



Healthy School Start Time Presentation & Recommendations

School Start Time Steering Committee

February 8, 2022

Overview



- Understanding normal adolescent sleep patterns
- The consequences of sleep deprivation in adolescents
- Other factors affecting adolescent sleep patterns
- Recommendations
- Strengths, Weaknesses, Opportunities, & Threats (SWOT) Analysis



Adolescent Sleep Patterns
&
Early School Start Times

Understanding Normal Adolescent Sleep Patterns



- Sleep scientists and pediatricians recommend 8-10 hours of sleep for teenagers.
- Circadian rhythm changes due to the onset of puberty in teenagers.
- Melatonin (brain hormone that causes one to feel sleepy) shifts causes delays in when teens begin to feel **sleepy**.
 - Melatonin production in teen bodies begins at approximately 11 PM
 - Melatonin production in adult bodies begins at approximately 9 PM

- At the high school level in CHPS, there are 2,963 children transported by bus.
- 58% (1,730) have an AM pick up prior to 7 AM.
- The earliest AM pick up is 6:20 AM



- Let's do the math

- HS student who falls asleep at 11 PM, wakes at 6 AM = **7 hours of sleep**

this is equivalent to:

- Adult who falls asleep at 9 PM, sleeps for 7 hours = **4 AM wake up time**

The Consequences of Sleep Deprivation in Adolescents

- Chronic sleep deprivation in teens is an epidemic in our country!
- Only 10% of Teens obtain 8-10 hours of sleep recommended by sleep scientists and pediatricians.
- Rapid Eye Movement (REM) Sleep/Paradoxical Sleep
 - Dreaming happens during this time.
 - Most closely associated with learning, memory consolidation, emotional processing.
 - On average, one will have 3-5 REM cycles per night, with each episode getting longer as the night progresses.
 - The final cycle may last roughly an hour and it occurs before one awakes.
 - Failure to complete this cycle may negatively impact the brain's ability to learn and create new memories.
 - A lack of REM sleep is often a sign of sleep deprivation.



- Chronic sleep deprivation in teens has been correlated with:
 - The overuse of caffeine consumption
 - Irritability, mood swings, lack of motivation
 - Lack of concentration, short attention spans, and ADHD type of behaviors
 - Mental health concerns including substance use, depression, and suicide
 - Increased risk of heart disease, obesity, and diabetes.
 - Increased risk for car accidents
 - *Studies have shown that teens driving on 5 hours or less sleep is the equivalent of an individual with a Blood Alcohol Content above the legal level.*
- *The American Pediatric Association recommends that high school start times are no earlier than 8:30 AM.*
- *The State of California passed a law requiring all high schools to start at 8:30 AM or later by 2022.*

The Bottom Line



- In September 2021, 3,950 students participated in a survey regarding their sleep patterns and perceptions toward school start times.
 - 6% of students surveyed indicated that they obtain the recommended 8-10 hours of sleep nightly.
 - 93% of students surveyed indicated that their sleep is interrupted every morning in being woken up for school.
 - 86% of students surveyed aligned with the research on melatonin onset as they indicated going to sleep at 11 PM, 12 PM, and some after midnight.
 - 92% of students surveyed reported feeling sleep deprived while in school.
 - 61% reported feeling sleep deprived at least 3-4 days per week
 - 35% reported feeling sleep deprived every day of the week

- In September 2021, 2,918 parents of children at the secondary level participated in a survey regarding their children's sleep patterns and perceptions toward school start times.
 - 16% of parents surveyed indicated that they obtain the recommended 8-10 hours of sleep nightly.
 - 90% of parents surveyed indicated the need to wake their children every morning for school.
 - 70% of parents surveyed aligned with the research on melatonin onset as they indicated their children go to sleep at 11 PM, 12 PM, and some after midnight.
 - 84% of parents surveyed reported their children feeling sleep deprived while in school at least once per week.
 - 46% reported feeling sleep deprived at least 3-4 days per week
 - 26% reported feeling sleep deprived every day of the week

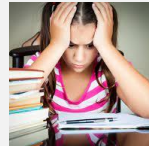
Other Factors Affecting Sleep Patterns in Teens



Employment



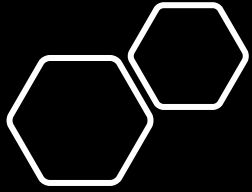
After school activities



Extensive homework and studying



Social networking and Screen Time



Recommendations

- Note: The start/end times at Barclay Early Childhood Center will remain unaffected.



Recommendation 1

- Moves the high school start and end time back by 45 minutes.
 - The instructional day remains unchanged.
- Moves the middle school start and end time forward by 15 minutes.
 - The instructional day remains unchanged.
- Moves the elementary start and end time back by 15 minutes.
 - The instructional day remains unchanged.

Level	Proposed Start Time	Proposed End Time
High School	8:15 AM	3:15 PM
Middle School	7:45 AM	2:45 PM
Elementary School	9:15 AM	3:45 PM

Level	Current Start Time	Current End Time
High School	7:30 AM	2:30 PM
Middle School	8:00 AM	3:00 PM
Elementary School	9:00 AM	3:30 PM

Strengths	Weaknesses	Opportunities	Threats
<p>Achieves the goal of a later start time for HS aged students.</p> <p>Preserves the instructional time allotments.</p> <p>Busing buffers of time remain consistent.</p> <p>Minimal change to the start and end times at other levels.</p> <p>Provides for better mental health for students.</p> <p>Potential for academic gains exist.</p> <p>Later start times have been correlated with a reduction in teen automobile accidents.</p> <p>Closes 75% of the gap between current start times, and researchers' consensus time of 8:30AM</p>	<p>Athletics may have to begin later.</p> <p>Late bus runs will be later.</p> <p>Elementary start time may require before school care. It may cause a strain on some families.</p> <p>Elementary lunches may be impacted.</p> <p>Students that work may be impacted due to the later dismissal time.</p> <p>Does not fully meet the 8:30 a.m. goal based on the research consensus.</p>	<p>All levels of schooling adjust times concurrently.</p> <p>Examination of the structure of the day exists.</p> <p>Expand before/after school care for students.</p>	<p>HS serving as the 2nd bus run of the day potentially may cause HS students to arrive to school late.</p> <p>Elementary to middle school transition may be a drastic change for students.</p>

Recommendation 2

- Moves the high school start and end time back by 45 minutes.
 - Maintain the current time allotments for the instructional periods.
 - Revise the current 50-minute lunch/homeroom model to a 30-minute unit lunch.
 - Provide Office Hours (20 minutes) for all students to occur immediately following the last period of the day.
- Moves the middle school start and end time forward by 15 minutes.
 - The instructional day remains unchanged.
- Moves the elementary start and end time back by 15 minutes.
 - The instructional day remains unchanged.

Level	Proposed Start Time	Proposed End Time
High School	8:15 AM	3:15 PM
Middle School	7:45 AM	2:45 PM
Elementary School	9:15 AM	3:45 PM

Level	Current Start Time	Current End Time
High School	7:30 AM	2:30 PM
Middle School	8:00 AM	3:00 PM
Elementary School	9:00 AM	3:30 PM

Strengths	Weaknesses	Opportunities	Threats
<p>Achieves the goal of a later start time for HS aged students.</p> <p>Preserves the instructional time allotments.</p> <p>Busing buffers of time remain consistent.</p> <p>Minimal change to the start and end times at other levels.</p> <p>Provides for better mental health for students.</p> <p>Potential for academic gains exist.</p> <p>Later start times have been correlated with a reduction in teen automobile accidents.</p> <p>Closes 75% of the gap between current start times, and researchers' consensus time of 8:30AM</p>	<p>Athletics may have to begin later.</p> <p>Students may not report to assigned locations</p> <p>Late bus runs will be later.</p> <p>Elementary start time may require before school care. It may cause a strain on some families.</p> <p>Elementary lunches may be impacted.</p> <p>Students may not have enough time to purchase their lunch and eat comfortably.</p> <p>Does not fully meet the 8:30 a.m. goal based on the research consensus.</p>	<p>Teachers are available to provide check ins, support for students as part of the schedule.</p> <p>Opportunities for affinity groups and clubs exist during the office hours.</p> <p>All levels of schooling adjust times concurrently.</p> <p>Examination of the structure of the day exists.</p> <p>Expand before/after school care for students.</p> <p>Expand locations for food vending (ex. Library, gymnasium, designated hallways)</p>	<p>HS serving as the 2nd bus run of the day potentially may cause HS students to arrive to school late.</p> <p>Elementary to middle school transition may be a drastic change for students.</p> <p>Consolidation of the lunch periods pose challenges in supervision, feeding, etc.</p>

Recommendation 3

- Moves the high school start time back by 69 minutes and end time back by 45 minutes
 - Maintain the current time allotments of the instructional periods.
 - Revise the current 50-minute lunch/homeroom model to a 30-minute unit lunch.
 - Achieves the minimum 8:30 AM start time recommendation.
- Moves the middle school start and end time forward by 15 minutes.
 - The instructional day remains unchanged.
- Moves the elementary start and end time back by 15 minutes.
 - The instructional day remains unchanged.

Level	Proposed Start Time	Proposed End Time
High School	8:39 AM	3:15 PM
Middle School	7:45 AM	2:45 PM
Elementary School	9:15 AM	3:45 PM

Level	Current Start Time	Current End Time
High School	7:30 AM	2:30 PM
Middle School	8:00 AM	3:00 PM
Elementary School	9:00 AM	3:30 PM

Strengths	Weaknesses	Opportunities	Threats
<p>Provides a significant impact on achieving the goal of a later start time for HS aged students.</p> <p>Preserves the instructional time allotments.</p> <p>Provides for better mental health for HS aged students.</p> <p>Potential academic gains exist.</p> <p>Later start times have been correlated with a reduction in teen automobile accidents.</p> <p>Meets the 8:30 a.m. goal based on the research consensus.</p>	<p>Athletics may have to begin later.</p> <p>Late bus runs will be later.</p> <p>Elementary start time may require before school care. It may cause a strain on some families.</p> <p>Elementary lunches may be impacted.</p> <p>Students may not have enough time to purchase their lunch and eat comfortably.</p>	<p>All levels of schooling adjust times concurrently.</p> <p>Examination of the structure of the day exists.</p> <p>Expand before/after school care for students.</p> <p>Expand locations for food vending (ex. Library, gymnasium, designated hallways)</p> <p>Provides additional time between middle and high school bus runs.</p>	<p>HS serving as the 2nd bus run of the day potentially may cause HS students to arrive to school late.</p> <p>Elementary to middle school transition may be a drastic change for students.</p> <p>Consolidation of the lunch periods pose challenges in supervision, feeding, etc.</p> <p>Reduces time for the elementary bus runs.</p>

Recommendation 4

- Moves the high school start and end time back by 25 minutes.
 - Maintain the current time allotments for the instructional periods.
 - Maintain the current model for lunch/homeroom
- Moves the middle school start and end time forward by 25 minutes.
 - The instructional day remains unchanged.
- Moves the elementary start and end time back by 25 minutes.
 - The instructional day remains unchanged.

Level	Proposed Start Time	Proposed End Time
High School	7:55 AM	2:55 PM
Middle School	8:25 AM	3:25 PM
Elementary School	9:25 AM	3:55 PM

Level	Current Start Time	Current End Time
High School	7:30 AM	2:30 PM
Middle School	8:00 AM	3:00 PM
Elementary School	9:00 AM	3:30 PM

Strengths	Weaknesses	Opportunities	Threats
<p>Achieves the goal of a later start time for HS aged students.</p> <p>Preserves the instructional time allotments.</p> <p>Busing increments of time remain consistent.</p> <p>Minimal change to the start and end times at other levels.</p> <p>Provides for better mental health for HS aged students.</p> <p>Potential academic gains exist.</p> <p>Later start times have been correlated with a reduction in teen automobile accidents.</p>	<p>Elementary and middle start/end times change significantly.</p> <p>Elementary start time may require before school care. It may cause a strain on some families.</p> <p>Elementary lunches may be impacted.</p> <p>Childcare responsibilities may be impacted.</p> <p>Closes less than 50% of the gap between current start times and researchers' consensus recommendation of 8:30 a.m.</p>	<p>All levels of schooling adjust times concurrently.</p> <p>Examination of the structure of the day exists.</p> <p>Expand before/after school care for students.</p>	<p>Athletics may be impacted.</p> <p>Elementary school students may arrive home significantly later if delays occur.</p>

Additional Considerations



- Students with Special Needs
 - Students in special education need time to forge relationships and regroup before heading back to class. 30-minute lunches can be a challenge to get their lunch, eat, socialize and reorganize.
 - Students from ages 3-21 who take a small private bus due to their needs are asked to have an adult at home when they leave and arrive each day. Bus drivers are not to leave them at home without an adult there. These times changes will need to be shared at least 6 months in advance so families can work with employers to accommodate their employment schedules.
 - Many students have difficulty with transition and time schedules. Social stories, guidance/psychologist consultations and behavior consultations with students and families will be beneficial to assist families with these changes at least 6 months in advance. Repeated reminders will help our students transition easily in September. Impacts on Athletics
- Impacts on Transportation
- Budgetary Implications
- Overall, Safety, Health & Welfare of Students.

References

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Questions?