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COMMENTARY

School start time: a public health crisis

Commentary on Danner F, Phillips B. Adolescent sleep, school start times, and teen motor vehicle crashes. *J Clin Sleep Med*. 2008; 4(6):533–535. doi:10.5664/jcsm.27345

Stephen H. Sheldon, DO, FAASM[1,2]; Rafael Pelayo, MD, FAASM[3]

[1]*Northwestern University Feinberg School of Medicine, Chicago, Illinois;* [2]*Sleep Medicine Center, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois;* [3]*Stanford Center for Sleep Sciences and Medicine, Stanford University, Stanford, California*

When Drs. Danner and Phillips published this 3-page article they may not have realized the profound influence their work would have on public policy throughout the nation and the world.[1] Their seminal finding of decreased automobile accidents in a community that delayed school start times has been repeatedly quoted in every school district in the country that has considered changing school start times. When California became the first state in the nation to pass a law promoting healthy sleep for adolescents, these findings were quoted in every public hearing. This work has touched the lives of millions of grateful children.

It is almost taken for granted that adolescents are sleep deprived.[2] In August of 2014, the American Academy of Pediatrics published a statement on this issue.[3] The American Academy of Pediatrics recognizes that insufficient sleep is a public health problem that significantly affects our teens. This public health crisis is at least as significant as efforts regarding drowsy driving for adults. Insufficient sleep is one of the most common, and potentially remediable, health risks in teens. Sleep deprivation during adolescence is due to a variety of complex factors including, but not limited to, a biological increased sleep need that is greater than that of prepubertal children.[4] There is also a biological delay and drift in sleep phase. A third biological factor is altered homeostatic "sleep drive" in which pressure to fall asleep accumulates more slowly during adolescence. Combining these biological factors can delay sleep onset in a teen. Lifestyle demands including, but not limited to, environmental factors, social/developmental requirements, extracurricular activities, homework, after-school jobs, and technology are superimposed on biological factors.

Sleep is as important to our health as food. Significant adverse effects occur when there is cumulative sleep loss. The literature has documented sleep loss in teens resulting in increased risk of obesity, metabolic dysfunction, hypertension, increased risk of stroke, changes in the immune system, high rates of caffeine consumption, nonmedical use of stimulants, lower level of physical activity, and motor vehicle accidents.[5] Indeed, motor vehicle accidents result in significant increased risk for acute morbidity and mortality not only of the teen driver but of passengers and others in these incidents. This paper showed this can be mitigated by delaying school start times for teens. This change resulted in increased sleep and decreased risk of motor vehicle accidents in teens. Since publication, these data have been replicated, providing validated, evidence-based parameters that delaying school start times can decrease motor vehicle accident risk, improve performance, and potentially save lives.[6–8] The authors showed great vision to study the convergence of driving safety with adolescent sleep deprivation. It is important to mention the profound skepticism and even cynicism that was present in 2008 about the effects of delaying school start time. Cynicism that sadly is still present today, but this publication even now helps combat it and will undoubtedly continue to do so in the future as we continue our effort to improve the sleep health of adolescents throughout the world. Just as our small patients can grow to change the world, this short paper changed society.

CITATION

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Address correspondence to: Stephen H. Sheldon, DO, FAASM, Sleep Medicine Center, Division of Pulmonary and Sleep Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago Avenue, Box 43, Chicago, IL 60611; Tel: (312) 227-6875; Email: ssheldon@luriechildrens.org

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