A randomized controlled trial compared the efficacy of four parent-based intervention (PBI) conditions to reduce college drinking: 1) pre-college, 2) pre-college + booster, 3) post-college, and 4) control. Latent transition analysis (LTA) identified four drinker classes and assessed whether transitions in drinking status differed by intervention condition in a random sample of 1901 first-year students. The pre-college condition had a significant effect within the heavy drinker class such that students in the heavy drinker class at baseline were 20 times less likely to stay in the heavy drinker class at follow up (CR=0.05). Findings suggest the optimal time of delivery for PBIs may be in the summer prior to college, especially for students who are heavy drinkers.

**BACKGROUND**

- Parent-based interventions (PBIs), consisting of a parent handbook delivered the summer prior to college matriculation, are associated with reductions in college student heavy episodic drinking (HED) and consequences when delivered alone or in combination with other individual-based strategies (Cleveland, et al., 2012; Turrisi, et al., 2010).
- The optimal timing or delivery and dosage of PBIs has not been identified.
- In addition, it is not yet known whether the optimal timing and dosage of PBIs vary based on students’ previous multidimensional drinking histories.
- The present study used latent transition analysis (LTA) to assess whether changes in students’ drinking statuses differed by intervention condition (pre-college, pre-college + booster, or post-college) and whether baseline drinker status moderated these effects.

**SAMPLE AND PROCEDURES**

- A sample of 1901 first-year college students (52.3% female) with a mean age of 17.9 (SD=.32) were randomized to one of four PBI conditions (Figure 1).
- Data were collected at two time points: 1) summer prior to college entrance, and 2) winter of freshman year.
- At each time point, participants reported on their typical weekly drinking, peak BAC, and heavy episodic drinking (HED).

**RANDOMIZATION SCHEME**

**DATA ANALYSIS PLAN**

1. Fit LTA model to determine the number of distinct classes of drinkers and the probability of transitioning between classes
2. Include dummy-coded intervention conditions as covariates in the final LTA model to determine whether intervention condition affected the likelihood of transitioning between drinker classes

**RESULTS**

Drinker Classes Identified by 4-Class LTA Model

<table>
<thead>
<tr>
<th>Model</th>
<th>LL</th>
<th>LRT</th>
<th>df</th>
<th>p-value</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>All terms</td>
<td>7800.72</td>
<td>11.66*</td>
<td>3</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Pre-college removed</td>
<td>7803.10</td>
<td>4.76*</td>
<td>1</td>
<td>0.03</td>
<td>0.90</td>
</tr>
<tr>
<td>Post-college removed</td>
<td>7800.63</td>
<td>0.18</td>
<td>1</td>
<td>0.67</td>
<td></td>
</tr>
</tbody>
</table>

- Covariate analyses indicated students in the heavy drinker class at baseline were 20 times less likely to stay in that class at follow up if they received the PC intervention (see Table 2).

**CONCLUSIONS**

- Timing of PBI is important and pre-college delivery may be optimal
- Increased dosage (i.e., booster) does not appear to increase benefits of PBI
- Efficacy of PBIs may differ based on students’ previous drinking history (e.g., effects observed for heavy drinkers)

Acknowledgment: This study was supported by NIH grant R01 AA015737 awarded to Rob Turrisi, Ph.D.