







Sleep and School Start Times

A REVIEW OF FINDINGS AND SCENARIOS
DOVER-SHERBORN START TIMES TASK FORCE

Presented April 9, 2019





A Brief History of the Work of the School Start Times Task Force

- 
- 
- **Reviewed** work of previous DS Start Time Committee
 - Comprehensive **Science and Studies Research**
 - **Studied Systems** that made change – what, how and why locally, US and abroad including detailed peer districts and MA superintendent survey
 - Unanimously concluded **DS change necessary** in response to science and student risk factors
 - **Education and Communication** with community on findings (>21 stakeholder meetings including faculty and students, expert speakers, web page, tv show, 1:1s and email for feedback)
 - Developed proposed DS **scenarios**
 - **Surveyed** students, staff, and families




Research of
Science
Showed...

- The circadian rhythm of adolescents is very different from all others –their biological sleep and wake time drives **shift 2 hours later – to 11pm** - than all age groups and **cannot be behaviorally manipulated**. Younger children tire earlier and wake earlier
- The American Academy of Pediatrics + dozens of medical/public health/educational associations recommends a **minimum of 8-10 hours of sleep** for teenagers and urge that secondary schools should not begin before 8:30 am
- DS students report not getting enough sleep -**6.75 hours** per Challenge Success survey
- Sleep is when the brain rejuvenates; deepest adolescent sleep 4:30 am – 6:30 am when the brain processes prior day's information, storing it into long term memory
- Lack of sleep is highly correlated with **emotional** (anxiety, depression, decreased self esteem, inattention, increased stress...), **physical** (fatal car accidents, athletic injuries, obesity...) incidence in adolescents



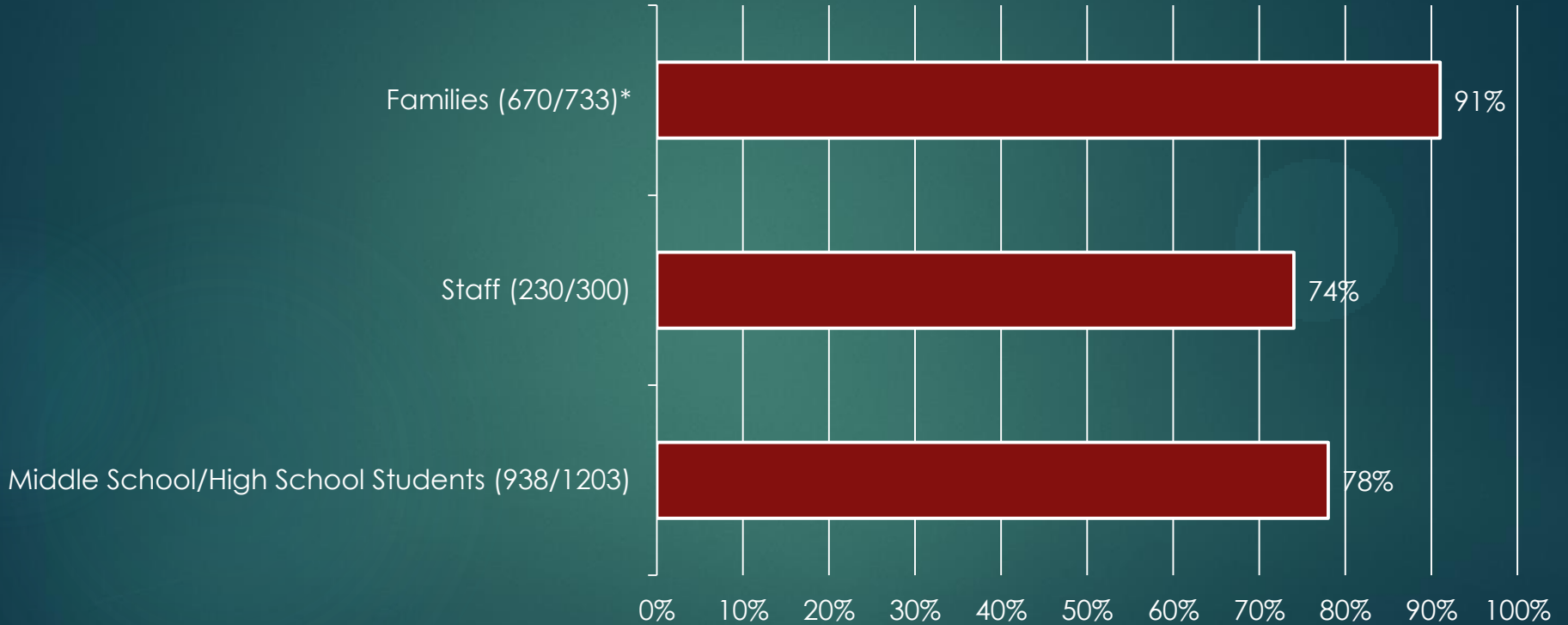
An Examination of Other Schools Showed...

- 
- Schools across the country have made changes with **proven positive effect in sleep and outcomes** (Seattle Study most widely reported)
 - Schools within the **Tri Valley League** have made changes to their start times recently and others are studying
 - Confirmed over **35%** of MA secondary schools **studying or have made change** (vs. 25% not and 40% status unknown)
 - The entire **Middlesex League committed to changing start times** in response to science; **MIAA endorsed 8:30 or later start times**
 - **All of Boston Magazine's top ten have either made a change (6) or are considering a change (4)**

Survey Results



Survey Participation*



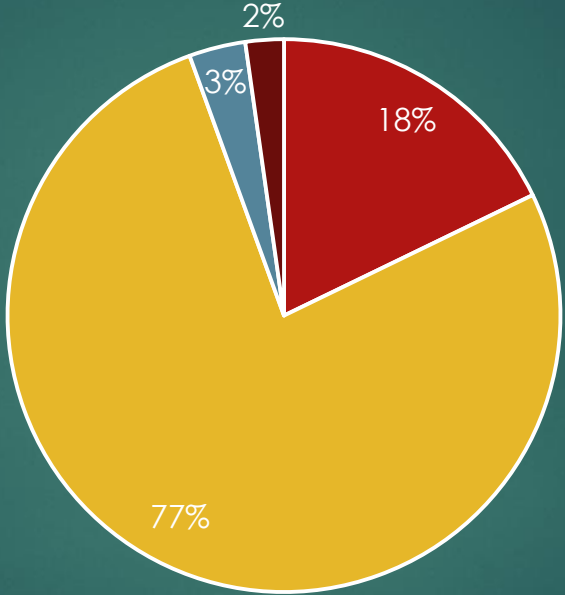
*Denominator = DS households surveyed; possible more than 1 respondent from multiple households



Student Surveys

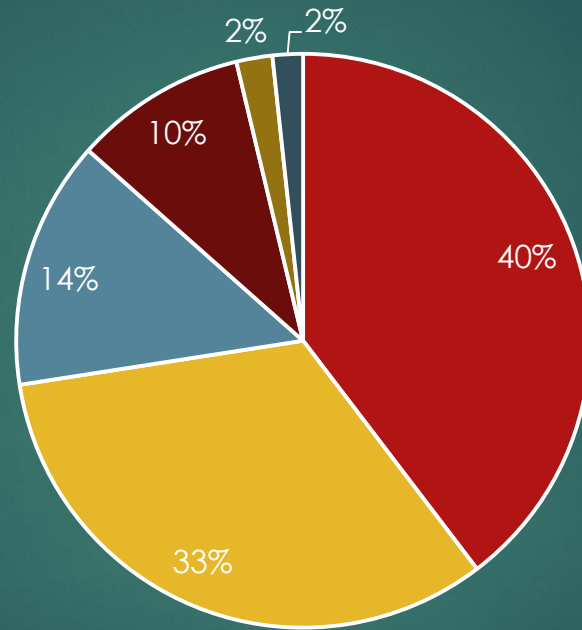
938 Participants DSMS/DSHS

Tiredness at School (n=938)



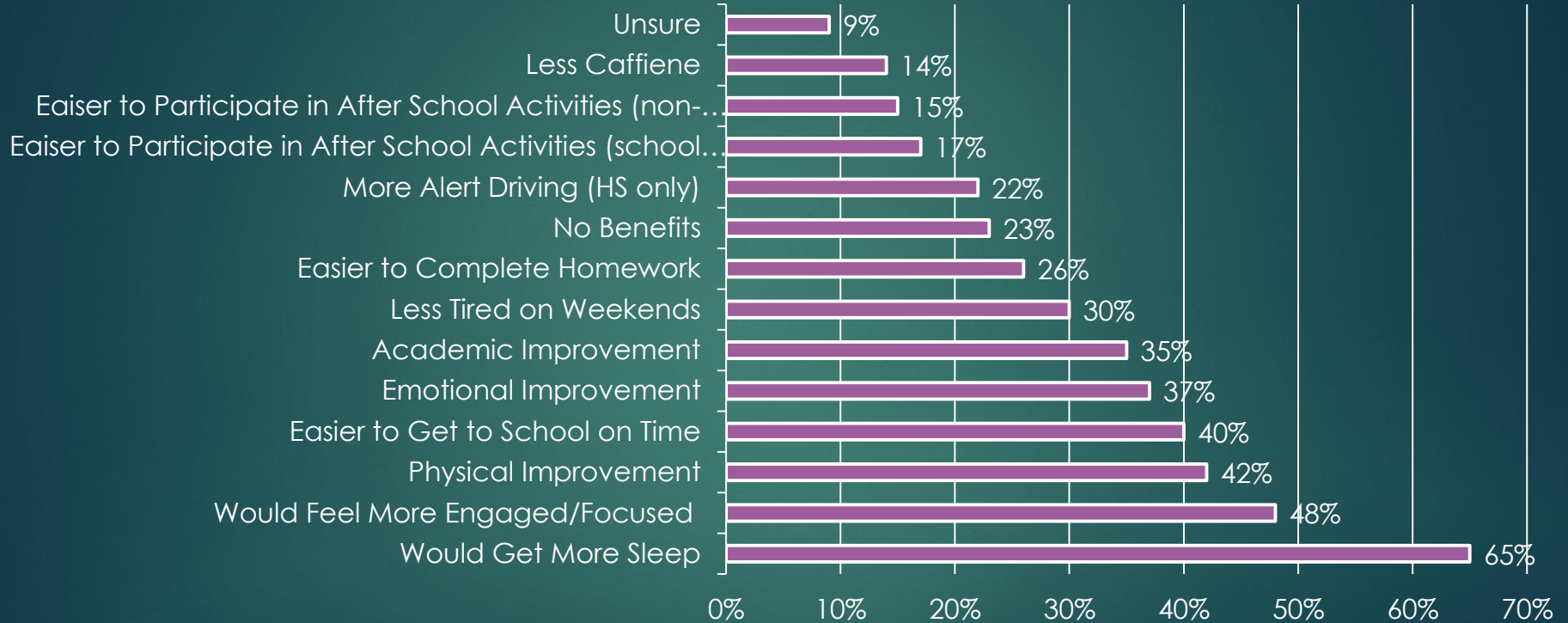
■ Never/Almost Never ■ 1-5 School Days/Week ■ Unsure ■ Other

Nightly Homework(n=936)

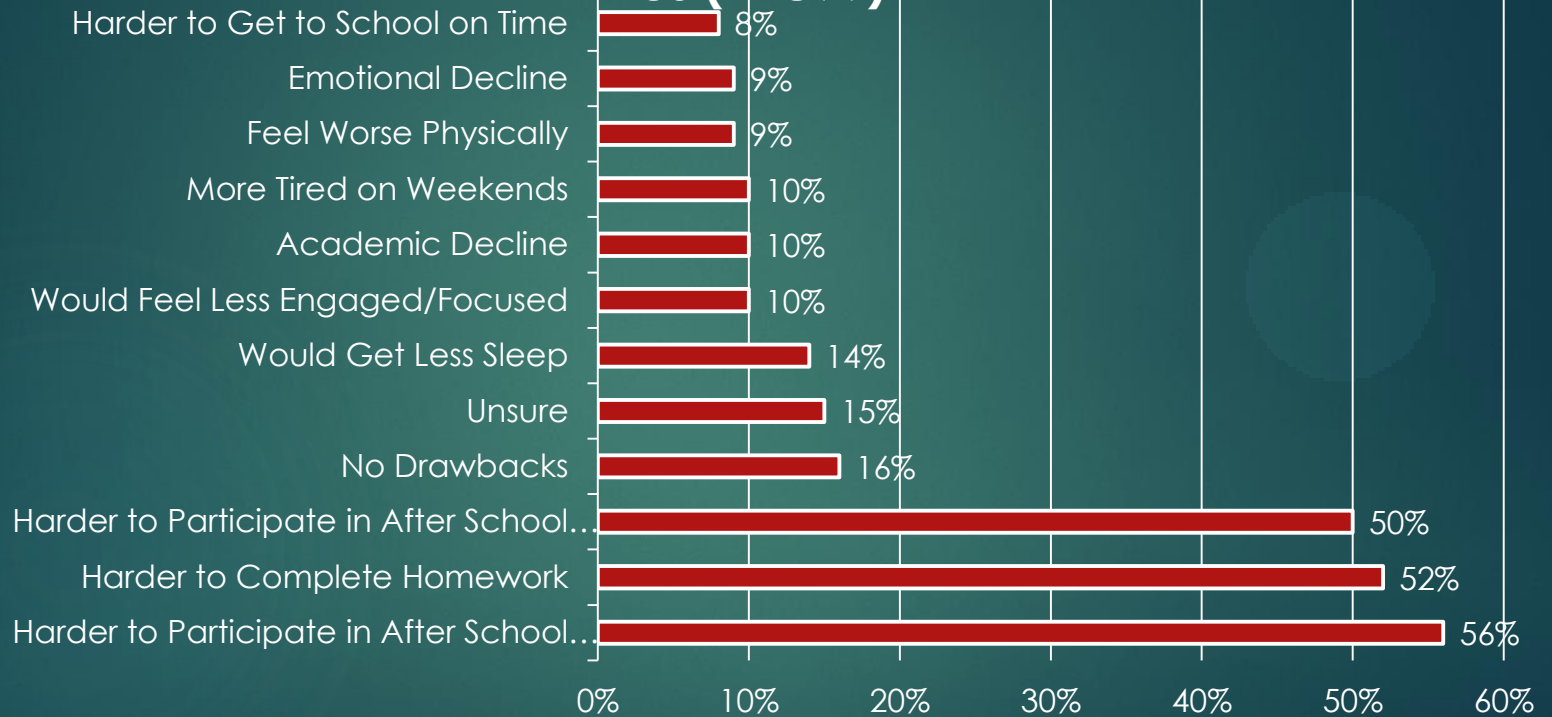


■ 0-2 Hours ■ 2-3 Hours ■ 3-4 Hours ■ >4 Hours ■ Unsure ■ Other

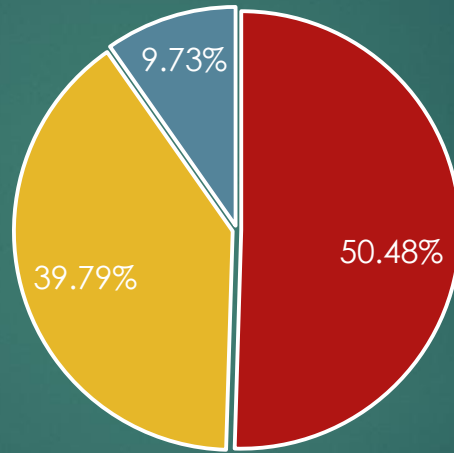
Potential Benefits to Later Start and End Times (n=936)




MS and HS Potential Drawbacks to Later Start and End Times (n=899)



Support of Closer Alignment With AAP Recommendation of 8:30 or Later Start Time (n=935)

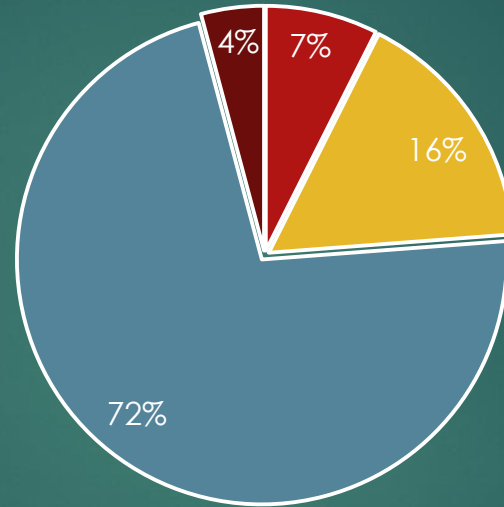


■ Yes ■ No ■ Other



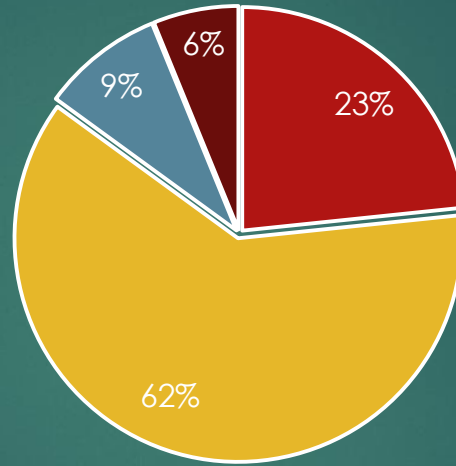
Staff Surveys
230 Participants

Relying on Childcare (n=458: before- and after school consolidated)



■ Yes - Relative/Babysitter ■ Yes - Daycare/School-based ■ No ■ Other

30 Minute "Shift" Later - Impact on Childcare (n=230)



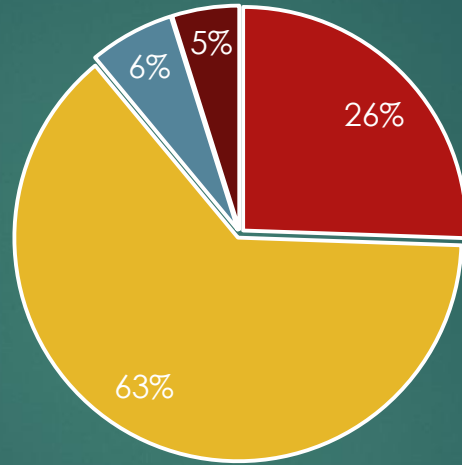
■ Would need to add/modify

■ Would not need to add/modify

■ Unsure

■ Other

“Flipping” of Start Times Impact on Childcare (n=230)



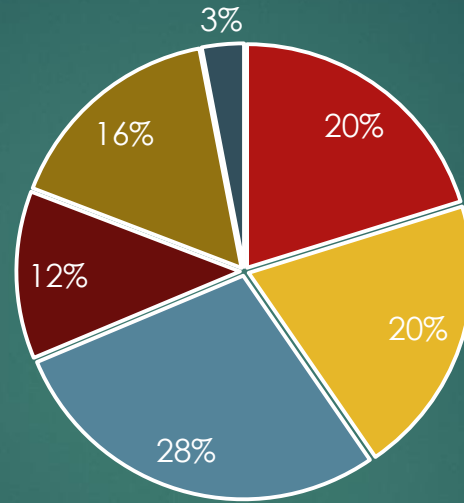
■ Would need to add/modify

■ Would not need to add/modify

■ Unsure

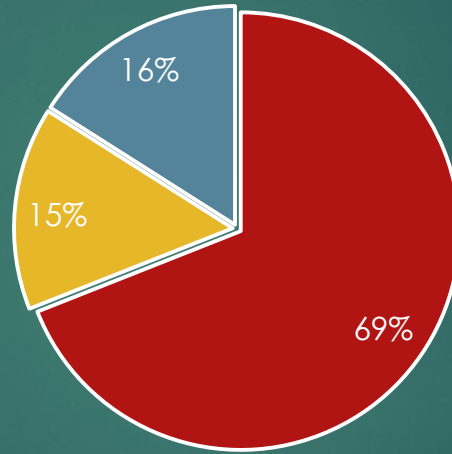
■ Other

Would Later Dismissal Impact After School Supervisory Role (n=99; 44% respondents have after school supervisory role)



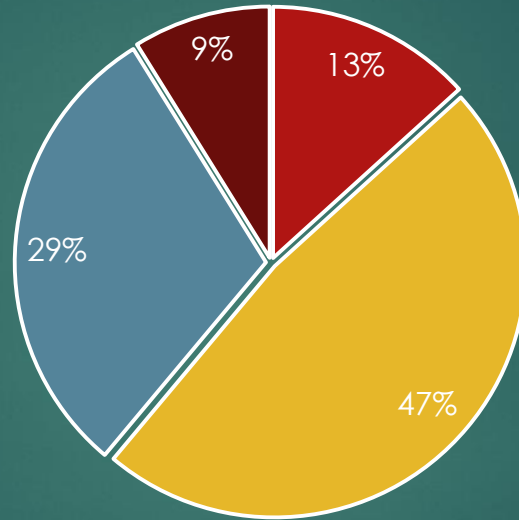
- Easier or little to no difference
- Somewhat more challenging
- Much more challenging
- Impossible
- Unsure
- Other

Support of Closer Alignment With AAP Recommendation of 8:30 or Later Start Time (n=226)



■ Yes ■ No ■ Other

Further Staff Data: Start Time Activity in Home District



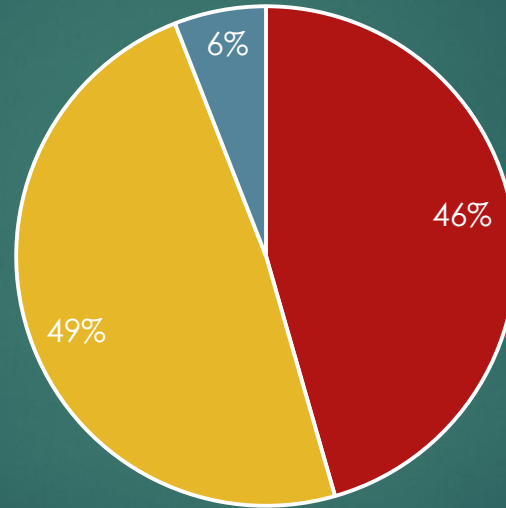
- Changed Start Times
- Considering Change
- Not Considering Change
- Don't Know Status



Family Surveys

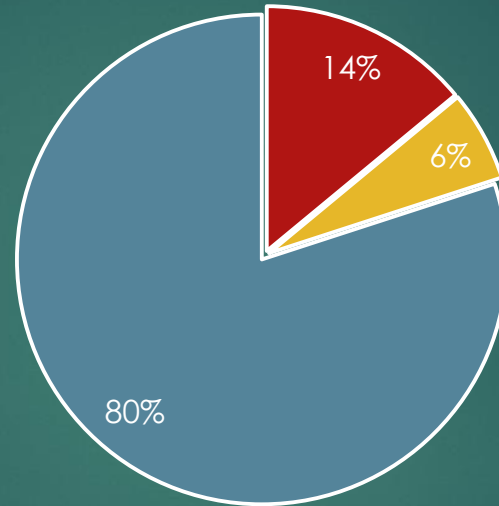
670 Participants

Do Your Children Get Appropriate Amount of Sleep (n=668)



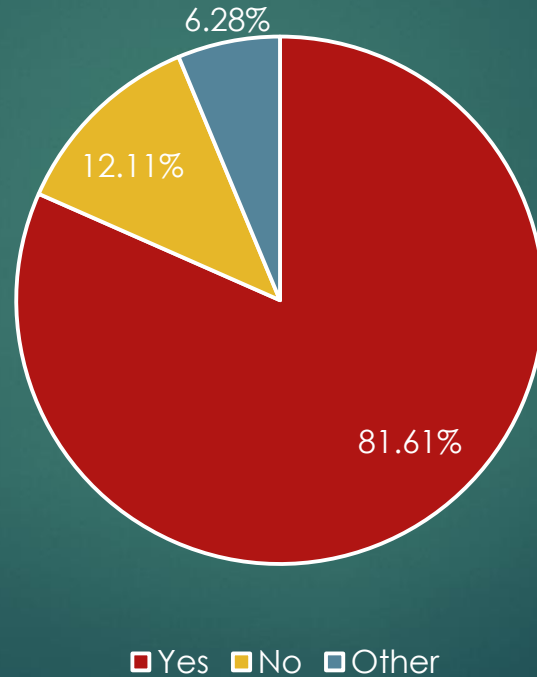
■ Yes ■ No ■ Other (most other were "sometimes")

Family Relying on Childcare (n=1337: before- and after school consolidated)



■ Yes - Relative/Babysitter ■ Yes - Daycare/School-based ■ No

Parent Support of Closer Alignment With AAP Recommendation of 8:30 or Later Start Time (n=669)



Representative Parent Comments

- ▶ Pro: “The benefits of a later (at least 8:30am) start time for MS/HS are overwhelming. No other arguments should undermine this. The health and wellbeing of our children is of paramount importance, and the science is clear. So the inevitable challenges faced by some parents, teachers and others, in making a change, have to be accommodated to the extent possible/sensible - but ultimately these challenges just need to be sucked up. Discussions have been on and off for several years now. It's time!”
- ▶ Con -: “I do not believe that start times will affect the high schoolers sleep time. They will just stay up later because they will be getting up later in the morning. The lack of sleep is due to the students being over scheduled because their parents are obsessed with getting them into the “right” college.”

Representative Staff Comments

- ▶ Pro: "I fully support starting school at 8:30AM or later, as I understand that we are all here to educate our students and, that is seriously affected when I see that most of my students in first period cannot pay attention because they are still groggy. In my opinion, this decision should be based on what is best for students not for the adults. I see resistance from my colleagues, just because this is inconvenient. We should remember that we are here for them, not the other way around."
- ▶ Con: "I think it is a very simplistic view that start times will improve test scores, tardiness, homework completion etc. and decrease disciplinary issues, risky/ impulse behavior, etc. because there are many factors (home life, testing demands, homework, after-school activities, working etc.) that contribute to these scenarios that would also have to be addressed. Let me sleep later, and I'll do better is an unrealistic point of view."

Representative Student Comments

- ▶ Pro: “Other than the short-term obstacles of re-arranging schedules and start/end times for all other school related activities, the long-term benefits of a later start time will help future students for years to come. Short term adjustments seem like an apt trade-off for an increase of academic achievement and mental and physical health for thousands of future Dover-Sherborn students.”
- ▶ Con: “I don’t like this idea along with many other people. Students would get less sleep from staying up later and we would have less time to complete our homework. For students who do after school activities, like sports and drama, everything would get pushed back decreasing their amount of sleep and homework and free time.”



Scenarios Examined

The SHIFT – KEY Components

- Moving middle and high school start times later by ½ hour from current start time of 7:40 a.m. to NEW start time of 8:10 a.m. Existing dismissal time would move from 2:15 p.m. to **NEW** dismissal time of 2:45 p.m.
- Moving Pine Hill School and Chickering School start times later by 20 minutes from current start time of 8:35 a.m. to **NEW** start time of 8:55 a.m. Existing end of school day would move from 3:00 p.m. dismissal to NEW dismissal time of 3:20 p.m.*

*Shifting/realignment of existing bus routes and existing downtime between runs can save 10 minutes and allow for less impact on elementary start times

SHIFT

Opportunities and Challenges

- More sleep for our teenagers (1/2 hour a day, 2 ½ hours a week)
- Positive impact on safety and physical and emotional health
- Improved academic performance
- Opportunities for teachers (e.g., team meetings, PD, class preparation before school)
- Does not strictly meet APA and other guidelines
- Impact on Elementary Students - later day
- Impact on athletics, extra curricular activities and after school help
- Impact on transportation
- Impact on teacher / family schedules and childcare
- Impact on Boston students

FLIP – Key Components

- Moving middle and high school start times later by 55 minutes from current start time of 7:40 a.m. to **NEW** start time of 8:35 a.m. Existing dismissal time would move from 2:15 p.m. to **NEW** dismissal time of 3:10 p.m.
- Moving Pine Hill School and Chickering School start times earlier by 45 minutes from current start time of 8:35 a.m. to **NEW** start time of 7:50 a.m. Existing end of school day would move from 3:00 p.m. dismissal to **NEW** dismissal time of 2:15 p.m.

FLIP

Opportunities and Challenges

- More sleep opportunity for MS/HS (55 minutes per day, 4 hours 35 minutes per week) meeting APA and other guidelines
- Positive impact on safety and physical and emotional health
- Improved academic performance
- Opportunities for MS/HS teachers (e.g., team meetings, PD, class preparation before school)
- Impact on athletics, extra curricular activities and after school help
- Impact on transportation
- Impact on teacher / family schedules and childcare
- Impact on Boston students



ONE RUN – Key Components

- All students would start school at the same time (8:35 am) and would end the day at roughly the same time (HS & MS 3:10 pm – Elem. 3:00 pm)

ONE RUN

Opportunities and Challenges

- Increased sleep opportunity for all students meeting APA and other guidelines
- Positive impact on safety and physical and emotional health
- Improved academic performance
- Opportunities for MS/HS teachers (e.g., team meetings, PD, class preparation before school)
- Impact on athletics, extra curricular activities and after school help
- Major impact on transportation needs
- Significant cost factor
- Impact on teacher / family schedules and childcare
- Impact on Boston students



A Visual Comparison....

Three Scenarios for Consideration

MIDDLE & HIGH SCHOOL (Secondary)

SHIFT
"A"



FLIP
"B"



ONE RUN
"C"



Scenario A: Shift		Scenario B: Flip		Scenario C: One Run	
Current Bus Pick-Up Start Times 6:35-7:05 am	NEW Bus Pick-Up Start Times 7:05-7:35 am	Current Bus Pick-Up Times 6:35-7:05 am	NEW Bus Pick-Up Start Times 7:30-8:00 am	Current Bus Pick-Up Times 6:35-7:05 am	NEW Bus Pick-Up Start Times 7:30-8:00 am
Existing Start of School 7:40 am	NEW Start of School 8:10 am	Existing Start of School 7:40 am	NEW Start of School 8:35 am	Existing Start of School 7:40 am	NEW Start of School 8:35 am
Existing Dismissal Time 2:15 pm	NEW Dismissal Time 2:45 pm	Existing Dismissal Time 2:15 pm	NEW Dismissal Time 3:10 pm	Existing Dismissal Time 2:15 pm	NEW Dismissal Time 3:10 pm

Three Scenarios for Consideration

PINE HILL & CHICKERING (Elementary)

SHIFT
"A"



FLIP
"B"



ONE RUN
"C"



Current Bus Pick-Up Start Times 7:35-7:57 am	➔	NEW Bus Pick-Up Start Times 7:55-8:17 am
Existing Start of School 8:35 am	➔	NEW Start of School 8:55 am
Existing Dismissal Time 3:00 pm	➔	NEW Dismissal Time 3:20 pm

Current Bus Pick-Up Start Times 7:35-7:57 am	➔	NEW Bus Pick-Up Start Times 6:50-7:12 am
Existing Start of School 8:35 am	➔	NEW Start of School 7:50 am
Existing Dismissal Time 3:00 pm	➔	NEW Dismissal Time 2:15 pm

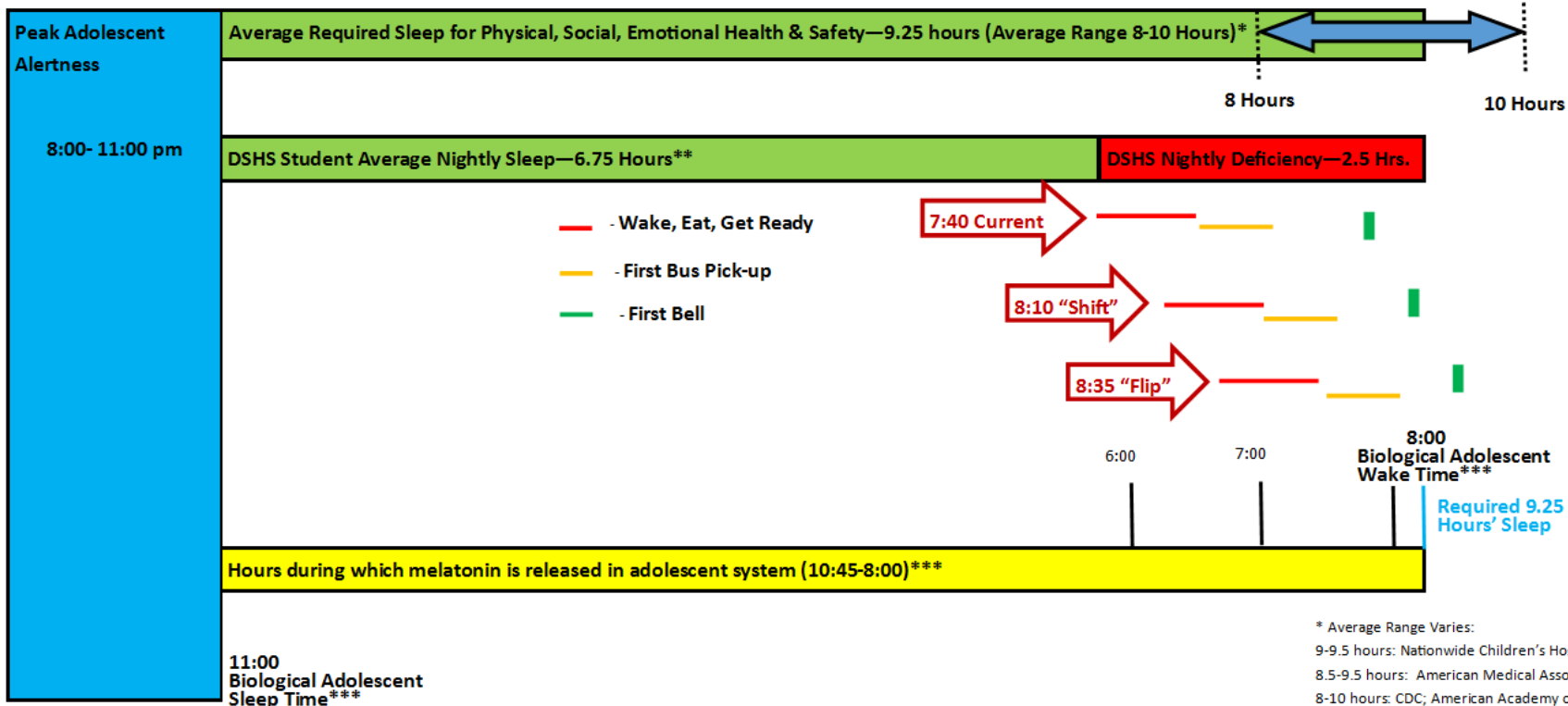
Current Bus Pick-Up Start Times 7:35-7:57 am	➔	NEW Bus Pick-Up Start Times 7:30-7:57 am
Existing Start of School 8:35 am	➔	NEW Start of School 8:35 am
Existing Dismissal Time 3:00 pm	➔	NEW Dismissal Time 3:00 pm



Possible Impact of Changes on Sleep Patterns

Dover-Sherborn Middle School-High School Sleep

What's the Problem?



* Average Range Varies:
 9-9.5 hours: Nationwide Children's Hospital
 8.5-9.5 hours: American Medical Association
 8-10 hours: CDC; American Academy of Pediatrics

** Stanford Survey of Adolescent School Experiences Report
 Dover-Sherborn Regional High School Spring 2017

*** <https://www.sleepfoundation.org/sleep-topics/sleep-drive-and-your-body-clock>

Timeline Moving Forward...

April 9, 2019

STTF
Presentation
of Findings
and Scenarios

Hear JSC
Feedback



April 9-29, 2019

Continued
solicitation of
feedback on
scenarios



April 30, 2019

Superintendent
Presentation of
Recommended
Scenario



2020-21

Implement
agreed upon
changes

In Appreciation...

Start Times Task Force:

Michael Jaffe – STTF Co-Chair, DSC
Judi Miller – RSC
Amanda Brown - SSC
Dawn Fattore – Business Administrator
John Smith – HS Headmaster
Laura Dayal – Chickering Principal
Hannah Wright – HS Teacher
Leonie Glen – MS Teacher
Jen Ryan & Nicole Darrah – PHS Teachers
Kevin Scannell - Student

Questions?

