Understanding how behavioral tools can influence preschool attendance

Ariel Kalil & Susan E. Mayer, University of Chicago
Sebastian Gallegos, Princeton University

Generously supported by the Joyce Foundation
Motivation

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

Percent of Children Chronically Absent in Head Start Programs

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore</td>
<td>27%</td>
</tr>
<tr>
<td>Chicago</td>
<td>36%</td>
</tr>
<tr>
<td>New York</td>
<td>49%</td>
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</tbody>
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(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?
Implementation

- Enrollment: **780 families**
- Implementation at **9 subsidized preschool centers** in Chicago
- Total of **3 Rounds** (18 weeks each):
  - ✔️ Spring 2016  N=79
  - ✔️ Fall 2016  N=248
  - ✔️ Spring 2017  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
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>
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</thead>
<tbody>
<tr>
<td>“Remember to make sure Alex gets to school</td>
<td>“Here is your monthly feedback, Alex missed 3 days last month including</td>
<td>“Preschool helps Alex develop early math skills to succeed in Kindergarten.</td>
<td>“Think of someone who is able to help drop off or pick up Alex if you are not</td>
</tr>
<tr>
<td>every day, unless he is sick”</td>
<td>excused and unexcused absences”</td>
<td>Don’t let him miss this opportunity!”</td>
<td>able to”</td>
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</table>
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

**Note:** Based on data of 310 children's baseline attendance data for 3 months. **p<.05

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

- Child has chronic illness: 64% Yes, 42% No
- Commute >25 minutes: 57% Yes, 41% No
- Parent reports low copayment: 48% Yes, 32% No
- Parent reports okay to miss some preschool: 56% Yes, 38% No
- Parent reports BA Degree or higher: 46% Yes, 44% No
- Child is 5 years-old (versus 3 or 4): 44% Yes, 44% No

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ITT Effects on Attendance Rates

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

Treatment group 38.9%
Control group 46.3%

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

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)

<table>
<thead>
<tr>
<th></th>
<th>Treatment group</th>
<th>Control group</th>
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</thead>
<tbody>
<tr>
<td>Children Chronically Absent at Baseline</td>
<td>54.5%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Children NOT Chronically Absent at Baseline</td>
<td>17.6%</td>
<td>18.9%</td>
</tr>
</tbody>
</table>

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
Contacts

Visit us: biplab.uchicago.edu
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Co-Directors:
Professor Ariel Kalil – akalil@uchicago.edu
Professor Susan E. Mayer – smayer@uchicago.edu

Senior Research Fellow:
Sebastian Gallegos, sebagallegos@princeton.edu

Postdoctoral Scholars:
Kate Prickett, kprickett@uchicago.edu
Nadav Klein, nklein@chicagobooth.edu

Doctoral Fellow:
William Delgado Martinez, william6@uchicago.edu

Key Research Staff:
Keri Lintz, Director of Operations – keri.lintz@uchicago.edu
Paula Rusca, Research Coordinator – prusca@uchicago.edu
David Koch, Research Coordinator – dkoch@uchicago.edu
Beatriz, de Quero, Project Assistant -- beatrizdequero@uchicago.edu