A Screening and Brief Intervention for Women in OB/GYN Care

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Prevent FAS in Russia Research Group

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Nizhny Novgorod State Pedagogical University
Study sites: St. Petersburg (SPB) and the Nizhny Novgorod Region (NNR)
Women oriented marketing
Phase I: Women’s reported alcohol use

Large alcohol exposure window prior to pregnancy recognition, more extensive than in other countries

Binge drinking is the major problem – 60% of women report one or more binges in the last 3 months. 40% report binges in the last month.

*(Balachova et al., 2012)*
Trial study design and objectives

- Can a brief intervention a) change alcohol use patterns, and b) specifically reduce alcohol use in early pregnancy, prior to recognition?
- Delivered by OB/GYN physicians
- Dual-Focused BPI (DFBPI): focused on both alcohol use and unplanned pregnancies

An adaptation of two evidence-based approaches:
- Brief physician intervention- *Healthy Moms* (Fleming & Mundt, 2006; NIAAA, 1999)
- A motivational dual-focused intervention- *CHOICES* (Floyd et al., 2007)
Two face-to-face structured sessions
Approximately 5 minutes each one month apart
Incorporated into routine OB/GYN clinic visits
Could include taking a medical history, conducting a physical exam, and/or providing/prescribing contraception
Motivational Interviewing (MI) based - MI “spirit”
Methods

- Design—Two-arm randomized cluster trial—intervention vs. control
- 20 OB/GYN clinics

- Inclusion—Potentially childbearing women, heterosexually active, >0 “at-risk” (4+) drinking
  - 2,165 women screened
  - 767 eligible women enrolled in the study

- Daily alcohol use measured by time-line follow-back interview method
  - 90 days pre-intervention
  - 90, 180 and 360 days post-intervention

- Data structure is days (n = 259,649) within subjects (n = 767) within clinics (n = 20)
  - Complete longitudinal data obtained for 84%. Mean days / subject = 339

- Modeling the data
  - 3-level (days/subjects/clinics) autoregressive latent trajectory (Bollen & Curran, 2004) piecewise growth model
### Participants (N=767)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td></td>
</tr>
<tr>
<td>Ethnically Russian</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td></td>
</tr>
<tr>
<td>Employed full time</td>
<td></td>
</tr>
<tr>
<td>Highest education on 1-6 scale*</td>
<td></td>
</tr>
<tr>
<td>Prior # Pregnancies</td>
<td></td>
</tr>
<tr>
<td>AUDIT score, mean (% ≥8)</td>
<td></td>
</tr>
<tr>
<td>Binge drinking (TLFB or single binge question) number (%) of participants report ≥1 binge drinking day in previous 90 days</td>
<td></td>
</tr>
<tr>
<td>Weekly drinking average of ≥ 8 drinks/week, number (%) of participants</td>
<td></td>
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</tbody>
</table>
### Intervention fidelity

#### Proportion of completed intervention components

<table>
<thead>
<tr>
<th>The doctor...</th>
<th>Woman’s report (N=372)</th>
<th>Physician’s report (N=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 asked if I planned a pregnancy or used contraception</td>
<td>0.987</td>
<td>0.997</td>
</tr>
<tr>
<td>2 asked about my alcohol consumption</td>
<td>0.989</td>
<td>1</td>
</tr>
<tr>
<td>3 told me about the incompatibility of pregnancy and alcohol use</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4 provided information on alcohol effects on the child</td>
<td>0.995</td>
<td>0.995</td>
</tr>
<tr>
<td>5 advised me to either stop/reduce drinking or use effective contraception</td>
<td>0.995</td>
<td>0.995</td>
</tr>
<tr>
<td>6 asked me what I would choose</td>
<td>0.949</td>
<td>0.997</td>
</tr>
<tr>
<td>7 helped me to make my choice</td>
<td>0.959</td>
<td>1</td>
</tr>
<tr>
<td>8 discussed with me how to achieve the goal</td>
<td>0.941</td>
<td>0.970</td>
</tr>
<tr>
<td>9 discussed barriers with me</td>
<td>0.938</td>
<td>0.965</td>
</tr>
<tr>
<td>10 made a follow-up appointment</td>
<td>0.978</td>
<td>0.992</td>
</tr>
<tr>
<td>11 I felt doctor’s support and willingness to help</td>
<td>0.997</td>
<td>0.992</td>
</tr>
</tbody>
</table>

Balachova, Bonner, Chaffin et al., 2013
Significant reduction of # drinks/drinking day (p < 0.05)

Reduced for both intervention and control groups, intervention effect was significant (95% CI = 0)

Figure is removed
Drinking during pregnancy, including a 60 day pre-recognition window

Time series (14 day moving average) plot for women who reported becoming pregnant during the follow-up period (N=72...42 usable)

Date of the pregnancy recognition

Same semi-continuous Autoregressive Latent Trajectories (ALT)

Centered pre-recognition time variable so intercept reflects mid-point pre-recognition estimate

Figure is removed

Significant drop in the odds of drinking in the intervention group compared to control (p<0.05)
Limitations

- Self-report data, possibly reactive to inquiry and to intervention
- Small number of clinic units (statistically speaking, not practically speaking)
- General population women—population level prevention; not necessarily generalizable to women with the most severe substance use disorder who may be the greatest risk for FASDs
The effect of the intervention on overall drinking was significant and remained robust over the 12 month follow-up period.

- The intervention effect was on the *amount* of alcohol, not the *frequency* of alcohol (i.e. cutting back); the sample included binge drinking women primarily.

- The reduction in #drinks/day was small in size (but not bad for 5 minute intervention!)

- Control group women continued to drink at about usual levels during the pre-recognition time period.

The effect of the intervention on early pregnancy drinking was larger in size, and was seen in a substantial reduction for the *frequency* of drinking (i.e. quitting).