Title: Professional and frequent driving habits detected in the European Sleep Apnea Database (ESADA) – Call for a safety alert

Ms. Mahssa 30183 Karimi mahssa.karimi@lungall.gu.se ¹, Prof. Jan 30184 Hedner jan.hedner@lungall.gu.se MD ¹, Dr. Ludger 30185 Grote ludger.grote@lungall.gu.se MD ¹ and 30209 on behalf of the ESADA study group esada@esada.eu . ¹ ESADA office, Center for Sleep and Vigilance Disorders, Internal Medicine, University of Gothenburg, Sweden .

Body: Obstructive sleep apnea (OSA) is associated with an increased risk for motor vehicle accidents. Treatment of OSA leads to a reduced risk. Many, but not all, EU countries associate untreated OSA with impaired capability to drive. The strategy to improve traffic safety for sleep centers has not been well addressed. This study captured driving habits in the multinational ESADA cohort. The ESADA database includes subjects with suspected OSA referred to 23 sleep centers in 16 EU countries. Reported parameters were obtained at regular clinic visits in association with an overnight sleep study in 8087 subjects (5789 males and 2298 females). Driving license status (no or A to E) was defined and mean yearly driving distance was recorded. AB license was reported by 4676 subjects (58.8% in men, 55.4% in women), CDE license by 923 (15.0% in men, 2.3% in women) and no driving license by 2488. Men reported a higher yearly driving distance than women (21847±478 km vs. 10681±347 km). 63% of subjects with severe OSA (AHI ≥30/h) were license holders. CDE license holders tended to be younger, less morbid and used fewer medications. Central obesity, OSA severity and daytime sleepiness were similar in AB and CDE drivers. 43.3% of all license holders were frequent drivers (>15.000 km/yr) and 35.4% (14.7%) of male (female) frequent drivers had severe OSA. Information from the ESADA confirms that professional and frequent driving is common in patients with OSA. Classification of driving habits should be included in the clinical routine at sleep centers and prospective outcome studies are warranted. The ESADA study is supported by the EU COST Action B 26, RESMED and PHILIPS RESPIRONICS.