

## Role of Sleep Medicine in Transportation Safety: An Important National Issue

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Road traffic injuries and deaths are among the first leading causes of death around the world (1). In Iran, annual deaths because of road crashes constitute the most common cause of mortality among the youth. The country is estimated to lose more than 17000 persons in traffic accidents annually (2). The economic annual burden of road accidents is also estimated considerable in Iran.

Several major initiatives have been implemented throughout the country to reduce deaths due to road traffic accidents by authorities such as Traffic police, Ministry of Roads and Urban Development, and Ministry of Health and Medical Education. Ministry of Health and Medical Education as the leading governmental organization concerning health issues have taken great steps towards promotion of road safety and reducing mortality due to traffic accidents. Accordingly, drivers' health is considered as one of the target areas requiring more investigation to insure safer transportation in public roads. Currently, commercial drivers undergo complete medical examination before taking their health license and driving permit. Apnea and narcolepsy are the two sleep disorders screened at the present time in Iran for commercial drivers.

In the field of sleep medicine, about 20% of road traffic accidents is contributed to sleep disorders, among which sleep apnea and narcolepsy are the most frequent ones (3). Otherwise, according to informal reports of accidents' analysis, about 30-40 percent of road accidents in Iran are because of drivers' fatigue and sleepiness. Currently, up to our knowledge, there is no evidence for the prevalence of sleepiness and fatigue by objective measure-

ments for the drivers and commercial ones with past history of traffic accidents especially fatal ones. Lack of information highlights the need for policy-makers' and authorities' more attention toward drivers' health issues especially commercial ones with more sensitive jobs such as truck and bus drivers. Current implemented standards for drivers' health license in terms of sleep disorders are completing Epworth Sleepiness Scale (ESS) and Snoring, Tiredness, Observed apnea, Blood Pressure, Body Mass Index, Age, Neck circumference, Gender (STOP-BANG) questionnaires; if the driver gets high score in ESS or has high STOP-BANG score, he/she will be required to perform further investigation including an overnight polysomnography. Those with low Apnea Hypopnea Index (AHI) after management of apnea if needed and negative Maintenance Wakefulness Test (MWT) will be qualified to continue their driving. However, several challenges have raised through past years since implementing these regulations. Drivers do not report their symptoms including daytime sleepiness, fatigue, and snoring honestly leading to underestimation of high-risk population for sleep apnea and narcolepsy. Moreover, insurance companies at the present time do not ensure polysomnography test and the most prevalent appropriate treatment modality for drivers [Continuous Positive Airway Pressure (CPAP)].

Therefore, great concern exists regarding undiagnosed and untreated drivers with sleep problems who may lead to fatal tragic accidents. Regarding aforementioned concerns of drivers' health, there is urgent need to a national alarm towards health issues of commercial drivers especially their sleep problems according to worldwide statistics. Furthermore, investing more for objective screening of sleep apnea and treatment of the disease among drivers will save more lives of our compatriots.

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