Sleep Medicine in the 21st Century: The Good, the Bad and the Ugly

Michael J. Sateia, M.D., FAASM
Professor of Psychiatry (Sleep Medicine)
Dartmouth Medical School
Chief, Section of Sleep Medicine
Dartmouth-Hitchcock Medical Center
(with gratitude to Nancy Collop, MD)
Objectives

- Discuss manpower and training issues
- Describe technologist licensing, training and role issues
- Identify the challenges of the current reimbursement climate
- Review emerging issues regarding diagnostic testing and durable medical equipment provision
- Discuss the integrated management proposal and practice models for the future
- Review research, standards of practice, scoring manual and ICSD initiatives of the AASM

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Predicting the Future:

- "Louis Pasteur's theory of germs is ridiculous fiction." -- Pierre Pachet, Professor of Physiology at Toulouse, 1872
- "Heavier-than-air flying machines are impossible." -- Lord Kelvin, president, Royal Society, 1895
- "I think there is a world market for maybe five computers." -- Thomas Watson, chairman of IBM, 1943
- "We don't like their sound, and guitar music is on the way out." -- Decca Recording Co. rejecting the Beatles, 1962
- "There is no reason anyone would want a computer in their home." -- Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977
Before 2000, no formal programs and little legislation existed regarding the practice of polysomnography.

In some states, respiratory therapy began to demand enforcement of licensing that only RT’s could administer CPAP and oxygen.

This prompted a movement to develop licensure for sleep techs.

Licensure also spawned a movement to developing standardized training programs for techs.
Technologist Legislation

- States with a Polysomnography Practice Act:
  - California, Louisiana, Maryland, New Jersey, New Mexico, North Carolina, Tennessee, and Washington D.C.
- States with exemption language in their respective Respiratory Care Act (31):
  - Maine, Massachusetts, Vermont
- States which specifically define polysomnographic technology and their scope of practice in Respiratory Care Acts:
  - New Hampshire
- States requiring authorization
  - New York
- States that do not address the practice of polysomnography at all in the Respiratory Care Act
  - Connecticut, Rhode Island
Technologists Manpower Issues

- Educational and credentialing initiatives have not kept pace with legislative efforts
- BRPT established 1978
  - 17000+ credentialed to date
- Eligibility
  - **RPSGT Pathway 1: Clinical Experience.** For candidates working in the field for at least 18 months, who have completed a STAR-designated Self-Study education program.
  - **RPSGT Pathway 2: Healthcare Credential.** For candidates working in the field for at least 6 months, who have another healthcare credential.
  - **RPSGT Pathway 3: CAAHEP/CoARC Student.** For graduates of a CAAHEP or CoARC-accredited polysomnography education program.
  - **RPSGT Pathway 4: Focused Training.** For candidates working in the field for at least 9 months, who have completed STAR-designated Focused education, or a combination of Self-Study and Focused education.
  - STAR programs include A-STEP course and modules
Technologists Manpower Issues

• ABSM certification programs
  • In response to perceived shortages of credentialed technologists, the AASM launched ASTEP (Accredited Sleep Technologists Educational Program)
    • Introductory course
    • A-STEP modules
  • More recently ABSM initiated its own PSG technologist certification

• Eligibility
  • CAAHEP approved polysomnography technologist program
    • Currently 42 approved CoA-PSG programs
    • In New England, Northern Essex (MA)
  • MD, DO, PA, RN, Ph.D., RRT, CRT, EMT, R.EEG.T with minimum experience

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Technologists Manpower Issues

RST eligibility (cont’d)

- OJT path
  - HS degree or equivalent
  - CPR certification
  - A-STEP completion (or CPSGT)
  - Experience (accrued over 6 months to 3 years)
    - 1. Independent performance of 50 overnight sleep studies
    - 2. Of the 50 overnight sleep studies, a minimum of 20 must include CPAP titration
    - 3. Performance of one Multiple Sleep Latency Test
      - Minimum 85% on scoring proficiency OR 2 month ISR
- 6000+ hold RST credential in the US
Physician Manpower

- Approximately 3200 are board certified by ABSM
- Approximately 3800 are board certified by ABMS
  - Many are both
  - Unsure of total board certified – probably < 6000 currently
- “Grandfathering” period for ABMS exam ended with 2011 exam
  - Maximum new test takers for 2013 = ~360
- 79 sleep medicine fellowship programs (~180 slots)
- ~2300 AASM accredited sleep centers
Physician Manpower

- Sleep Apnea
  - 5% of US adult population (217,000,000) = 10,850,000
  - 1% of US pediatric population (74,000,000) = 740,000
  - Total = 11,590,000

- Insomnia
  - 10% of US adult population = 21,7000,000

- Restless Legs Syndrome
  - Estimate affects 12,000,000

- TOTAL = 45,290,000 / 6000 BCSS = 7550 New Pts/yr
Psychologists

- Insomnia afflicts 10-30% of US population
- Hypnotic therapy is a poor long term solution
- Cognitive behavioral therapy for insomnia has a proven track record and long term effectiveness, but…
- AASM had offered certification test in Behavioral Sleep Medicine (BSM)
  - ABSM took over the exam in 2010
- Currently ~ 200 BSM certified
- $21,700,000 / 200 \text{ BSMC} = 108,500 \text{ New Pts/year} !!!
Psychologists

- Debate exists about training masters level practitioners
  - Some PhD’s do not think this is appropriate – need enough background to properly diagnose and initiate CBT-I
  - New exam is limited to PhD’s with health care background
- Unmet need being met with novel online programs, group therapy, physician managed, self help (MP3 downloads, books, CD/DVD’s)
  - Limited research on effectiveness of these alternate approaches
Reimbursement

Money, it’s a gas

- The money pot is shrinking
- Medicare cuts
- Medicaid
- Home testing reimbursement is poor
- More will be required for less reimbursement

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RUC (RVS Update Committee)

- AMA and Specialty Societies
  - Recommends RVU’s (relative value units) for CPT codes
  - Evaluates cost of providing the service
    - Physician work
    - Practice expense
    - Malpractice expense

- Budget neutrality
- One pot of funds
- ONE SPECIALTY GAINS, ANOTHER MUST *LOSE*

- A zero sum game!!
### 2011-12 - Conversion Factor = $33.97 (w/ 2011 RVUs)

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Dartmouth-Hitchcock Sleep Disorders Center
Re-evaluation of Sleep Codes

- Consider new codes
  - Pediatric polysomnography
  - Polysomnography with extended EEG leads
  - Split night study
  - Actigraphy

- Update old codes
  - Limited channel studies
  - PSG
Out of center (Home) Sleep Testing (HST)

- Diagnostic testing is experiencing a paradigm shift
  - In lab PSG’s will continue to shrink as will reimbursement
  - HST’s will skyrocket

- HST opens the door to a highly fragmented model of care
  - HST performed by DME or private entrepreneurs
  - Reporting to non-BCSP for interpretation
  - DME provided by purveyor of HST or other HCC
  - Limited or no follow-up other than compliance monitoring

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Home sleep testing

- Massachusetts
  - Fallon Community Health Plan (FCHP), then Tufts (THP) contracted with Sleep Mgmt Solutions (SMS) and CareCorp (gatekeeper)
  - SMS does HST and DME; CareCorp decides which pt gets which test
  - As expected most patients are steered to HST
  - Harvard Pilgrim HealthCare (HPHC) added similar program but allows other providers to do the HST/DME
  - Reduced PSG tests – estimates are by 40-60%
  - Reductions in technical staff
Summary of Where We Are

- Sleep medicine faces potential shortfalls in adequately trained personnel in this decade and beyond
  - As in lab PSG’s fall, PsgT’s must retool their skills (DME education, HST setups/scoring, more complex PSG patients)
    - Certification and licensure will play increasingly important roles
  - Highest number of board certified MD’s will be 2012 – after that the number will shrink
  - Reimbursement climate is increasingly unfavorable
  - The field faces a potentially major shift in location and technology of sleep studies
    - This has significant fiscal implications
- Research in sleep medicine remains limited and the training circumstances and funding are not conducive to growth in this area
  - Need larger studies and research networks to answer key questions, and the work must go beyond sleep apnea!
Where We are Going

Dartmouth-Hitchcock Sleep Disorders Center
Dartmouth Medical School
2012 Strategic Plan

- Defining the technologists’ role in patient education and outcomes-based comprehensive disease management
  - address the management of sleep disorders and co-morbidities
  - guidelines for tracking long-term patient compliance and outcomes
- Standardize the role of the sleep technologist to reflect the current landscape
- Develop educational resources for long-term patient care and follow-up
2012 Strategic Plan

- Build awareness of OCST and the AASM Standards for Accreditation of OCST… and promote standardized OCST education
- Improve and expand relationships with national sleep, allied health and accrediting organizations
- Provide ongoing support and educational resources to state sleep societies.
- Maintain its advocacy efforts to define and protect the sleep technology profession
The diagnostic algorithm and treatment model for OSA is fragmented and flawed in its present state.

- In many cases, physicians untrained in sleep medicine infer a diagnosis of OSA based on a computer-generated simplistic report provided by a commercial home sleep testing company.

- Treatment is not provided or managed by any physician (let alone a BCSP) but rather a DME company that emphasizes equipment sales.
ICDMPPPO

• This program creates a new model of patient management with an emphasis on the following goals:
  • Improved care coordination
  • Increased adherence to PAP therapy
  • Reduced co-morbidities
  • Strengthened patient satisfaction
  • Realized, significant cost savings for CMS

• Assumptions:
  • More patients will undergo Out of Center Sleep Testing (OCST) and treatment adherence will increase by 20 percent
  • A minimum of 50 and a maximum of 75 sleep centers will be recruited for the program
ICDMPPPO

- The program will change the current standard of all patients tested in-center to a testing algorithm of
  - 20 percent in-center
  - 20 percent split-night in-center
  - 40 percent OCST
  - 20 percent OCST and in-center retest
- All care coordinated by the board certified sleep medicine physician (BCSP), and greater patient education and support provided by the sleep center facilitator
Integrated Sleep Management

1. Patient is diagnosed with sleep apnea by BCSP

   2. BCSP orders an in-center CPAP/BPAP titration

      3. Patient is prescribed CPAP/BPAP by BCSP

         4. Patient outcomes are tracked

   2. BCSP orders an out of center APAP titration

      3. Patient is prescribed APAP by BCSP

         4. Patient outcomes are tracked

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Specific goals of the ICDMPOPO with OSA

• To identify the appropriate type of diagnostic testing for each patient presenting with symptoms of OSA using a standard patient assessment tool and to test patients with out of center sleep testing (OCST) when appropriate

• To provide integrated care including testing and treatment to patients diagnosed with OSA by imposing a model of care that includes an individualized care plan created through partnership with the patient, the primary care physician (PCP) and other specialists (e.g., dentists, surgeons, cardiologists), as required
Specific goals of the ICDMPOPO with OSA

• To manage and monitor the care provided to the patient with OSA while *measuring the clinical outcomes* of the various treatment avenues such as PAP therapy, oral appliance therapy (OAT) or upper airway surgery, and intervening, as necessary, to ensure optimal care at lower cost

• To demonstrate how this integrated model of care enhances patient satisfaction and provides cost-effective care

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How to position your sleep center

- Investigate ways to reduce PSG costs
  - Scoring on the fly
  - Closely examine your costs (tech:patient ratio, use of auto-titrating devices in the lab, remote monitoring)
- Develop a comprehensive program
  - **Chronic care model** for OSA, insomnia, RLS
  - Distribute your own DME
  - Create a HST program
How to position your sleep center

- Develop new programs
  - Offer CBT-I
    - Online or self study programs
    - Group therapy
  - Actigraphy
  - Online consultations
  - Executive Health/Wellness programs

- Use physician extenders
  - CPAP clinic
  - Medical Home
  - CBT-I

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The Dartmouth Model
(but, one size does not fit all)

• Develop an effective system for providing HST
  • Technology assessment
  • Interface with current technology
  • Data management systems/EMR
  • Physician and Technologist education
  • Patient education
  • Logistics
The Dartmouth Model

- Develop and maintain an algorithm for routing patients appropriately to clinic, HST or laboratory
  - AASM guidelines as a starting point (see previous algorithm)
- Become proactive with payers to develop clinically sound and effective authorization protocols
The Dartmouth Model

- Gain increased control over the DME operation
  - Stark Laws significantly restrict this for centers that see Medicare patients
    - ICDMPPO seeks waiver of these restrictions
  - Enhance patient follow-up with real time data and interventions responsive to that data
  - Maintain outcome markers and quality of care data as an ongoing component of compliance
  - Work toward increasing control of the DME operation so as to maximize integration of care
Other Challenges

- Demonstrating positive outcome
- Effective data management systems/EMR to track outcome

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The Dartmouth Model

- How to address reduction of in-lab studies
  - Increase throughput of patients by increasing and streamlining physician consultation
  - Reduce MD follow-up time by increased utilization of technologists for routine follow-up, equipment and compliance assessments
    - This requires retooling technologist education
    - Better follow-up yields more studies
  - Broaden the array of skills and responsibilities for technical staff
    - DME
    - Patient education
    - Clinical follow-up

Dartmouth-Hitchcock Sleep Disorders Center
Other Challenges

• Attracting the “best and brightest” to the field
  • More teaching in medical school
  • Electives for housestaff (neurology, internal medicine, psychiatry, family medicine, ENT)
• Nimble accreditation standards
• Developing chronic disease management strategies for the complex variety of sleep disorders
• Utilizing the electronic medical record
• Research and development of new therapies
AASM Initiatives

- Research
  - AASM has donated > $10,000,000 to ASMF for research initiatives
  - Joint taskforce with SRS to determine how to double number of T32 (training) grants for sleep medicine (n=5)
  - Academic Affairs committee developing a white paper to examine development of academic sleep centers
Standards of Practice

• Revising Standards of Practice model
  • No longer a committee
  • Individual task forces
  • Staff driven literature reviews
  • Shorter timelines, quicker throughput, more board involvement along process
Scoring Manual

- Revisions currently underway but “too soon” for release
Coding and Diagnosis
Diagnostics

• ICSD revision currently underway
  • Publication date - Spring 2013
  • Major chapters unchanged from ICSD-2
  • Provisional major changes:
    • Insomnia collapsed into a single diagnosis of “Insomnia Disorder”
    • Narcolepsy “Type 1” (with cataplexy or hypocretin deficiency) and “Type 2”
    • Addition of complex sleep apnea and obesity hypoventilation syndrome
    • Revision of all diagnostic criteria
    • Reassessment of pediatric diagnoses and criteria for pedi sleep disorders
  • On-line publication
  • ICD-11 proposal for separate sleep / wake disorders chapter
Our truest life is when we are in dreams awake. (Thoreau)