ATS SYMPOSIUM PROPOSAL (TO BE SUBMITTED VIA INTERNATIONAL HEALTH COMMITTEE)

TITLE: Global Care for Sleep Disorders: Towards Universal Access

Session Format Symposium

Assemblies: Primary SRN

Secondary: Pediatrics, Behavioral Science and Health Services Research, Nursing, Clinical Problems

Session Focus: Global Health Services for Sleep Apnea and other sleep disorders

Target Audience: Physicians, Health services and outcomes researchers, Advance Practice Nurses, Quality and Comparative effectiveness researchers, pediatric and adult Residents and Trainees

Session Summary:

To discuss diverse models of care for Sleep Apnea (SA) and other sleep disorders across different geographical /socioeconomic regions, throughout the world, and how we can extend the reach of sleep health service provision to under-resourced areas. Innovative models of care from diverse countries and health systems will be discussed with a focus on quality and cost-effectiveness tools employed in each unique setting.

Proposed Chairs:

Sonia Buist, MD, Oregon Health and Science University, buists@ohsu.edu

Ching Li Chai-Coetzer, MBBS, PhD, Adelaide Institute for Sleep Health, Chingli.Chai-Coetzer@sa.gov.au

Aviv Goldbart, MD, Ben-Gurion University of the Negev, Beer-Sheva, Israel, avivgold@bgu.ac.il

Bharati Prasad, MD, MS, University of Illinois at Chicago, bpradsad@uic.edu

Mihaela Teodorescu, MD, MS, University of Wisconsin, Madison, mt3@medicine.wisc.edu

Presentations:

1. Introduction: **Burden of Sleep Disorders Around the World**

Discuss the public health burden and consequences of sleep disorders/OSA across the globe, summarize current models of care, and highlight the need for innovative models of care to improve sleep services' access in under-resourced countries as well as rural/remote and underprivileged populations in developed countries.

15 minutes: Atul Malhotra, University of California San Diego (atulandkaren@gmail.com)

2. Primary Care Physician and Specialist Nurse Led Models of Care for OSA: Data from Down Under

Present the evidence for Australian /New Zealand specialist nurse-led model of care for OSA in sleep specialist centers; development of simplified screening tools and use of home oximetry for use in

primary care; and community-based model of care for OSA involving primary care physicians and advance practice nurses.

15 minutes: Ching Li Chai-Coetzer, Adelaide Institute for Sleep Health (Chingli.Chai-Coetzer@sa.gov.au)

3. In-laboratory versus Ambulatory Management of SA: Can we do more for less?

Discuss the comparative effectiveness of the current gold standard, i.e. in-laboratory polysomnography for diagnosis and continuous Positive Airway Pressure (PAP) treatment versus in-home cardiorespiratory SA testing and autoadjusting PAP treatment.

15 minutes: Najib Ayas, The University of British Columbia (najib.ayas@vch.ca)

4. Telemedicine and Wearable Technologies to Enhance the Reach of Sleep Services

Discuss the emerging role of telehealth services and wearable technologies to expand the reach of sleep disorders service provision globally to under-resourced areas and how these technologies can be leveraged to improve scalability of population health research.

15 minutes: Anita Shelgikar (avalanju@med.umich.edu)

5. Models of Care for SA from around the World: Lessons from Diverse Economies

Discuss practical models of care for SA including pros/cons, challenges and relevant quality and cost-effectiveness metrics.

7 minutes each: **Rapid Fire Presentations**

- **Germany**: Winfried Randerath, Bethanien Hospital Solingen (randerath@klinik-bethanien.de)
- **Spain**: Ferran Barbe, University of Lleida (febarbe.lleida.ics@gencat.cat)
- **Turkey:** Yuksel Peker, Marmara University (yuksel.peker@lungall.gu.se)
- **Romania:** Oana Deleanu, University of Medicine Bucharest, (oanadeleanu@gmail.com)
- **Brazil:** Gustavo Moreira, University of Sao Paulo (Gustavo.A.Moreira@sono.org.br)
- **India:** Sanjeev Sinha, All India Institute of Medical Sciences (drsanjeevsinha@gmail.com)

TOTAL 102 minutes, 3 minutes for Q and A after Sessions 1-4 and 6 minutes after Session 5

Statement of Clinical/Scientific Importance

Recent epidemiological data from the USA, Australia, Europe, Asia and Brazil suggest that sleep apnea (SA) is highly prevalent in population-based samples, affecting as many as 24% of men and 9% of women and children worldwide. SA poses a substantial public health burden worldwide, being associated with an increased risk of motor vehicle accidents, cardiovascular disease and neurocognitive impairment. Despite the increasing recognition of the global burden of SA, there is a substantial gap between demand for SA care and access to care, in both developed and developing countries. Laboratory polysomnography, the current gold standard for SA diagnosis, is labor-intensive, costly and limited in its availability. This problem is further compounded by the limited number of physician specialists, resulting in significant delays between symptom onset and

commencement on effective SA therapies. To address the growing burden of disease and problem of sleep service provision which is inadequate to meet demand, there has been increasing attention towards the use of screening questionnaires, home-based limited channel sleep studies and auto-titrating CPAP, and innovative models of care involving other health professionals, such as trained nurses and general practitioners, as primary providers of care to SA patients. The proposed symposium will: (1) improve awareness of the burden of SA across the world; (2) increase knowledge about the clinical utility of SA screening tools, limited sleep studies, auto-titrating PAP and how these may be applied in clinical practice to improve access; (3) highlight approaches to SA and sleep disorders care from countries with diverse economies and health systems to stimulate exchange of ideas and discussion regarding potential solutions to address barriers to access; and (4) review the role of telemedicine and wearable technologies in creating innovative models of care for SA.

References:

1. Sands SA, Owens RL, Malhotra A. New Approaches to Diagnosing Sleep-Disordered Breathing. Sleep Med Clin. 2016 Jun;11(2):143-52.

2. Zia S, Fields BG. Sleep Telemedicine: An Emerging Field's Latest Frontier. Chest. 2016 Jun;149(6):1556-65.

3. Shelgikar AV, Anderson PF, Stephens MR. Sleep Tracking, Wearable Technology, and Opportunities for Research and Clinical Care. Chest. 2016 Sep;150(3):732-43.

What sources did you use to assess the needs of this target audience?

1. ATS International Health Committee members, a strong recommendation from Dr. Sonia Buist, ATS MECOR Founder based upon requests to her from numerous MECOR participants, from Africa, Asia, Latin America, India, Turkey, Vietnam, etc.

2. ***An Official American Thoracic Society Research Statement: Implementation Science in Pulmonary, Critical Care, and Sleep Medicine.***
Weiss CH, Krishnan JA, Au DH, Bender BG, Carson SS, Cattamanchi A, Cloutier MM, Cooke CR, Erickson K, George M, Gerald JK, Gerald LB, Goss CH, Gould MK, Hyzy R, Kahn JM, Mittman BS, Mosesón EM, Mularski RA, Parthasarathy S, Patel SR, Rand CS, Redeker NS, Reiss TF, Riekert KA, Rubenfeld GD, Tate JA, Wilson KC, Thomson CC; ATS Ad Hoc Committee on Implementation Science. Am J Respir Crit Care Med. 2016 Oct 15;194(8):1015-1025.

Learning Objectives

At the conclusion of this session, the learner will be better able to:

1. Understand the global burden of sleep problems, sleep apnea and the current gap in health services.
2. Learn the innovative models of care that rely on technology to improve access, efficiency and quality of care.
3. Apply lessons from diverse health systems around the world to develop, test and implement novel models of care that aim to provide quality accessible care for all.