

Sleep matters

ASEAN SLEEP MEDICINE NEWSLETTER NEWS / OPINIONS / INSIGHTS

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The areas of collaboration allow Singhealth Duke-NUS Sleep Centre's professional expertise in Sleep Medicine and Obstructive Sleep Apnea management to spread its wings in the region, with support from Philips Electronics Singapore Pte Ltd.

Interview with Dr. Toh Song Tar on the MOU between Philips and Singhealth Duke-NUS Sleep Centre

The SingHealth Duke-NUS Sleep Centre was officially established on the 1st April 2017, with the vision to be an academic medical centre of excellence for treatment of Sleep Disorders and understanding of Sleep Science. Shortly after its formation, the centre signed a Memorandum of Understanding with Philips Electronics Singapore Pte Ltd during the Sleep Conference event, on 25th August 2017. Apart from reflecting the mutual interest of both parties to enter into a strategic collaboration to achieve its vision and objectives, it also aims to collaborate to raise the public awareness for Sleep Disorders & Obstructive Sleep Apnea (OSA).

With this collaboration, it aims to promote the Sleep Centre's professional expertise in the area of Sleep Medicine and OSA with support from Philips Electronics Singapore Pte Ltd by utilizing it as a reference site. There will also be development and implementation of joint research projects in Sleep Medicine and OSA

and screening programmes for OSA. Additionally, educational programmes, including fellowship training, sleep awareness and outreach programmes in Sleep Medicine and OSA, will be established and implemented for both healthcare and allied healthcare professionals in Singapore and the ASEAN region.



Email us on
sleepmatters@philips.com with your content.

Pointers

1. Importance and need of this MOU

- Singhealth Duke-NUS Sleep Centre signed an MOU with Philips to promote SDDC Sleep Centre as Centre of Excellence for treatment of Sleep Disorders and understanding of Sleep Science through integrated quality patient care, clinical education and research.
- Collaboration in areas to increase public awareness for sleep disorders & Obstructive Sleep Apnea

2. Areas of collaboration & Future Directions

- Promotion of Sleep Centre's expertise in the area of Sleep Medicine and Obstructive Sleep Apnea (OSA) with support from Philips utilizing it as a reference site.
- Development & implementation of joint research projects in Sleep Medicine and OSA, especially in looking at treatment of OSA in reducing OSA-related chronic diseases.

- Development & implementation of educational programmes including fellowship training, training of sleep technicians, public sleep awareness and outreach programmes in Sleep Medicine and OSA for healthcare and allied healthcare professionals in Singapore and ASEAN.
- Development & implementation of screening programmes for OSA
- Training of family physicians in identifying, ordering diagnostic tests for diagnosis of OSA, and managing OSA as a chronic disease in family physician settings
- Use of telemedicine in managing sleep disorders and OSA



From Left to Right: Prof Terrance Chua (Group Chairman Medical Board, SingHealth), Dr. Toh Song Tar (Head Singhealth Duke NUS Sleep Centre), Ms. Ivy Lai (Country Manager Philips Singapore), Mr. Diedrik Zeven (General Manager Health Systems Philips ASEAN Pacific)



Standing from left to right: Mr. Diedrik Zeven (General Manager Health Systems Philips ASEAN Pacific); Ms. Ivy Lai (Country Manager Philips Singapore); Mr. Jason yeo (Senior Manager Sleep and Respiratory Care Philips ASEAN); Dr. Toh Song Tar (Head Singhealth Duke NUS Sleep Center); Prof Terrance Chua (Group Chairman Medical Board, Singhealth)



Dr. Toh Song Tar and Ms. Ivy Lai signing the MOU





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)

Using CPAP for 8 hours per night over a course of 1 week improves glycemic control in patients with OSA.

Dr. Teofilo's summary of Clinical studies on Sleep Apnea and Diabetes

1 Nocturnal hypoxemia leads to hyperglycemia in patients with OSA and T2DM.

The relationship between SaO₂ and interstitial glucose level (IGL) was studied in 130 patients who each underwent PSG and oral glucose tolerance tests. Several variables, including AHI, mean SaO₂, SaO₂min and microarousal index were associated with higher IGL. Hui P et al. Am J Med Sci. 2016 Feb;351(2):160-8.

2 Severe OSA increases the likelihood of developing DM independent of obesity.

Middle-aged and older non-diabetic subjects enrolled in the Atherosclerosis Risk in Communities Study and the Sleep Heart Health Study (n = 1,453) underwent PSG testing. There were 285 cases of incident DM cases identified by telephone calls during a median follow-up of 13 yrs. Patients with severe OSA (AHI ≥ 30) had a greater risk of incident DM compared to normal controls (AHI < 5) even after accounting for differences in BMI and waist circumference. Nagayoshi M et al. Sleep Med. 2016 Sep;25:156-161.

3 Using CPAP for 8 hours per night over a course of 1 week improves glycemic control in patients with OSA.

Twelve subjects with DM type 2 and OSA were evaluated before and after 1 week of an entire 8-hour-night CPAP therapy. Levels of glucose, insulin and counter-regulatory hormones were measured every 15 to 30 minutes for 24 hours under controlled conditions. Using CPAP reduced 24-hour mean glucose, morning fasting glucose levels, dawn phenomenon and norepinephrine levels, but did not change 24-hour profiles of growth hormone and cortisol.

Mokhlesi B et al. Diabetes Obes Metab. 2016 Nov 17.

4 Continuous positive airway pressure treatment improves insulin resistance and glycemic control in patients with OSA and suboptimally controlled T2DM.

In this 6-month RCT, 50 subjects with OSA and T2DM, in whom HbA_{1c} levels were ≥ 6.5% on 2 occasions, were randomized to CPAP or no CPAP. Insulin resistance and sensitivity, HbA_{1c}, and serum levels of IL-1β, IL-6 and

adiponectin improved after 6 months in the CPAP group. Martínez-Cerón E et al. Am J Respir Crit Care Med. 2016 Feb 24.

5 In contrast to its beneficial effect on glycemic control in poorly controlled T2DM, CPAP therapy for OSA does not improve glucose levels in those with well controlled T2DM.

Four hundred and sixteen diabetic patients (HbA_{1c} level of 6.5-8.5%) and ODI ≥ 15 were assigned to receive PAP or no PAP therapy. Change in HbA_{1c} did not differ between the study groups.

Shaw JE et al. Am J Respir Crit Care Med. 2016 Aug 15;194(4):486-92.

6 The presence of SA predicts the development of incident T2DM, but the latter is not associated with increased risk of SA.

Investigators conducted two 12-year longitudinal analyses. In the first, the incidence rates T2DM was calculated in 102,355 persons to be 17.7 and 11.1 per 1000 person-years in those with and without SA, respectively. In the second, the hazard ratio of incident SA determined in 258,053 persons was found to be not significantly different in those with and without T2DM.

Liu CL et al. Can J Diabetes. 2017 Apr;41(2):197-203.

7 There is a high prevalence of asymptomatic OSA among persons with T1DM.

Home sleep testing, ESS and evaluation for peripheral neuropathy were conducted in 200 outpatients with T1DM. Mean age was 52 ± 15 yrs. and mean duration of DM was 24 ± 14 yrs. Forty-six percent of patients had OSA, a majority of which were previously undiagnosed. Patients were generally asymptomatic, and most (69%) had mild OSA. Prevalence of OSA was related to weight – 32% in those with normal BMI and 60-61% in overweight and obese patients. Age, BMI and neuropathy were associated with higher risk of OSA.

Banghoej AM et al. J Diabetes Complications. 2017 Jan;31(1):156-161.

Events in the region and world

Mar - Sep 2018

Annual meeting of
Philippine Sleep
Society, Manila

1 - 3 March 2018

World Sleep day

16 March 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

Singhealth Duke-
NUS Sleep Centre
Singapore Sleep
Conference

3 - 5 Aug 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

21 Sep 2018

National Sleep
Medicine Course
Goa, India
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

Sleep matters

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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