Sleep Apnea and Public Health Costs: Economic Consequences

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Abstract

Sleep apnea represents a significant public health challenge, primarily due to the high proportion of undiagnosed cases that place a long-term burden on the healthcare system. In addition to its clinical burden, sleep apnea generates substantial economic costs, including direct costs of diagnosis and treatment and indirect costs associated with comorbidities, reduced productivity, and an increased risk of accidents. Analyses indicate that the economic burden of sleep apnea is extremely high, with the costs of untreated disease far exceeding those of diagnosis and therapy. In Italy, the total annual cost is estimated at between EUR 10.7 and 32.0 billion, while additional losses related to reduced quality of life reach up to EUR 9 billion annually. At the same time, the costs of diagnosis and treatment account for a relatively small proportion of the overall burden, indicating substantial underdiagnosis and undertreatment of the disease. Sleep apnea is associated with a range of chronic conditions, including cardiovascular diseases, type 2 diabetes, and depression, which further increase healthcare resource utilization. Furthermore, untreated sleep apnea significantly increases the risk of traffic accidents and reduces work efficiency, resulting in substantial social and economic losses. In the regulatory context, sleep-related breathing disorders have an important impact on road safety, particularly among professional drivers, for whom untreated sleep apnea represents a risk factor for traffic accidents. Timely diagnosis and appropriate treatment of sleep apnea not only improve patient health outcomes but also significantly reduce the overall costs borne by the healthcare system and society.

Keywords: sleep apnea; comorbidities; economics; costs; treatment

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Apneja u spavanju i javnozdravstveni troškovi – Ekonomske posljedice

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Sažetak

Apneja u spavanju predstavlja značajan javnozdravstveni izazov,prvenstveno zbog visoke stope nedijagnosticiranih slučajeva koji dugoročno opterećuju zdravstveni sustav. Osim kliničkog opterećenja, generira značajan ekonomski teret koji uključuje izravne troškove dijagnostike i liječenja te neizravne troškove povezane s komorbiditetima, smanjenom produktivnošću i povećanim rizikom od nesreća. Analize pokazuju da je ekonomski teret apneje u spavanju izrazito visok, pri čemu troškovi neliječene bolesti višestruko nadmašuju troškove same dijagnostike i terapije. U Italiji se ukupni godišnji trošak procjenjuje između 10,7 i 32,0 milijardi eura, dok dodatni gubici kvalitete života dosežu i do 9 milijardi eura godišnje. Istovremeno, trošak dijagnostike i liječenja čini relativno mali dio ukupnog opterećenja, što ukazuje na značajnu poddijagnosticiranost i nedovoljno liječenje bolesti. Apneja u spavanju povezana je s nizom kroničnih bolesti, uključujući kardiovaskularne bolesti, dijabetes tipa 2 i depresiju, što dodatno povećava potrošnju zdravstvenih resursa . Također, neliječena apneja u spavanju značajno povećava rizik prometnih nesreća i smanjuje radnu učinkovitost, što generira velike društvene i ekonomske gubitke. U kontekstu regulative, poremećaji disanja u snu imaju važan utjecaj na sigurnost u prometu, osobito kod profesionalnih vozača, gdje neliječena apneja u spavanju predstavlja rizik za prometne nesreće. Pravovremena dijagnostika i adekvatno liječenje apneje u spavanju ne samo da poboljšavaju zdravstvene ishode pacijenata, već i značajno smanjuju ukupne troškove za zdravstveni sustav i društvo.

Ključne riječi: apneja, komorbiditeti, ekonomija, trošak, liječenje

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