School Start Time
Working Group

Presentation for ORCSD School Board
School Board Meeting
April 15, 2015
Presentation Outline

- Working group: participants and process
- What do we know about teen sleep and school start times?
- What has ORCSD already done?
- Common concerns and strategies to address them
- Working group recommendations to the Board
Superintendent asks ORMS and ORHS principals for informal working group

- Response to Summer 2014 parent letter
- Long-standing concern: Wellness Committee Letter from 2009. signed by MOH Wellness Committee Chair, members of the committee, and concerned teachers, parents, and counselors.

- Participation: open to all.
- Volunteers included parents with kids in both elementary schools, the middle school, and the high school.
- Monthly meetings (except December); posted and publicized
Working Group Participants

- Rachel Higginbotham
- Jennifer Lyon
- Katie MacManes
- Jay Richard (principal, ORMS)
- Dee Dunbar-Hambucken
- Joe Hannon
- Astrid Wolf-O’Hern
- ChrisAnn Weichart
- Erin Hiley Sharp
- Jeannie Sowers
- Todd Allen (principal, ORHS)
- Mary Malone
- Ginger Johnson
- Susan Bullivant
- AND help from Lisa Huppe, Director of Transportation!!
Working Group process

- Assessed current state of research and findings on adolescent sleep, educational attainment, and physical/emotional health.
- Reviewed prior work done by ORCSD in 2010/2011.
- Assessed what other districts have done—how did they address common concerns? What worked?
- Identified preliminary options for start times
- Coordinated with ORCSD transportation to explore possibilities
Why do adolescents need to sleep?

- Release of growth hormones
- Memory storage
- Brain reorganizations (adolescence = second “critical period” of brain development)
- Immune activity
- Washing out of plaques
Adolescents are sleep deprived

- 70% of teens found to be sleep deprived
- 40% of teens get 6 or fewer hours of sleep/night
- 20% sleep in class

(2011 Youth Risk Behavior Survey)
Question: Why are teens so sleep deprived?

Answer: It is developmental

Delayed Phase Preference
Waking the average teen at 7 AM is like waking an average adult at 4 AM.

Sleep deprivation adversely affects school performance, emotional, and physical well-being.
Why might parents not recognize the extent of the problem?

- On national sleep surveys, teens consistently report significant sleep deprivation.
- But 71% of parents in one such survey thought that their teens were getting adequate sleep!

May be a large difference between how much sleep teens report-- and how much parents think they are getting.

Also, symptoms of sleep deprivation are often “written off” as symptoms of adolescence.
Making the Sleep Problem worse: ORCSD starts earlier than the majority of schools nationally --AND earlier than it used to!

- ORMS AND ORHS start at 7:35 AM
- Median start-time nation-wide for middle schools is 8 AM.
- Only 20% of schools nation-wide start at 7:30 AM. --Source: U.S. Department of Education
- Todd Allen (ORHS) reports that ORCSD used to start at 8:05 up until the mid-1990's.
Additional Costs to ORCSD of Early School Start Times

- Inefficiencies in transportation
  - Last efficiency study: buses at 40% capacity
  - Congestion with parent pick-up and drop-offs at schools

- Illness, tardiness, and absences
  - ORMS: random week: 15-30 students per day late to school.
  - ORHS: 19.7 students per day on average; on Fridays, average is 31/
Recommended Intervention

[] Start ORMS/ORHS later

AMERICAN ACADEMY OF PEDIATRICS:

“The evidence strongly implicates earlier school start times as a key modifiable contributor to insufficient sleep….Furthermore, a substantial body of research has now demonstrated that delaying school start times is an effective countermeasure to chronic sleep loss and has a wide range of potential benefits to students with regard to physical and mental health, safety, and academic achievement.”
Optimum start times

- Optimum start time for teens to get adequate sleep: 8:30-9:00 AM
- Most schools in Europe start at 9 am, as do most schools in Texas, many in California.
- Schools in 43 states have pushed back school start times – NOT ONE reports going back to earlier start times!
Does starting school later help? YES!

Example: Minneapolis Public Schools moved from 7:30-8:30 AM

Longitudinal study of 12,000 students, Wahlstrom 2002.

- Decreased truancy and tardiness
- Decreased problem behavior
- Fewer trips to school nurse
- Improved attendance and improved alertness
Benefits of Delayed School Start Times

- Minnesota study cont:
  - Students reported 1 hour more per sleep per night on average
  - Ate breakfast more frequently
  - Completed homework during school hours, because they were more alert and more efficient.

- 92% of parents preferred later time after just 1 year despite earlier concerns
Benefits of Delayed School Start Times: Academic Achievement

Center for Applied Research and Educational Improvement, University of Minnesota--February 2014 study tracking 9,000 students in 8 public high schools in Minnesota, Colorado and Wyoming

(http://www.sciencemag.org/content/early/2014/02/13/10.1126/science.1242578)

- Found better grades—after one semester, when school began at 8:35 a.m. or later, grades earned in math, English, science and social studies typically rose a quarter step—for example, B to B+.  
- Similar findings from studies at UNC and the Air Force Academy.  
- Some studies report higher standardized test scores.
Benefits of Delayed School Start Times

Impacts on extracurricular activities:

- **Performance** in sports, music, and the arts improves with sleep.

- ORCSD middle and high school sports and practices meet in evenings, after school and before school.

- Later school start time allows kids doing sports to get sleep they need.
  - E.G. instead of 6 AM practice, can move to 7 AM with later start time. Result: kids sleep longer.
  - If practice goes until 9 PM, students can sleep in longer in the morning.
Benefits of Delayed School Start Times cont.

- Reduction in car accidents involving teens (car accidents around schools with later start times fell anywhere from 15-70% during the morning hours)

- Decreases in reports of depressive symptoms from teens

- Decreases in risk behaviors (reducing critical time of risk: 3-6 pm)
Regional Examples: Other schools start later!

- Brattleboro Union High School, VT (moved from 7:45 to 8:45 in 2011/2012)
  - Reports less tardiness, more alertness, especially in first period
    (www.sentinelsource.com/news/local/brattleboro-happy-with-change-but-area-high-schools-don-
    t/article_d8301d61-b423-5eec-9b21-98aa14354dbd.html).

- South Burlington School District
  - Middle schools and high schools start at 8:30 AM
  - With a once monthly ‘TLC’ late start at 9:40 AM for SBHS.

- Portland, Maine, 3 middle schools: moved to 8:35-3:05.

- Portsmouth and Rochester have ad-hoc committees currently studying later school start times.
What has ORCSD already done?

- 546 ORHS students surveyed in 2011-2012.
  - 61% of students surveyed supporting a later start time than current time
  - 55% reported being late at some point “due to difficulty waking up in the morning.”
  - 85% reported that they did not care for a younger sibling after school.
  - 71% reported that they did not work after school.

- When asked how their sleep might change if school started later:
  - 44% said they would go to sleep the same time and sleep later
  - 26% said they would go to sleep later
  - 22% said they didn’t know
  - ONLY 8% reported that they would go to sleep and get up as early as they currently do!
What has ORCSD already done?

Public forums:

- List of questions documented in letter from then-Superintendent Coulter.
- Concerns and questions identical to those raised in other districts across the country.
- Concerns can be proactively addressed in thinking of solutions.
- Lesson learned: public forums without proposing concrete solutions does not generate new feedback.
Shared concerns and ways forward

- How can later start times work?
- Common approaches by school districts nation-wide:
  - One common start time for all schools
  - For tiered starts, move all start times at all schools later.
  - Flip elementary and middle/high times. (This is most commonly accompanied with a shift of all start times later to ensure that elementary children do not start too early)
  - Many case studies to consult in this process.
Shared concerns and ways forward: After-school activities

- When will my child get out of school?
- How will a later start time impact after-school activities, work, or care for siblings?

WG recommendations:
- Look at length of school day and organization of school day along with start times.
  - Return length of school day to mid-1990’s length?
  - Schedule study periods at end of day to accommodate early dismissal for away games for student-athletes?
  - PE credit for sports allowing for practice at the last period of the day?
ORCSD Transportation system: constraints and opportunities

- ORCSD transportation system provides:
  - Door-to-door elementary school pick-ups.
  - Middle and high school are clustered pick-ups with some walking.
  - Kindergarten AM and PM
  - Pre-school program
  - Late buses, athletic buses, activity buses

- ORCSD bus system is not close to capacity, but data on actual ridership can be updated and improved.
Early start times at ORMS and ORHS are detrimental to student health, academic performance, athletic and artistic achievements, and emotional wellbeing.

The evidence that later school start times benefit adolescents is compelling and substantial.

Change is difficult and requires leadership—-from the School Board, from district administrators, and from parents.

Community outreach is important. Can be more constructive when focused on specific proposals, so that costs and benefits can be adequately shared and discussed.
Working Group Specific Recommendations

- 1. Adopt later start times at ORMS and ORHS as a key priority for this year.
- 2. Authorize transportation study to see how bus schedules and later school start times can work and why ridership is so low right now.
- 3. Work in consultation with administration, teachers, staff, athletics, and other extracurricular providers to resolve any scheduling concerns.
- 4. Once a feasible option is complete, reach out to the community for feedback.
END OF PRESENTATION
Organizations Officially Endorsing Later School Start Times

- American Academy of Pediatrics (AAP)
- Centers for Disease Control and Prevention (CDC)
- US Secretary of Education
- National Education Association (NEA)
- Healthy People 2020
- National Sleep Foundation (NSF)

Recommend middle and high schools delay the start of class to 8:30 a.m. or later
Effects of Sleep deprivation

- Irritability
- Cognitive impairment
- Memory lapses or loss
- Impaired moral judgement
- Severe yawning
- Hallucinations
- Symptoms similar to ADHD
- Impaired immune system
- Increased heart rate variability
- Risk of heart disease
- Increased reaction time
- Decreased accuracy
- Tremors
- Aches

Other:
- Growth suppression
- Risk of obesity
- Decreased temperature
Lack of sleep causes parts of your brain to slow or shut down completely.

- **Parietal Lobe**
  - **Math & Logic**
  - Effect: Slower thought processes and difficulty forming logical conclusions to problems.

- **Frontal Lobe**
  - **Creative Thinking**
  - Effect: Lack of imagination or originality, lack of focus, stuttering, use of clichés in speech.

- **Neocortex**
  - **Memory/Learning**
  - Difficulty learning new tasks and making novel connections.

- **Prefrontal Cortex**
  - **Judgment and Visuals**
  - Effect: Blurred vision and hallucinations.

- **Temporal Lobe**
  - **Language**
  - Effect: Slurred speech.