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## Policy Analysis Report: Later Class Start Time for Adolescents

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## Policy Analysis Report: Later Class Start Time for Adolescents

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### Introduction

Using Bardach's (2011) eight-fold path as a framework for policy evaluation, this report addresses early school start times in need of change. Across the United States, school start times for middle schools are typically 8:11 a.m. and 8:07 a.m. for high schools (Taie & Lewis, 2022). The American Academy of Pediatrics (2014) recommends a start time after 8:30 a.m. for adolescent students to provide adequate sleep opportunities for better health outcomes. The Center for Disease Control (2015) found that in 42 states, over 75% of K-12 schools in their districts started before 8:30 a.m. Smaller high schools (fewer than 100 students enrolled) characteristically start later at an average of 8:12 a.m. and schools with between 100 and 199 enrolled typically start at 8:15 a.m. (National Center for Education Statistics [NCES], 2020). Further discussion will provide the rationale for a more developmentally appropriate time to begin classes (Meltzer et al., 2021; Meltzer et al., 2022).

### Step 1: Problem Definition

Students today are not getting enough sleep. To meet the state guidelines for minutes of instructional time, school systems must often compromise student sleep needs to provide a schedule that accommodates all stakeholders of a campus and the community. Center for Disease Control and Prevention (2014) reported that

the majority of secondary schools start before 8:30 a.m.: 93% for high school campuses and 83% for middle schools. Reasons for earlier campus start times include the need for earlier release for students to work after school jobs, participate in extracurricular activities, provide after school care for younger siblings, and work around caregiver work hours and bus schedules. Historically, multiple bills between 1997 and 2019 (ZZZ's to A's Act, 2019; Start School Later, 2019) have been brought to Congress to request action legislating later school start times, most introduced by Rep. Zoe Lofgren (D-CA), but each died after being introduced. Delayed start to the school day, after 8:30 a.m., would provide a better environment for teens to get their needed sleep (Meltzer et al., 2021; Meltzer et al., 2022).

Insufficient sleep also occurs more frequently for certain student groups. For example, "Female students, students in 11th and 12th grades, and black students have the highest risk for insufficient sleep" (Eaton et al., 2010, p. 400). In 2021, the United States Surgeon General, Vivek Murthy, M. D., released an advisory, *Protecting Youth Mental Health*, identifying youth most at risk for mental health struggles in the wake of the Covid-19 pandemic. He named students in marginalized communities and minoritized ethnic groups at higher risk for mental health obstacles and crises. In the report, Murthy (2021) called on educators to "create positive, safe, and affirming school environments," including "a later start to the school day" to benefit students' health and wellness (p. 19). Furthermore, research points to early start times as a factor "[contributing] to total sleep time, including employment status, social interaction,

caffeine consumption, [and] sleeping disorders” (Eaton et al., 2010, p. 401). Additionally, inadequate sleep put students at higher risk to participate in conduct related to school violence (Hildenbrand et al., 2013). In fact, the study found that,

Students with insufficient sleep had higher odds of engaging in the majority of school violence-related behaviors examined compared to students with sufficient sleep. Males with insufficient sleep were at increased risk of weapon carrying at school, a finding not observed for females with insufficient sleep. White students with insufficient sleep had higher odds of missing school because of safety concerns, a pattern that did not emerge among Black and Hispanic/Latino students. (Hildenbrand et al., 2013, p. 408)

Thus, school districts that implement later start times could have better student health outcomes when students get more sleep on school nights.

## Step 2: Provide Evidence

States and lawmakers have noticed the need for later start times. California and Florida (Start School Later, 2019) signed into law that secondary schools would not start before 8:30 a.m. (Middle School and High School Start Times, 2023; Pupil Attendance: School Start Time, 2019). Connecticut designated funding in Senate Bill 1 (An Act Concerning Childhood Mental and Physical Health Services in Schools, 2022) to address early start times for public schools. Lawmakers in Indiana (Various Education Matters, 2016),

Maryland (Task Force to Study Starting Times in Maryland Public Schools, 2014), New Jersey (An Act Establishing a Pilot Program on Later School Start Times for High School Students, 2020) and Pennsylvania (State Resolution 417, 2018) all called for studies to investigate the issue of school start times in public schools.

Research supports the need for students to get adequate sleep, which leads to beneficial academic and social behaviors (Wheaton et al., 2016; Thacher & Onyper, 2016), while inadequate sleep leads to poor concentration and memory function (Curcio et al., 2006). Sleep science also indicates the incompatibility of early school start times with adolescent sleep rhythms (Kirby et al., 2011). A large study in Singapore (Lo et al., 2018) calculated the benefits of a 45-minute later class start time, which resulted in greater well-being overall for the participants between grades seven and 10. Another finding in sleep studies for elementary students showed that earlier start times for the younger students did not have a negative impact on sleep or sleepiness in school, compared to middle and high schoolers (Meltzer et al., 2021; Meltzer et al., 2022).

Furthermore, a later start time “improves the health and well-being of adolescents, [...] healthy start times contribute to increased sleep opportunity for [middle school] and [high school] teachers and improved daytime functioning for [high school] teachers, with changed start times having no significant effect on elementary school teachers” (Wahlstrom et al., 2023, p. 128). Thus, teachers who work with high school students also benefitted from a later start time.

## Discussion

Although later start times lead to better outcomes for adolescents, unfortunately budget constraints that require buses to be used by multiple campuses, resistance to change and other factors lead to maintained early start times against the best practice and advice of medical professionals. Other factors such as parental work schedules, students with after school jobs, teens as after school caregivers for younger siblings and extracurricular club and sports practice and travel schedules potentially impact the viability of a later start time. Some schools have implemented alternatives to changing the school start time, as discussed in the following section.

### Step 3: Offer Alternatives

For many school systems, starting the secondary campuses after 8:30 would mean less anxiety and stress for students (related to lack of sleep), later pick-up times for parents that work later in the day and a developmentally appropriate school schedule for teens (Metzer et al., 2021; Metzer et al., 2022; Thacher & Onyper, 2016; Wahlstrom et al., 2023). Another alternative to the current start time is an extended school day, which allows for more flexibility to take additional classes or participate in extracurricular activities. Instead of extracurricular activities as an optional out-of-school event, students could have an extended school day that allowed for all students to participate in enrichment and additional instructional time. This option would create more flexibility for when students arrive and finish at school campuses; however, it would not address the sleep issue.

Other unconventional scheduling strategies (Sellors, n.d.) include a four-day week, with the fifth weekday reserved for independent study, more in-depth study time, rest and recovery from the demands of the rigid school schedule. This would require longer days and an extension beyond the 180-day previous standard. The four-day week could provide space for creative enrichments, field trips and community internships, opening up students' opportunities to participate in the community in new ways. In Texas, for example, 963 districts under the designation of District of Innovation (Texas Education Agency, 2022) have some flexibility in reaching the current requirement of 75,600 minutes per school year, if the campus meets the standard requirement over the school year, such as Alvarado Independent School District (Alvarado ISD, 2022).

### Step 4: Criteria Selection

In evaluating the multiple alternatives to the current start time, how efficient, equitable, and helpful would alternative schedules and start times be for all stakeholders (Bardach, 2011)? What unintended consequences might arise? For the later start time after 8:30 a.m. parents would have more flexibility in working later hours, but caregivers who depend on dropping students off early would need an alternative. In some districts, the middle and high school level buses are shared between other elementary campuses. Thus, a later start time could encourage more bus riders in secondary schools because parents need to leave for work before the students need to arrive at school. This would require more buses and an increase in the current transportation budget.

Choosing an extended school day could create the chance for schools to stagger start times for students. The extended school day also could provide options for students who might need support services. In England, a case study (Rose et al., 2009) of two secondary extended schools showed a positive influence of the extended care based on integrating social service agencies in schools. This could be a future endeavor that begins with establishing a later start time.

Implementing a four-day week with a later start time could work well for secondary students but create scheduling conflicts for the district if families have students at multiple campuses. Furthermore, this calendar at elementary schools might strap parents with difficulty finding childcare, and students experiencing food insecurity might be unduly affected (National Conference of State Legislatures, 2019). More research and data analysis are needed from the states that currently employ this schedule: Colorado, Oregon, Montana and Oklahoma.

### **Step 5: Outcome Prediction**

Some schools have a year-round school schedule that usually provides 45 days of instruction and 15 days off (National Education Association, n. d.). This schedule seeks to offset summer learning loss and help students retain their academic knowledge by giving shorter frequent breaks without the long summer months that most schools still take off. The year-round school changes the hypothetical outcome of a fully rested student at the end of summer but could provide a more spread out version of the rested summer schedule, where students could sleep longer on breaks more

frequently over the school year. The year-round schedule could offer the flexibility needed to fully implement later start times for adolescents.

Internationally the year-round model is popular but in the United States it has not caught on as a common school schedule choice for communities. Certainly, for some schools this schedule also could include students attending schools at different times by staggering start times, allowing for more students to be served in one school building. However, using this calendar for the secondary campuses would create problems if not implemented throughout the district, particularly concerning siblings or school children of district teachers. Furthermore, the research has not fully answered the question of whether achievement is improved with this model (McMullen & Rouse, 2012). The Appendix provides policy alternatives to an early start time and proposed sleep impact, expense increases, and impact on extracurricular activities, caregivers and districts.

With a start time after 8:30, the typical American middle schoolers would get approximately 19 more minutes of sleep per school day, and high schoolers will get about 23 more minutes (Taie & Lewis, 2022). More students might ride the bus daily because the buses would run later. Furthermore, research from the criminology field (Semenza et al., 2019) reported that later start times for teens would lead to enhanced self-control and improved school performance, while also decreasing time spent with peers in unmonitored situations, since the school day would also end later, leading to fewer instances of delinquent behavior. Likewise, a later start time would

result in fewer sleepy teenage drivers on the roads.

### **Step 6: Weighing the Options**

Keeping the average scheduled start time at 8:07 for high schools and 8:11 a.m. for middle grade campuses would continue to allow students to complete the academic day around 3:45 p.m. (NCES, 2020). This timeframe allows the students the freedom to pursue part-time jobs, greater daylight hours for outdoor activities, and a longer span of time for hobbies and out-of-school interests. By changing the ending time to around 4:15 p.m., traffic congestion, school zone traffic violations, and possibly accidents could increase. There would be less daylight hours for after school practices, although many practice facilities have lighting.

Secondary students who serve as after school caregivers or babysitters would not be available as early, which could affect elementary school students and their parents. Currently, after-school support meets some of the needs of students, although most students in secondary schools do not use the after-school care services. Parents with later work shifts would not necessarily benefit from a later start time and could have more difficulty finding appropriate care for their students after school.

### **Step 7: Choose the Strongest Policy**

Consistent research supports a later start for the school day for teenage students (Au et al., 2014; Curcio et al., 2006; Kirby et al., 2011; Lo et al., 2018; Semenza et al., 2019; Wheaton et al., 2016), based on sleep needs and adolescent development. Some school districts employed early hour school options, such as zero hour with a first period

start time after 8:30 a.m., but the current start time policies across the states must be amended to a researched based later start time after 8:30 a.m. (Metzer et al., 2021; Metzer et al., 2022; Thacher & Onyper, 2016; Wahlstrom et al., 2023).

### **Step 8: Share the Story**

To conclude with Bardach's path to policy analysis (2011), consider one mother's journey to help her daughter in a difficult season of high school as an exemplar of sharing the story. Representative Zoe Lofgren (D-CA) (KQED, 2014) began her quest to bring later start times to campuses after her daughter's sleep habits radically changed as she developed into a teenager. As a parent Lofgren consulted sleep experts at Stanford University and discovered the early school day was exacerbating the problem. Next, she proposed that Congress conduct a study to determine the relationship between the beginning of the school day and student achievement. Although federal mandates have not passed, California and most recently Florida (Start School Later, 2019) now have set a precedent that secondary schools may not start before 8:30 a.m. (Middle School and High School Start Times, 2023; Pupil Attendance: School Start Time, 2019), thanks in part to Rep. Lofgren's personal vision of the importance of sleep for adolescents. Although Florida stipulated that middle schools may not begin before 8:00 a.m., this movement across the states must inspire more activism toward a standard of beginning schools at a developmentally appropriate time for adolescents. In the same manner, this article seeks to share the story of how vital sleep is for teens and how schools might support students through implementing later start

times. Now is the time to carry this vision forward in our communities for our students' best interests.

### Conclusion

Middle and secondary students need quality sleep and schools potentially can contribute to the quantity of their sleep by implementing policies of later school start times. A statement released by the Members of the American Academy of Sleep Medicine (Paruthi et al., 2016) recommended that,

Children 6 to 12 years of age should sleep 9 to 12 hours per 24 hours on a regular basis to promote optimal health. Teenagers 13 to 18 years of age should sleep 8 to 10 hours per 24 hours on a regular basis to promote optimal health (p. 1549).

Teens having better access to sleep quantity is a goal for school districts and communities that considers students' health and wellbeing and physical and emotional development.

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## Appendix

### Proposed Impact of Policy Alternatives to Early School Start Times for Adolescents

Policy Alternatives	Maximize sleep impact	Minimize expense	Extracurricular activities outcomes	Caregiver impact	District impact
Later start time (after 8:30 a.m.)	Teens get more sleep per night	Transportation costs increase	Pushes back start of games, practices, instructional time interference	Parents working early or late shifts have difficulty, more busing needed	Elementary start earlier, traffic flow improved
Extended school day (staggered start times)	Some teens get more sleep, competitive advantage	Transportation, utilities, teacher pay increases	More time for extracurriculars at school, less flexibility for after school jobs	Parents have more options when the students start and end school	Flexibility for families to choose start times best for individual families
4-day school week	Teens get long weekend, personal study day, sleep not impacted until end of week	Teacher pay increases with longer work schedules	Extracurricular shift to off day, or after school options shortened	Parents would need options for student care on the off day	Problematic if not adopted by whole district
Year-round school (ex. 45 days on, 15 days off)	Sleep impacted by more spread out breaks over the year	Utilities costs increase with school open through hot summer months	Multiple breaks interfere with sports seasons, continuity of practicing	Parents would need options for student care on the breaks	Problematic if not adopted by whole district