The Future of Sleep Medicine

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Pediatric Sleep Medicine Course
October 5-6, 2012

Report of Financial Relationships

• (past 12 months) with commercial entities producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients relevant to the content I am presenting

• Chief Medical Officer: Sleep HealthCenters
• Consultant: CareCore National
• Consultant: American Imaging Management

Sleep Medicine:
A Field At The Crossroads

Drivers of Change

• Change in Focus of Clinical Practice
• Regulatory and Marketplace Changes

Change in Focus of Clinical Sleep Practice

Drivers of Change In Focus

• Sleep disorders are chronic diseases requiring long-term management
• Increased demand: Shortage of expertise
• Focus on outcomes/effectiveness
• Payers & public want efficient healthcare utilization
Chronic Illness: Definition

Any condition that requires ongoing activities and response from patients and their care givers as well as a response from the healthcare system.

- Wagner EH, Director, McColl Institute for Healthcare innovation

OSA is a Chronic Illness

- OSA does not resolve on own without
  - Change in underlying airway anatomy
  - Weight loss
  - Surgery
  - Correction of an underlying medical condition
  - Hypothyroidism
  - Chronic generalized adenopathy
  - Effective therapy but requires lifetime care
  - Causes other chronic diseases
    - Hypertension
    - Congestive heart failure
    - Obesity

Sleep Medicine is a Chronic Disease Specialty

- Sleep disorders = Chronic diseases
  - Obstructive sleep apnea
  - Restless legs syndrome
  - Narcolepsy
  - Insomnia
  - Sleep deprivation

Chronic Disease Management Principles

- Identify patients with problem (targeting)
- Use information systems to gather data
- Stratify patients by risk
- Involve patients in their own care
- Use multidisciplinary teams
- Provide care in the least intensive setting

Chronic Disease Management: Benefits

- Successful in other chronic diseases
  - Asthma
  - Congestive heart failure
  - Diabetes
- Improve clinical outcomes
  - Reduce exacerbations
  - Reduce hospitalizations
  - Improve quality of life
- Reduce cost
  - May require initial increased outlay to change system
  - Best way to reduce cost is to improve health status

U.K. Department of Health

Chronic Disease Management Principles Example: OSA

- Identify patients with problem (targeting)
  - High risk populations (obese, hypertensive, drivers)
- Use information systems to gather data
  - Compliance systems, Pay for performance database
- Stratify patients by risk
  - AHI, Cardiovascular disease
- Involve patients in their own care
  - Compliance data, weight loss
- Use multidisciplinary teams
  - Integrated care programs (MD, RT, ST)
- Provide care in the least intensive setting
  - Home sleep testing
OSA Disease Management Programs

- Follow clinical practice parameters
- Use multidisciplinary teams
- Regular clinic follow-up
- Compliance monitoring and intervention
- Patient education and support
- Risk assessment and modification
- Clinical information systems

AASM Integrated Care Initiative

- Sleep center provides comprehensive care model
  - Evaluation
  - Management
    - Evidence based (utilize Practice Parameters)
    - Therapeutics
    - Care coordination
      - Sleep specialist
  - Accreditation
    - Sleep Center
    - Out of Center Sleep Testing
    - DME
  - Medicare Innovation Grant

Barriers to Changing Models

- Inertia
- Third party payer policies
- Clinical guidelines need to reflect chronic disease management model
- Demonstrate value of sleep specialist
- Add value to clinic evaluation

Benefit of Sleep Specialist Care

<table>
<thead>
<tr>
<th>Pearson $\chi^2$ p = 0.01</th>
<th>Using PAP D/C ed PAP</th>
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<tbody>
<tr>
<td>MD + Center + (n=307)</td>
<td>95% 5%</td>
</tr>
<tr>
<td>MD or Center + (n=99)</td>
<td>93% 7%</td>
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<tr>
<td>MD – Center – (n=38)</td>
<td>79% 21%</td>
</tr>
</tbody>
</table>

- Factors associated with discontinuation
  - Lack of MD certification or center accreditation
  - Nasal congestion severity
  - Factors associated with continuation
    - Patient education of health risk of OSA

Summary

- Sleep Medicine is a chronic disease specialty practice
- Apply chronic disease management principles to the organization of clinic and treatment of patients
  - Follow clinical practice parameters
  - Use multidisciplinary teams
  - Regular clinic follow-up
  - Compliance monitoring and intervention
  - Patient education and support
  - Risk assessment and modification
  - Clinical information systems
Drivers of Change
- Change in Focus of Clinical Practice
- Regulatory and Marketplace Changes

Regulatory Changes
- Have resulted in dramatic changes in sleep medicine practice over the last 2 years:
  - Change in site of testing
  - Reduction in testing volume
  - Reduction in revenue
  - Change in business models
  - Impact on continuity of care

Drivers of Change
- Rapid growth in demand for sleep medicine services
- Rapid growth in sleep centers
- Rapid growth in diagnostic testing and therapy

Increase in Study Volumes

PAP Equipment Volume Growth

Source: Mizuho Securities USA, Jan 2011
Acceptance of Portable Monitoring - 2007

Clinical Guidelines for the Use of Unattended Portable Monitors in the Diagnosis of Obstructive Sleep Apnea in Adult Patients

- Task Force Members
  - Nancy Collop (Chair)
  - McDowell Anderson
  - Brian Boehlecke
  - David Claman
  - Rochelle Goldberg
  - Daniel Gottlieb
  - David Hudgel
  - Michael Satia
  - Richard Schwab


Shot Heard Round The Sleep World

Apologies to Ralph Waldo Emerson

- CMS NCD for CPAP (CAG-0093R2) – 3/2008
  - Pay for PAP with OSA diagnosis by home study
- CMS LCD for PAP devices
  - Must demonstrate adherence for continued reimbursement
  - > 4 hours/night on 70% of nights

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The Revolution Spreads

- Private payers implement sleep benefits management programs
- Target spending on OSA through 3 key elements:
  - Determining appropriateness of care
  - Transition of in-lab to home sleep testing (goal of 50-70% of all sleep studies)
  - Ongoing payment for PAP therapy based on 90-day patient compliance levels.
- These programs can result in greater than 25% savings to the payer.

Utilization Management Firms

- Many payers outsource these programs to a utilization management (UM) firm who may already be providing other services to the payer.
- Selling points:
  - Increased demand for testing
  - Lower cost testing alternative available, but not used
  - Fragmentation of care
  - DME provider lack of accountability
  - Compliance tracking technology is available
- Method
  - Preauthorization for tests and PAP
  - HST unless don’t meet criteria
MA Programs

- Fallon, CareCore National, 1/1/10
- Tufts, CareCore National, 1/1/11
- Harvard Pilgrim, CareCore National, 8/1/11
- United/Oxford, 10/1/11
- Aetna, Med Solutions, (2009), 3/1/2012
- Neighborhood Health Plan, CareCentrix, 5/1/12
- BCBS? 2013

Each Program Is Different

<table>
<thead>
<tr>
<th>Process</th>
<th>Network Manager</th>
<th>HST Study Provider</th>
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<tbody>
<tr>
<td>Test preauthorization</td>
<td>UM Firm</td>
<td>Outside sole source co.</td>
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<tr>
<td>Test preauthorization</td>
<td>UM Firm</td>
<td>Local network providers</td>
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<tr>
<td>Test preauthorization</td>
<td>Insurance Co.</td>
<td>National testing co.</td>
</tr>
<tr>
<td>Test preauthorization</td>
<td>UM Firm</td>
<td>Local preferred providers</td>
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</table>

Impact

- Initial drop in volume with change
- Rapid shift to OCAST
- Potential delay in care
- Potential fragmentation of comprehensive programs
- Decrease in lab volume
- Change in staffing requirements
- Increased administrative cost

Clinic Volume

Slide withheld by request.
Pediatric Center Challenges

- Revenue impact
  - Increased cost/study
  - Longer test
  - Additional equipment
  - Lower patient:tech ratios
    - Decreased revenue per study
  - Increased demand

Future Steps

- Plan ahead
  - Implement HST program
  - Plan lab downsizing
  - Increase lab efficiency
- Get to know the payers
- Diversify services
  - Integrated, comprehensive
- Increase clinic availability
- Implement chronic disease management principles