

# Sleep matters

ASEAN SLEEP MEDICINE NEWSLETTER NEWS / OPINIONS / INSIGHTS



**DR. MUVENTHIRAN RUTHRANESAN**

**MBBS (University of Malaya), Masters in Internal Medicine (MMed) (University of Malaya)**

Fellowship in Respiratory Medicine, Training in Sleep Medicine at Chulalongkorn Hospital Thailand

The Sleep Laboratory at Hospital Pantai Ayer Keroh was launched in June 2015. The Lab currently is able to do Full Polysomnograph Studies, Partial Sleep studies, Split Night Studies, PAP titration studies, Multiple Sleep Latency Tests and MWTs. The lab is fully equipped to do CPAP and BiPAP titration studies.

## Interview with Dr. Muventhiran Ruthranesan on Sleep lab in Panatai Hospital, Ayer Keroh Malacca Malaysia

### **When was the sleep lab started?**

The Sleep Laboratory at Hospital Pantai Ayer Keroh was launched in June 2015.

### **What is the waiting time in your sleep lab?**

Waiting time in our sleep lab is about 2 weeks.

### **Are you doing any home sleep tests? If yes, how many per year?**

We are doing home sleep tests. We do 15-20 HSTs per year.

### **How many beds does the sleep lab have for level 1 sleep studies?**

We currently have 1 bed for Level 1 Sleep studies.

### **What type of diagnostic studies are done in the sleep center?**

The Lab currently is able to do Full Polysomnography Studies, Partial Sleep studies, Split Night Studies, PAP titration studies, Multiple Sleep Latency Tests and MWTs.

### **What type of PAP titration facilities are available at your sleep center?**

The lab is fully equipped to do CPAP and BiPAP titration studies.

### **What are the educational/training opportunities available for doctors and technicians at your sleep center, especially for candidates from other countries?**

We are ever-ready to welcome foreign candidates who wish to experience first-hand training in Sleep medicine.

### **How many sleep techs are employed at the sleep center? What are their daytime and nighttime duties?**

The clinical arm of the lab is headed by Dr Muventhiran Ruthranesan who is a Consultant Respiratory Physician and Sleep Medicine Consultant. He is assisted by Sister Aslindah Bt Abu Said, and Sister Chui Mue Yung. The administrative side of Sleep Laboratory is headed by Ms Simran Kaur. At present there are two Sleep technologists employed. One is a male staff nurse, nurse Nik Syamsul Helmee, who is involved in nursing duties during the day as well as scoring and conducting sleep studies at night. The other is a female staff nurse, Staff Nurse Som Sheng Yi who works as a sleep technologist at night and staff nurse during the day. We also have a full time sleep technologist Ms Kivisna Nair Amurtha Lingam.

Email us on

**sleepmatters@philips.com** with your content.

**How many level 1, level 3 studies, PAP titration studies, MSLT and MWT are done in one year?**

We have conducted 95 Full polysomnography tests thus far, 18 Split Night studies, 16 partial studies and 3 MSLTs.

**What are the contact details of your sleep center-address, phone number, email and website?**

We are located at Pantai Hospital Ayer Keroh a branch of Pantai Medical Centre Sdn Bhd (73056-D)  
No 2418-1 KM 8, Lebuhraya Ayer Keroh, 75450, Melaka



**Sleep lab**



**Control room**



**Team photo**

Seated: Dr Muventhiran Ruthranesan

From Left: Sister Chui Mue Yung, Staff Nurse Som Sheng Yi,  
Sister Aslindah bt Abu Said, Staff Nurse Nik Syamsul Helmee



**DR. TEOFILO L. LEE-CHIONG JR.**

Professor of Medicine, National Jewish Health and University of Colorado Denver School of Medicine,  
Chief Medical Liaison for Philips Respironics (Denver, USA)

“Telemedicine offers the promise of greater reach, more cost-effective care and improved outcomes. The role of telemedicine in the management of sleep disorders, particularly in the long-term monitoring of obstructive sleep apnea, is evolving.”

–Dr. Teofilo

## Dr. Teofilo’s summary of Clinical studies on “The Promise of Telemedicine in the Management of Obstructive Sleep Apnea”

### **1 Telemonitoring is more cost-effective, but does not improve adherence to CPAP therapy, compared to traditional follow-up.**

Researchers randomized 100 patients with newly diagnosed OSA (AHI > 15) to either telemonitoring or to standard management. Data on compliance, residual respiratory events and air leaks were collected daily in the telemonitoring program and problems were resolved. After 3 months, CPAP compliance was not significantly different between telemonitoring and traditional management ( $5.1 \pm 2.1$  and  $4.9 \pm 2.2$  hours per night, respectively). Symptoms, QOL and adverse effects were also not different between the two groups. Telemedicine was less costly and was associated with an ICER EUR 17,358.65 per QALY. Patients reported less satisfaction with telemonitoring.

Turino C et al. Eur Respir J. 2017 Feb 8;49(2).

### **2 Telemedicine reduces the likelihood of patients abandoning PAP use at long-term follow-up compared with standard care.**

This study compared follow-up using telemedicine with a cloud-based monitoring system versus regular care. Each group included 3,401 patients receiving their first PAP therapy. Compared to standard care, proactive telemedicine had a significantly lower therapy termination (11% vs. 5.4%,  $P < 0.001$ ) and a longer time to therapy termination ( $337 \pm 76$  vs.  $348 \pm 58$  days,  $P < 0.05$ ) in the first treatment year. However, risk of PAP termination was similar between the two groups in patients younger than 40 years of age.

Woehrle H et al. Somnologie (Berl). 2017;21(2):121–127.

### **3 When added to usual care, CPAP telemonitoring with automated patient feedback improves CPAP adherence in patients with OSA.**

In this study, 556 patients with OSA were prescribed CPAP and were randomized to one of 4 groups, namely group 1 (usual care), group 2 (usual care plus web-based OSA education), group 3 (usual care plus CPAP telemonitoring with automated patient feedback), and group 4 (usual care plus web-based OSA education plus CPAP telemonitoring with automated patient feedback).

Average nightly CPAP use at 90 days and Medicare adherence rates were  $3.8 \pm 2.5$  hours and 53.5% (group 1),  $4.0 \pm 2.4$  hours and 61% (group 2),  $4.4 \pm 2.2$  hours and 65.6% (group 3) and  $4.8 \pm 2.3$  hours and 73.2% (group 4). Use of CPAP was significantly higher in groups 3 and 4, but not group 2, compared to usual care. The same associations were noted for Medicare adherence rates. Clinic attendance was higher in group 2 vs. group 1. Hwang D et al. Am J Respir Crit Care Med. 2017 Aug 31.

### **4 Providing telemonitoring when starting CPAP therapy saves nursing time for OSA without negatively affecting treatment effectiveness.**

After CPAP titration, 111 patients with OSA were followed-up via usual care or with telemonitoring. Nursing time included extra phone calls and visits. Median nursing time was significantly shorter with telemonitoring (39 min) than usual care (58 min). Patient satisfaction, CPAP adherence and residual AHI were similar between groups at 1-year follow-up.

Anttalainen U et al. Sleep Breath. 2016 Dec;20(4):1209–1215.

### **5 Patient preference should be considered when developing a telemedicine program for obstructive sleep apnea.**

A survey on preferences regarding PAP data download via modem or card was conducted in patients without previous PAP experience. A total of 444 responses (mean age of respondents was 52 years) were analyzed and revealed that the most important factor determining download preference was convenience, independent of concerns of information privacy. It took most patient at least half an hour to get to the PAP clinic. A modem download was preferred by 47% of the patients, and mail-in memory card method by 38%. Fifteen percent of patients were undecided.

He K et al. Respir Care. 2017 Mar;62(3):357–362.

**Abbreviations:** AHI: apnea hypopnea index; CPAP: continuous positive airway pressure; ICER: incremental cost-effectiveness ratio; OSA: obstructive sleep apnea; PAP: positive airway pressure; QALY: quality-adjusted life-year



# Events in the region and world

Jan - Sep 2018

3rd Clinical Update Sleep International Conference London, UK  
<http://www.cvent.com/events/3rd-clinical-update-sleep-international-conference-2018/event-summary-80ac5bdb03204c88881fc9b5db4bcd1.aspx>

23 Feb 2018

2nd Congress of ASIAN Society of Sleep Medicine  
Seoul, Korea  
<https://www.assm2018.com>

22 - 25 March 2018

9th International Surgical Sleep Society Meeting  
Munich, Germany  
<https://www.issm-munich.com>

5 - 7 April 2018

5th International Pediatric Sleep Association Congress Paris, France  
<http://www.pedsleep.org/>

27 - 29 April 2018

ATS San Diego, California  
<http://conference.thoracic.org/>

18 - 23 May 2018

APSS Sleep Baltimore, Maryland US  
<http://www.sleepresearchsociety.org/sleepmeeting.aspx>

2 - 6 June 2018

2nd Edmund Tay Mai Hiong Distinguished Speaker Programme - Sleep Medicine for Physician and Dentist: Interdisciplinary Clinical Sciences Singapore  
<http://www.dentistry.nus.edu.sg/Events/cde.html>

8 July 2018

2nd Edmund Tay Mai Hiong Distinguished Speaker Programme - Sleep Bruxism and Apnea: An Association? Evening Lecture Singapore  
<http://www.dentistry.nus.edu.sg/Events/cde.html>

9 July 2018

ERS International Congress Paris, France  
<https://www.ersnet.org/congress-and-events/ers-international-congress>

15 - 19 Sep 2018

National Sleep Technology Course Goa, India  
[www.issr.in](http://www.issr.in)

21 Sep 2018

National Sleep Medicine Course Goa, India  
[www.issr.in](http://www.issr.in)

22 - 23 Sep 2018

ESRS Basel, Switzerland  
<http://www.esrs.eu/conferences-events/esrs-congresses-events.html>

25 - 28 Sep 2018

## Sleep matters past issues

To access the past issues of sleep matters, please go to the below webpage  
[www.philips.com.sg/healthcare-consumer/sleep-apnea/resources#sleep-physicians-newsletters](http://www.philips.com.sg/healthcare-consumer/sleep-apnea/resources#sleep-physicians-newsletters)

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## Letters to the Editor:

Our readers are invited to write to the editor by volunteering content that they feel strongly about or feel needs coverage in a publication such as this. Your input is welcome and valued, particularly with case studies and hot topics currently debated in the field, as well as reviews of Asia Pacific congresses and conferences that you might like to share with the audience. Your letters will be featured in future issues of Sleepmatters, allowing an open forum between experts and increasing the level of engagement amongst the audience.

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