Rhinebeck Central School District

School Start Time Discussion

RCSD Board of Education Ad Hoc Committee
December 8, 2015
Why are we exploring this issue now?

Over the last decade, the medical and scientific communities have become increasingly aware of what the National Sleep Foundation describes as "a widespread chronic health problem" among adolescents: sleep deprivation.
Why are we exploring this issue now?

Teens need more sleep than adults do. On average, experts say, they should be sleeping 8.5 to 9.5 hours a night.
In 2014, the American Academy of Pediatrics (AAP) made an official recommendation: schools should align schedules "to the biological sleep rhythms of adolescents, whose sleep-wake cycles begin to shift up to two hours later at the start of puberty."
Researchers agree: changes in sleep patterns make it difficult for students to fall asleep before 11 PM. Adolescent sleep phase delay has been documented and studied not only in North America, but also around the globe.
This summer (August 2015), the Centers for Disease Control declared insufficient sleep for adolescents to be a public health concern best addressed by adopting later school start times.

Why are we exploring this issue now?
What are our Parameters?

• Any recommendation must be **Cost Neutral**

• **Maintain** all extra and co-curricular programs for all students.

• **Pilot** any recommendation for one year and assess effects throughout the year.
How did we research the options?

Dutchess County Bell Schedule

<table>
<thead>
<tr>
<th>School District</th>
<th>Start/End Time</th>
<th>Class Periods</th>
<th>Length</th>
<th>Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wappingers</td>
<td>7:17-1:42</td>
<td>8</td>
<td>43m</td>
<td>5</td>
</tr>
<tr>
<td>Dover</td>
<td>7:25-2:00</td>
<td>8</td>
<td>46m</td>
<td>3</td>
</tr>
<tr>
<td>Spackenkill</td>
<td>7:28-2:04</td>
<td>9</td>
<td>41m</td>
<td>3</td>
</tr>
<tr>
<td>Arlington</td>
<td>7:30-2:10</td>
<td>8</td>
<td>45m</td>
<td>5</td>
</tr>
<tr>
<td>Webutuck</td>
<td>7:30-2:12</td>
<td>9</td>
<td>42m</td>
<td>3</td>
</tr>
<tr>
<td>Pine Plains</td>
<td>7:30-2:15</td>
<td>9</td>
<td>41m</td>
<td>4</td>
</tr>
<tr>
<td>Rhinebeck</td>
<td>7:30-2:16</td>
<td>9</td>
<td>41m</td>
<td>4</td>
</tr>
<tr>
<td>Hyde Park</td>
<td>7:35-2:07</td>
<td>8</td>
<td>45m</td>
<td>4</td>
</tr>
<tr>
<td>Millbrook</td>
<td>7:35-2:09</td>
<td>9</td>
<td>41m</td>
<td>3</td>
</tr>
<tr>
<td>Red Hook</td>
<td>7:45-2:11</td>
<td>9</td>
<td>39m</td>
<td>3</td>
</tr>
<tr>
<td>Poughkeepsie</td>
<td>7:45-2:40</td>
<td>9</td>
<td>42m</td>
<td>4</td>
</tr>
</tbody>
</table>
### How did we research the options?

#### Ulster County Bell Schedule

<table>
<thead>
<tr>
<th>School District</th>
<th>Start/End Time</th>
<th>Class Periods</th>
<th>Length</th>
<th>Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highland</td>
<td>7:40-2:17</td>
<td>8</td>
<td>47m</td>
<td>3</td>
</tr>
<tr>
<td>Onteora</td>
<td>7:40-2:35</td>
<td>9</td>
<td>42m</td>
<td>4</td>
</tr>
<tr>
<td>Marlboro</td>
<td>7:42-2:32</td>
<td>8</td>
<td>45m</td>
<td>3</td>
</tr>
<tr>
<td>Saugerties</td>
<td>7:45-2:08</td>
<td>8</td>
<td>43m</td>
<td>4</td>
</tr>
<tr>
<td>Wallkill</td>
<td>7:49-2:21</td>
<td>9</td>
<td>40m</td>
<td>4</td>
</tr>
<tr>
<td>Ellenville</td>
<td>7:50-2:34</td>
<td>8</td>
<td>47m</td>
<td>4</td>
</tr>
<tr>
<td>Kingston</td>
<td>7:50-3:00</td>
<td>9</td>
<td>42m</td>
<td>5</td>
</tr>
<tr>
<td>Rondout Valley</td>
<td>7:55-2:22</td>
<td>9</td>
<td>40m</td>
<td>4</td>
</tr>
<tr>
<td>New Paltz</td>
<td>8:00-2:20</td>
<td>5</td>
<td>82m</td>
<td>5</td>
</tr>
<tr>
<td>Coleman</td>
<td>8:00-2:35</td>
<td>9</td>
<td>41m</td>
<td>3</td>
</tr>
</tbody>
</table>
How did we research the options?
Before and After School Club Participation

<table>
<thead>
<tr>
<th></th>
<th>CLS</th>
<th>BMS</th>
<th>RHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enrollment</strong></td>
<td>444</td>
<td>249</td>
<td>405</td>
</tr>
<tr>
<td><strong>Extracurricular Participation</strong></td>
<td>@ 350</td>
<td># Clubs</td>
<td>Participation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
<td>@ 90†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td># Clubs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

* Extracurriculars include Before School Enrichment, Young Rhinebeck, Flying Colors, PTSO Electives
†Students can participate in multiple clubs. Participation represents total students based on average attendance.
How did we research the options?
Athletic Participation - Grades 7-12

<table>
<thead>
<tr>
<th></th>
<th>2013-14</th>
<th></th>
<th>2014-15</th>
<th></th>
<th>2015-16</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>Total Athletes - Fall</td>
<td>95</td>
<td>140</td>
<td><strong>235</strong></td>
<td>91</td>
<td>136</td>
<td><strong>227</strong></td>
</tr>
<tr>
<td>% Student Body Gr 7-12</td>
<td>34%</td>
<td>49%</td>
<td><strong>41%</strong></td>
<td>31%</td>
<td>48%</td>
<td><strong>39%</strong></td>
</tr>
<tr>
<td>Total Athletes - Winter</td>
<td>42</td>
<td>40</td>
<td><strong>82</strong></td>
<td>55</td>
<td>34</td>
<td><strong>89</strong></td>
</tr>
<tr>
<td>% Student Body Gr 7-12</td>
<td>15%</td>
<td>14%</td>
<td><strong>14%</strong></td>
<td>19%</td>
<td>12%</td>
<td><strong>15%</strong></td>
</tr>
<tr>
<td>Total Athletes - Spring</td>
<td>84</td>
<td>152</td>
<td><strong>236</strong></td>
<td>136</td>
<td>75</td>
<td><strong>211</strong></td>
</tr>
<tr>
<td>% Student Body Gr 7-12</td>
<td>30%</td>
<td>53%</td>
<td><strong>41%</strong></td>
<td>47%</td>
<td>27%</td>
<td><strong>37%</strong></td>
</tr>
</tbody>
</table>

Total Athletes Fall: 253
% Student Body Gr 7-12: 46%
Total Athletes Winter: 84
% Student Body Gr 7-12: 15%
Total Athletes Spring: 211
% Student Body Gr 7-12: 37%
How did we research the options?

Discussions with Stakeholders

- CLS, BMS, RHS Principals
- Athletic Director
- Business Office
- Teachers
- Parents
- Students
- RCSD Health & Wellness Committee
- CLS, BMS & RHS BLPTs
- National Research: American Academy of Pediatrics
  Centers for Disease Control
  National Sleep Foundation
What are the Possibilities?

• Single Trip All Students K-12
• “Flip-Flop” BMS/RHS & CLS
• “Flip-Flop and Shift” BMS/RHS & CLS
• Shift BMS/RHS 30m & CLS 5-7m
• Maintain current start and end times
What are the Possibilities?

Single Trip All Students K-12
What are the Possibilities?
Single Trip all students K-12

How would we do it?

• All students K-12 would ride on the same bus at the same time.
• BMS/RHS students would arrive at the secondary school for @ 8am start.
• CLS students would arrive at the elementary school for @ 8:15am start.
What would the effect be on the BMS/RHS schedule?

- First period at BMS/RHS would begin @ 8:00am.
- Ninth period would end @ 2:46pm.
- BMS/RHS bus students would depart @ 2:56pm
- After-school Clubs and Extra Help would meet until @ 3:40.
- Athletic buses would depart @ 3:00pm
- After school bus would depart @ 3:46pm
What are the Possibilities?
Single Trip all students K-12

What would the effect be on the CLS schedule?

- Classes at CLS would begin @ 8:15am.
- Final classes at CLS would end @ 2:35pm.
- CLS bus students would depart @ 2:45pm.
What are the Possibilities?
Single Trip all students K-12

What would it cost?

• A total of 22 buses would be required for the home-to-school runs (10 buses more than are currently used).
• Estimated additional cost for 10 extra busses would be between $372k - $622k
• Estimated additional cost for Bus Monitors would be between $241k - $485k
What are the Possibilities?
Single Trip all students K-12

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Single” start and end time for all students.</td>
<td>Additional Total Cost: approx. $613k-$1.1m</td>
</tr>
<tr>
<td>All clubs and After-school help maintained.</td>
<td>National bus driver shortage. This option may not be feasible from a personnel stand point</td>
</tr>
<tr>
<td>CLS students begin day earlier, aligning with their sleep patterns.</td>
<td>No before school enrichment transportation for CLS students.</td>
</tr>
</tbody>
</table>

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What are the Possibilities?

“Flip-Flop”
BMS/RHS and CLS start times
What are the Possibilities?
“Flip-Flop” BMS/RHS & CLS

How would we do it?

• All CLS students would ride the first bus run of the day.
• CLS students would arrive at the elementary school for @ 7:30am start.
• All BMS/RHS students would ride the second bus run of the day.
• BMS/RHS students would arrive at the secondary school for @ 8:55am start.
• BMS/RHS passing time would decrease to 3 minutes (from 4).
What are the Possibilities?
“Flip-Flop” BMS/RHS & CLS

What would the effect be on the CLS schedule?

• Classes at CLS would begin @ 7:30am.
• Final classes at CLS would end @ 1:50pm.
• CLS bus students would depart @ 2:05pm.
What are the Possibilities?
“Flip-Flop” BMS/RHS & CLS

What would the effect be on the BMS/RHS schedule?

• First period at BMS/RHS would begin @ 8:55am.
• Ninth period would end @ 3:41pm.
• BMS/RHS bus students would depart @ 3:51pm
• After-school Clubs and Extra Help would meet until @ 4:41pm.
• Athletic buses would depart @ 3:56pm
• After school bus would depart @ 4:50pm
What would it cost?

• Approximately 4 “After-school” buses would be required for students who stay late.
• Estimated additional cost would be between $21k - $29k
What are the Possibilities?
“Flip-Flop” BMS/RHS & CLS

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary and Secondary students would begin classes at the hours when they are most awake.</td>
<td>Additional Cost: Approx: $21k - $29k</td>
</tr>
<tr>
<td>Athletes at away games would have to leave early thus missing instructional time.</td>
<td></td>
</tr>
</tbody>
</table>
What are the Possibilities?

“Flip-Flop” BMS/RHS and CLS start times and
“Shift” CLS earlier in the morning

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What are the Possibilities?
“Flip-Flop & Shift” BMS/RHS & CLS

How would we do it?

• All CLS students would ride the first bus run of the day.
• CLS students would arrive at the elementary school for @ 7:00am start.
• All BMS/RHS students would ride the second bus run.
• BMS/RHS students would arrive at the secondary school for @ 8:15am start.
• BMS/RHS passing time would decrease to 3 minutes (from 4).
What are the Possibilities?
“Flip-Flop & Shift” BMS/RHS & CLS

What would the effect be on the CLS schedule?

• First period at CLS would begin @ 7:00am.
• Final classes at CLS would end @ 1:20pm.
• CLS bus students would depart @ 1:35pm.
What are the Possibilities?
“Flip-Flop & Shift” BMS/RHS & CLS

What would the effect be on the BMS/RHS schedule?

• First period at BMS/RHS would begin @ 8:15am.
• Ninth period would end @ 2:53pm.
• BMS/RHS bus students would depart @ 3:03pm.
• After-school Clubs and Extra Help would meet until @ 3:53pm.
• Athletic busses would depart @ 3:00.
• After-school busses would depart @ 4:00pm
What are the Possibilities?
“Flip-Flop & Shift” BMS/RHS & CLS

What would it cost?

• Approximately 4 “After-school” buses would be required for students who stay late.
• Estimated additional cost would be between $21k - $29k
What are the Possibilities?
“Flip-Flop & Shift” BMS/RHS & CLS

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>School schedule would mirror the sleep cycles for ALL students</td>
<td>Additional Cost: Approx: $21k-$29k</td>
</tr>
<tr>
<td>CLS early start would optimize younger students’ learning time</td>
<td>No before school enrichment transportation for CLS students</td>
</tr>
<tr>
<td>BMS/RHS students would gain additional sleep time optimizing adolescent learning time</td>
<td>CLS electives MAY be affected</td>
</tr>
</tbody>
</table>
What are the Possibilities?

Shift BMS/RHS Start time
30 minutes later -
Shift CLS Start time
5-7 minutes later
What are the Possibilities?
Shift BMS/RHS 30m and CLS 5-7m Later

How would we do it?

• All BMS/RHS students would ride the first bus run.
• BMS/RHS students would arrive at the secondary school for @ 8am start.
• All CLS students would ride the second bus run.
• CLS students would arrive at the elementary school for @ 9:02am start.
• BMS/RHS passing time would decrease to 3 minutes (from 4).
What are the Possibilities?
Shift BMS/RHS 30m and CLS 5-7m Later

What would the effect be on the BMS/RHS schedule?

• First period at BMS/RHS would begin @ 8:00am.
• Ninth period would end @ 2:46pm.
• BMS/RHS bus students would depart @ 2:56pm
• After-school Clubs and Extra Help would meet until @ 3:30pm.
• Athletic buses would depart @ 3:00pm
• After school bus would depart from CLS @ 3:45pm
What are the Possibilities?
Shift BMS/RHS 30m and CLS 5-7m Later

What would the effect be on the CLS schedule?

• Classes at CLS would begin @ 9:02am.
• Final classes at CLS would end @ 3:22pm.
• CLS bus students would depart @ 3:37pm.
• Before school programs would begin @ 8:15am.
What are the Possibilities?
Shift BMS/RHS 30m and CLS 5-7m Later

What would it cost?

• There are no additional costs
## What are the Possibilities?
Shift BMS/RHS 30m and CLS 5-7m Later

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS/RHS students would gain 30 minutes extra sleep improving</td>
<td>CLS students would be pushed slightly (5-7 minutes) later in the day.</td>
</tr>
<tr>
<td>health and wellness.</td>
<td></td>
</tr>
<tr>
<td>CLS Early morning programs would not be affected.</td>
<td>BMS/RHS Club meeting time potentially shortened for bus departure at 3pm.</td>
</tr>
<tr>
<td>BMS first period lunch would push to 11:00 from 10:30</td>
<td></td>
</tr>
</tbody>
</table>
What are the Possibilities?

Maintain current school start and end times.
What are the Possibilities?
Maintain current start and end times

How do we do it currently?

• All BMS/RHS students ride the first bus run.
• BMS/RHS students arrive at the secondary school for a 7:30am start.
• All CLS students ride the second bus run.
• CLS students arrive at the elementary school for an 8:55am start.
What are the Possibilities?
Maintain current start and end times

What is the current BMS/RHS schedule?

• First period at BMS/RHS begins at 7:30am.
• Ninth period ends at 2:16pm.
• BMS/RHS bus students departs at 2:26pm
• After-school Clubs and Extra help meets until 3:00pm.
• Athletic buses depart at 2:45pm
• After school bus departs from CLS at 3:30pm
What is the current CLS schedule?

• Classes at CLS begin at 8:55am.
• Final classes at CLS end at 3:15pm.
• CLS bus students depart at 3:30pm.
• Before school programs begin at 8:00am.
What are the Possibilities?
Maintain current start and end times

What would it cost?

• There are no additional costs
What are the Possibilities?
Maintain current start and end times

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s easy</td>
<td>Adolescents do not gain additional sleep time.</td>
</tr>
</tbody>
</table>
What does our Community Say?
Parent Survey Results

<table>
<thead>
<tr>
<th>Total Response</th>
<th>% Total Possible Response</th>
<th>Average Response per Grade: K-12</th>
<th>Positive Impact on Students</th>
<th>Negative Impact on Students</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>335</td>
<td>51.5%</td>
<td>50.7%</td>
<td>66%</td>
<td>21%</td>
<td>13%</td>
</tr>
</tbody>
</table>

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### What does our Community Say?

**Teacher Survey Results**

<table>
<thead>
<tr>
<th>Total Response</th>
<th>% Total Possible</th>
<th>Positive Impact*</th>
<th>Negligible Impact*</th>
<th>Negative Impact*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS/RHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>56%</td>
<td>44%</td>
<td>50%</td>
<td>6%</td>
</tr>
</tbody>
</table>

* Impact as it relates to students in teachers' buildings

<table>
<thead>
<tr>
<th>Total Response</th>
<th>% Total Possible</th>
<th>Positive Impact*</th>
<th>Negligible Impact*</th>
<th>Negative Impact*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLS Teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>68%</td>
<td>0%</td>
<td>28%</td>
<td>72%</td>
</tr>
</tbody>
</table>

* Impact as it relates to students in teachers' building
What does our Community Say?
Student Survey Results - Grades 6-12

<table>
<thead>
<tr>
<th>Total Response</th>
<th>% Total Possible Respondents</th>
<th>Average Response per Grade</th>
<th>Positive Impact</th>
<th>Negligible Impact</th>
<th>Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>197</td>
<td>80%</td>
<td>80%</td>
<td>59%</td>
<td>6%</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Response</th>
<th>% Total Possible Respondents</th>
<th>Average Response per Grade</th>
<th>Positive Impact</th>
<th>Negligible Impact</th>
<th>Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>310</td>
<td>70%</td>
<td>77%</td>
<td>71%</td>
<td>6%</td>
<td>23%</td>
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</table>
What does our Community Say?
Parent, Teacher, Student Survey Results - Recap

Parent - Grades K-12

<table>
<thead>
<tr>
<th>% Total Response</th>
<th>Positive Impact on Students</th>
<th>Negligible Impact or Undecided</th>
<th>Negative Impact on Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.5%</td>
<td>66%</td>
<td>13%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Teacher - BMS/RHS

<table>
<thead>
<tr>
<th>% Total Response</th>
<th>Positive Impact on Students</th>
<th>Negligible Impact or Undecided</th>
<th>Negative Impact on Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>56%</td>
<td>44%</td>
<td>50%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Teacher - CLS

<table>
<thead>
<tr>
<th>% Total Response</th>
<th>Positive Impact on Students</th>
<th>Negligible Impact or Undecided</th>
<th>Negative Impact on Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>68%</td>
<td>0%</td>
<td>28%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Student - Grades 6-12

<table>
<thead>
<tr>
<th>% Total Response</th>
<th>Positive Impact on Students</th>
<th>Negligible Impact or Undecided</th>
<th>Negative Impact on Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>73%</td>
<td>66%</td>
<td>6%</td>
<td>28%</td>
</tr>
</tbody>
</table>
Public Comment