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## ADOLESCENT SLEEP NEEDS AND SCHOOL START TIMES

EDUCATION COMMITTEE MEETING

NOVEMBER 7, 2018



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### DISTRICT GOAL #1.4

- To assess the impact of potential strategies for addressing adolescent sleep needs, including the implications for school start times.

## KEY RESEARCH DATA

### American Academy of Pediatric Medicine

- “Although many changes over the course of adolescence can affect the quality and quantity of sleep, one of the most salient and, arguably, most malleable is that of school start times.”

### William E. Kobler, M.D. – American Medical Association Board Member

- "Scientific evidence strongly suggests that allowing adolescents more time for sleep at the appropriate hours results in improvements in health, academic performance, behavior, and general well-being. We believe delaying school start times will help ensure middle and high school students get enough sleep, and that it will improve the overall mental and physical health of our nation's young people."

## KEY RESEARCH DATA

### Position Statement of the American Academy of Sleep Medicine (2017)

- During adolescence, internal circadian rhythms and biological sleep drive change to result in later sleep and wake times. As a result of these changes, early middle school and high school start times curtail sleep, hamper a student's preparedness to learn, negatively impact physical and mental health, and impair driving safety.
- The AASM recommends that teenagers 13 to 18 years of age should sleep 8 to 10 hours per 24 hours on a regular basis to promote optimal health, and this recommendation has been endorsed by the American Academy of Pediatrics, Sleep Research Society, and American Association of Sleep Technologists.

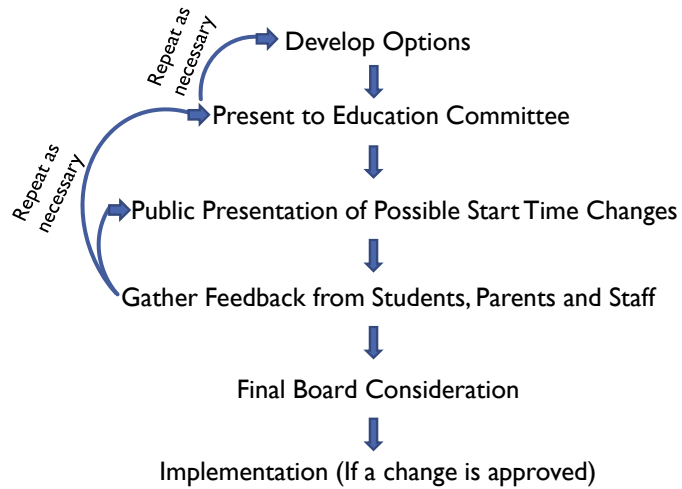
## KEY RESEARCH DATA

- Regional Adolescent Sleep Needs Coalition (RASNC)
- American Academy of Sleep Medicine
- Research by Dr. Wendy Troxel

## CONSIDERATIONS FOR START TIME CHANGE

- Unknown personal impact on families and staff members
- Transportation
- Extra Curricular Activities
- School End Times
- Professional Staffing
- Instructional Day
- Financial – Could have an effect on other programs

## PROCESS



## CURRENT START TIMES AND END TIMES

- Conestoga High School = 7:20 AM – 2:20 PM
- Middle Schools = 7:50 AM – 2:33 PM
- Elementary Schools = 8:45 AM – 3:20 PM

## CURRENT START TIMES AT LOCAL DISTRICTS

### MIDDLE SCHOOL

| District               | Start Time |
|------------------------|------------|
| TESD                   | 7:50 AM    |
| Avon Grove             | 7:30 AM    |
| Kennett                | 7:40 AM    |
| Lower Merion           | 8:15 AM    |
| Owen J. Roberts        | 7:30 AM    |
| Oxford                 | 7:35 AM    |
| Phoenixville           | 7:18 AM    |
| Radnor                 | 8:00 AM    |
| Unionville-Chadds Ford | 8:00 AM    |
| West Chester           | 7:30 AM    |

### HIGH SCHOOL

| District               | Start Time |
|------------------------|------------|
| TESD                   | 7:20 AM    |
| Avon Grove             | 7:30 AM    |
| Kennett                | 7:40 AM    |
| Lower Merion           | 7:30 AM    |
| Owen J. Roberts        | 7:30 AM    |
| Oxford                 | 7:39 AM    |
| Phoenixville           | 7:24 AM    |
| Radnor                 | 7:35 AM    |
| Unionville-Chadds Ford | 8:00 AM    |
| West Chester           | 7:30 AM    |

## CONESTOGA'S CURRENT SCHEDULE

- Period 1 = 7:20 AM – 8:03 AM
- Homeroom = 8:07 AM – 8:16 AM
- Period 2 = 8:20 AM – 9:03 AM
- Period 3 = 9:07 AM – 9:50 AM
- Period 4 = 9:54 AM – 10:37 AM
- Period 5, 6 & Lunch = 10:41 AM – 12:45 PM
  - Period 7 = 12:49 PM – 1:32 PM
  - Period 8 = 1:36 PM – 2:20 PM

## TRANSPORTATION VARIABLES

1. Length of Bus Runs
  - a. Number and Location of Students
  - b. Traffic Patterns
  - c. Geographic Size of District
2. Location of Schools
3. Non-Public Bus Runs
4. Provider(s)
5. Number of Walkers

## CURRENT TRANSPORTATION SCHEDULE

- 3 Tiers
  - One Tier for each level
  - Buses are shared between tiers

## POSSIBLE TRANSPORTATION OPTIONS TO CHANGE START TIMES

1. Status Quo
2. Eliminate Tiers
3. Compact Tiers
4. Shift Tiers
5. Re-Order Tiers
6. Combination

## CONSIDERATIONS FOR ELIMINATING TIERS

- Would allow all students to start at 8:30 AM
- Unknown personal individual impact on families and staff members
- Could involve students from different levels sharing buses
- Larger number of buses on the road – More Traffic
- Professional Staffing Considerations
- Increased number of drivers
- Significant Financial Impact

## CONSIDERATIONS FOR COMPACTING TIERS

- Would possibly allow for a 15-20 minute later start at the high school and middle schools
- Unknown personal individual impact on families and family members
- Might add bus runs
- Professional Staffing Considerations
- Increased number of drivers
- Could create more disrupted routes at elementary level

## CONSIDERATIONS FOR SHIFTING TIERS

- Would keep the same order and number of tiers with all starting later
- Unknown personal individual impact on families and staff members
- Would affect all levels
- Traffic – closer to morning and afternoon rush hours



## CONSIDERATIONS FOR RE-ORDERING TIERS

- Would reverse order and move elementary to earliest start time
- Unknown personal individual impact on families and staff members
- Affects all levels
- Professional Staffing Considerations

## CONSIDERATIONS FOR A COMBINATION

- Would look at implementing aspects of one or more options
- Unknown personal individual impact on families and staff members

## ASSUMPTIONS TO CONSIDER

- #1 = Maintain the current number of instructional minutes each day
- #2 = Defining Start Times and Ending Times
  - Should 7:45 AM be the earliest possible start time?
  - Should 3:45 be the latest possible ending time?
- #3 = Continue to have 3 tiers for busing
- #4 = Maintain current start time order (High School, Middle, Elementary)
- #5 = Standard start times by level
  - All elementary schools begin and end at the same time
  - Both middle schools begin and end at the same time