Understanding how behavioral tools can influence preschool attendance

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The achievement gap opens before Kindergarten

And doesn’t narrow during the school years.
Primary Policy Response

Expand preschool opportunities for disadvantaged children

- Availability of Head Start slots
Chronic absenteeism is pervasive in Head Start programs

- ✔ Availability of Head Start slots
- □ Head Start program attendance

The Challenge

Percent of Children Chronically Absent in Head Start Programs

- Baltimore: 27%
- Chicago: 36%
- New York: 49%

(Source: Balfanz and Byrnes 2013; Connolly and Olson 2012; Ehrlich et al. 2014)
Q: Can a set of behaviorally-informed text messages reduce absenteeism in subsidized preschool programs?
Enrollment: 780 families

Implementation at 9 subsidized preschool centers in Chicago

Total of 3 Rounds (18 weeks each):
- Spring 2016: N=248
- Fall 2016: N=433
Parent Criteria

- Have child enrolled in a subsidized preschool program (e.g. Head Start)
- Child must be 3-5 years old
- Parent speaks English and/or Spanish
- Access to a mobile phone and be willing to receive 3-5 texts a week
- Permission to access monthly attendance data from preschool center
Treatment

18-weeks of behaviorally-informed text messages to parents

- Reminders
- Feedback
- Loss Aversion
- Planning prompts
<table>
<thead>
<tr>
<th>Reminders</th>
<th>Feedback</th>
<th>Loss aversion</th>
<th>Planning Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Remember to make sure Alex gets to school every day, unless he is sick”</td>
<td>“Here is your monthly feedback, Alex missed 3 days last month including excused and unexcused absences”</td>
<td>“Preschool helps Alex develop early math skills to succeed in Kindergarten. Don’t let him miss this opportunity!”</td>
<td>“Think of someone who is able to help drop off or pick up Alex if you are not able to”</td>
</tr>
</tbody>
</table>

Sample SMS
Participating Families

Parents:
- Average age - 31 years-old
- 89% female
- 80% Hispanic
- 17% African American
- 3% White
- 46% do not live with spouse/partner

Children:
- Average age – 3.8 years-old
- 83% in good or excellent health
- 11% have a chronic illness

Households:
- Average income - $21,128
- 2.07 total children in household

Note: Characteristics balanced by treatment status (individually) and jointly – F-test = 0.316
Results
Determinants of Chronic Absenteeism

**Chronically absent defined as having an attendance rate equal or less than 85%.

Note: Based on data of 310 children’s baseline attendance data for 3 months. **p<.05
ITT Effects on Attendance Rates

<table>
<thead>
<tr>
<th></th>
<th>Treatment group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance rate</td>
<td>82.4%</td>
<td>80.6%</td>
</tr>
</tbody>
</table>

Notes: Statistically significant at p<0.01*** level. Estimate includes round and preschool fixed effects.
ITT Effects on Chronic Absenteeism

Percent of children chronically absent

<table>
<thead>
<tr>
<th>Treatment group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.9%</td>
<td>46.3%</td>
</tr>
</tbody>
</table>

Notes: Statistically significant at p<0.05** level. Chronically absent defined as having an attendance rate less than or equal to 85%
Effects on Attendance Over Time

<table>
<thead>
<tr>
<th>Month</th>
<th>Treatment</th>
<th>Control</th>
<th>Treatment</th>
<th>Control</th>
<th>Treatment</th>
<th>Control</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>83.0%</td>
<td>81.9%</td>
<td>81.9%</td>
<td>79.4%</td>
<td>83.2%</td>
<td>78.7%</td>
<td>81.0%</td>
<td>76.2%</td>
</tr>
</tbody>
</table>

Notes: Includes round 3 data (n=433). Month of April statistically significant at p<0.05 level. Month of May statistically significant at p<0.01 level.
Effects on Attendance by Chronically Absent at Baseline (Round 3)

**Notes:** Statistically significant at p<0.05** level for children chronically absent at baseline.
Effects on Chronic Absenteeism by Chronically Absent at Baseline (Round 3)

Notes: Statistically significant at $p<0.05^{**}$ level for children chronically absent at baseline.
Conclusions

- Parent survey data indicates that the main predictors of absenteeism are structural (with the exception of one psychological factor – tolerance for missing preschool)
- The intervention had a modest but statistically significant effect on average attendance rates
- The size of the treatment effect increased over time
- The intervention had a sizeable effect on increasing the percentage of children who are present 85% of the time
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