Binge Drinking by Women in the Preconception Period, California, 2010

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Presenter Disclosure
Maria A. L. Jocson, MD, MPH

• The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
  No relationships to disclose

Background

• Alcohol use during pregnancy is a leading cause of birth defects and developmental disabilities, such as:
  – Fetal Alcohol Spectrum Disorders (FASD), including Fetal Alcohol Syndrome (FAS)

• Alcohol can harm a baby at any time during pregnancy, including early on, before women know they are pregnant
  – Preconception period is a proxy for behaviors early in pregnancy

• No known quantity of alcohol consumption is safe
  – As few as 7 drinks per week, or one per day, can cause damage
  – Binge drinking (4+ drinks in one sitting) is especially harmful
  – Higher levels of consumption increase risk of fetal damage


• Surveillance of FASD is limited because of:
  – Varying criteria for diagnosing FASD
  – Lack of provider knowledge
  – Inadequate information about maternal drinking patterns

Specific Aims

• This presentation will describe:
  – Prevalence of binge drinking during the 3 months before pregnancy among women with a recent live birth in California
  – Characteristics of women who are more likely to binge drink, in order to inform outreach efforts to specific populations
  – Percentages and adjusted odds ratios

Maternal and Infant Health Assessment Survey (MIHA)

• Since 1999, annual population-based survey of women with recent live birth
• Sample from birth certificates for Feb - May births, excluding:
  – Non-residents
  – Women < 15 years old
  – Multiple births > 3
• Designed to represent all women giving birth in calendar year who meet inclusion criteria
• Survey mailed in English and Spanish with telephone follow-up to non-respondents
• ~6,800 women participated in 2010, with a response rate of 69%

Study Population

• Survey respondents who answered the following question on binge drinking before pregnancy (n=6,739)
  The next questions are about drinking 4 or more alcoholic drinks in one sitting. By one sitting, we mean within about 2 hours.
  During the 3 months before you got pregnant, how many times did you drink 4 or more alcoholic drinks in one sitting?
  □ ___ times
  □ I didn't drink 4 or more drinks in one sitting in the 3 months before I got pregnant

• In 2010, 15.0% (95%CI=13.5-16.5) reported binge drinking at least once during the 3 months before pregnancy
**Preconception Binge Drinking by Smoking, California, 2010**

- **Smoked before pregnancy**: 35.9%
- **Did not smoke before pregnancy**: 12.0%

**Logistic Regression Analysis**

<table>
<thead>
<tr>
<th>Age (reference = age 15-19)</th>
<th>Adjusted Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24</td>
<td>1.88</td>
<td>1.11 - 3.17</td>
</tr>
<tr>
<td>25-29</td>
<td>2.42</td>
<td>1.36 - 4.30</td>
</tr>
<tr>
<td>30-34</td>
<td>1.72</td>
<td>0.92 - 3.21</td>
</tr>
<tr>
<td>35+</td>
<td>1.33</td>
<td>0.71 - 2.50</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Race/ethnicity (reference = White)</th>
<th>Adjusted Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>0.51</td>
<td>0.29 - 0.89</td>
</tr>
<tr>
<td>Hispanic, US-born</td>
<td>1.09</td>
<td>0.79 - 1.49</td>
</tr>
<tr>
<td>Hispanic, Foreign-born</td>
<td>0.63</td>
<td>0.40 - 0.99</td>
</tr>
<tr>
<td>Asian/PI, US-born</td>
<td>1.45</td>
<td>0.76 - 2.77</td>
</tr>
<tr>
<td>Asian/PI, Foreign-born</td>
<td>0.46</td>
<td>0.24 - 0.86</td>
</tr>
<tr>
<td>Other</td>
<td>2.66</td>
<td>1.21 - 5.81</td>
</tr>
</tbody>
</table>

**Predictors of Preconception Binge Drinking**

- Age 20-29 years
- First live birth
- Income >200% of FPG
- Some college education or college diploma
- Single/never married
- Cigarette smoking

Blacks, Foreign-born Hispanics, and Foreign-born Asians were less likely to binge drink

**Conclusions**

- In 2010, 15.0% (95%CI:13.5-16.5) of women with a recent live birth reported binge drinking at least once during the 3 months before pregnancy
- Substance use around the time of pregnancy may be underreported to provide a more favorable response, or due to women’s inability to recall behaviors
- Clinicians/public health professionals should provide preconception health counseling on alcohol use
- Specific prevention messages may be targeted to women who are most likely to engage in risky behaviors