

# **JOINT STATE GOVERNMENT COMMISSION**

General Assembly of the Commonwealth of Pennsylvania

## **SLEEP DEPRIVATION IN ADOLESCENTS: THE CASE FOR DELAYING SECONDARY SCHOOL START TIMES**

**Report of the Advisory Committee on  
Later School Start Times at Secondary Schools**

**OCTOBER 2019**



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## EXECUTIVE SUMMARY

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Public health officials and the medical community at large have declared that a public health crisis of epidemic proportions is affecting American adolescents. Most adolescents do not get enough sleep, leading to a myriad of mental, behavioral, and physical effects, as well as public safety concerns. Adolescent sleep needs are driven by a temporary biological shift in sleep onset and wake times that occurs concurrently with the onset of puberty, and ends in early adulthood. Early school start times run counter to this biological condition, and can contribute substantially to adolescent sleep deprivation.

Insufficient sleep affects adolescent school performance in terms of cognitive function and performance, graduation rates, attendance, and tardiness. Insufficient sleep increases the risk of adolescent motor vehicle accidents, athletic injuries, and other injuries. Insufficient sleep affects adolescent behavioral health in terms of poor self-esteem, and risky behavior, including crime and delinquency. Insufficient sleep affects adolescent mental health in terms of affect and mood, anxiety, depression, and suicidality. Insufficient sleep affects adolescent physical health in terms of higher cardiometabolic disease risk and immune system compromise. These effects can be further intensified by socioeconomic status and racial/ethnic differences. These effects on youth and their scientific bases are discussed at length in this report.

A number of ways to address insufficient sleep in adolescents exist, but the response that garners the most attention, has the greatest potential to impact large numbers of students at the same time, and has been endorsed by numerous professional organizations, is delaying secondary school start times. The American Academy of Pediatrics and the American Medical Association were among the first organizations to call for an 8:30 AM or later start time, and many others followed. Policy Statements from several of these organizations are included in this report.

A review of the status of school start times in Pennsylvania reveals that the majority of Pennsylvania's school districts have start times between 7:30 AM and 7:59 AM. At least eight of the 500 school districts across the Commonwealth have secondary start times of 8:30 AM or later. Overall, charter schools and nonpublic schools have slightly later secondary school start times, but few meet the 8:30 AM or later goal. Further details on these findings can be found in this report.

A survey conducted by the Commission in conjunction with the Pennsylvania Department of Education, as well as additional information provided by the Start Schools Later organization, helped to identify at least 25 school districts that delayed their secondary school start times during the period 2011-2019. At least 28 districts were found to be publicly engaged in researching the matter, and at least 15 more self-identified as having had informal discussions at the administrative level about the suitability of delaying

school start times within their home districts. This report contains information about the timeline and process used by the 25 districts that have delayed their school start times recently, and the current state of the process in the 28 districts publicly contemplating changes.

The Commission's survey also identified common perceived challenges that have been encountered or were anticipated to be encountered in efforts to delay secondary school start times. Among the challenges identified were instructional school day requirements (number of days and hours of school), transportation in general, bus driver shortages, transportation mandates, coordination and logistics, athletics and other extracurricular activities, impact on elementary school students and families, impact on teachers and staff, and other perceived challenges. These challenges have been identified, relevant information about the concerns addressed, and strategies to counter these concerns have also been addressed in this report. Appendix A provides advice for school districts considering a change in secondary school start times from advisory committee members who have successfully navigated the process.

Senate Resolution 417 of 2018 directed the Joint State Government Commission to appoint an Advisory Committee to assist the Commission in a study of the issues, benefits, and options relating to instituting a later school start time in Pennsylvania's secondary schools. The Advisory Committee's most salient recommendation is that Pennsylvania's school districts should consider studying the advisability of changing their secondary school start times to improve the health and welfare of their students.

This report is a consensus document; it does not reflect unanimity of opinion, nor does it reflect an endorsement of all its parts by each individual advisory committee member or the organization the member may represent.

New findings that reinforce the previous science about insufficient sleep and adolescents are released almost daily. More Pennsylvania school districts are announcing efforts to study the advisability of delaying school start times at a similar pace. The resources identified in Appendix C can be useful in identifying further developments in the subject.