



Family Health
Services Division

Preconception Alcohol Use

Pregnancy Risk Assessment Monitoring System

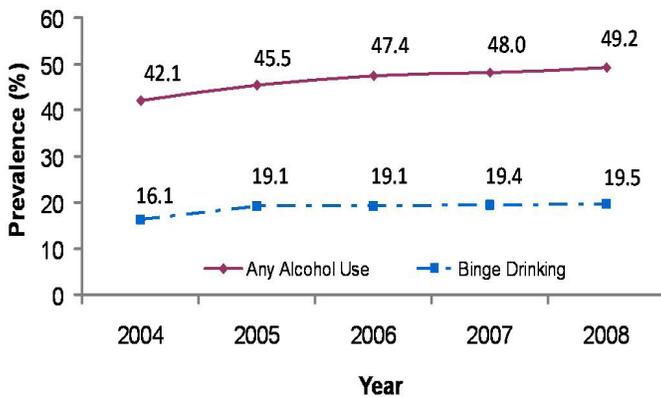
Background

Alcohol exposed pregnancies, although 100% preventable, are a leading cause for developmental disabilities and birth defects in the United States.¹ Any alcohol consumption at any time during pregnancy is considered unsafe to the developing fetus, and can lead to stillbirth, low birth weight, and preterm delivery.¹ In addition, Fetal Alcohol Spectrum Disorder (FASD), a range of adverse birth outcomes of poor neurological, physical, and behavioral development, is strongly associated with alcohol use during pregnancy.^{1,2} FASD can compromise the long term health, behavior, development, and academic achievement of a child.^{1,2} In addition, research has determined that binge drinking during the first month of fetal development is especially harmful to the fetus.^{3,4} Women often drink alcohol during this time, unaware that they are pregnant. Therefore, identifying women who are most at risk of drinking in early pregnancy can reduce the incidence of FASD and promote healthy pregnancies.

“When I was drinking, I felt really sick, so I stopped and that’s how I found out I was pregnant.”

—Hawai’i PRAMS Participant

Preconception Alcohol Use, Hawai’i PRAMS 2004-2008



Preconception Alcohol Use

From 2005-2008, the rate of binge drinking remained relatively constant after an initial increase from 2004, whereas any alcohol use increased from 42.1% in 2004 to 49.2% in 2008.

About the Data

The Hawai’i Pregnancy Risk Assessment Monitoring System (PRAMS) is a self-reported survey of recent mothers conducted by mail with telephone follow-up. It is designed to monitor the health and experiences of women before, during and just after pregnancy. Every year in Hawai’i, about 2,000 women who deliver an infant are randomly selected to participate. For this analysis, the preconception period refers to the three months before pregnancy occurred, and binge drinking is defined as consuming 5 or more drinks in one sitting on at least one occasion.

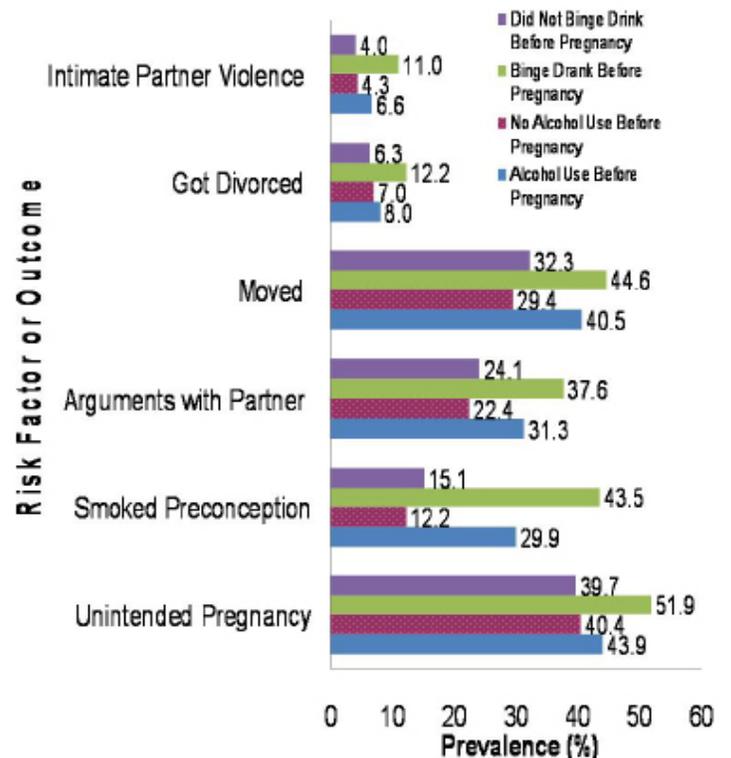
Data Highlights

- Nearly half of women reported any alcohol use and about 20% of women reported binge drinking in the three months prior to pregnancy.
- Preconception alcohol use was more likely among White and Korean women, while preconception binge drinking was more likely among White and Hawaiian women.
- Younger mothers and women who had never given birth before were more likely to report preconception alcohol use.
- Women with a college education were more likely to report preconception alcohol use, while those with only a high school education were more likely to report binge drinking.

Risk Factors and Outcomes Associated with Preconception Alcohol Use

Compared to those that did not engage in alcohol use in the preconception period, mothers that drank any alcohol showed an increase in preconception smoking and unintended pregnancy. Preconception alcohol use was associated with negative or stressful preconception experiences, including intimate partner violence, divorce, moving, and arguments with partner. Therefore, preconception alcohol use, and especially binge drinking, may be a marker of women experiencing and engaging in a constellation of harmful behaviors prior to pregnancy.

Risk Factors and Outcomes Associated with Preconception Alcohol Use, Hawai’i PRAMS 2004-2008



Characteristics of Mothers with Preconception Alcohol Use, Hawai'i PRAMS 2004-2008

Any Alcohol Use **Binge Drinking**
 Prevalence (%) 95% CI* Prevalence (%) 95% CI*

	Prevalence (%) 95% CI*	Prevalence (%) 95% CI*
Maternal Race/Ethnicity		
White	67.3 (65.1-69.4)	23.7 (21.8-25.7)
Black	49.3 (42.0-56.6)	12.9 (8.7-18.8)
Hispanic	48.4 (40.5-56.3)	17.5 (12.2-24.5)
Hawaiian	48.3 (46.2-50.5)	24.1 (22.2-26.0)
Samoan	31.8 (26.0-38.1)	20.9 (16.1-26.8)
Other Pacific Islander	16.9 (13.4-20.9)	10.1 (7.5-13.5)
Filipino	32.7 (30.6-34.8)	12.1 (10.7-13.7)
Japanese	47.2 (44.2-50.2)	15.8 (13.7-18.2)
Chinese	32.8 (30.2-35.5)	7.5 (6.1-9.2)
Korean	50.9 (46.7-55.1)	18.7 (15.7-22.3)
Other Asian	32.3 (25.5-40.0)	12.0 (7.9-17.9)
Maternal Age		
Under 20 years	34.0 (30.3-37.9)	18.0 (15.1-21.3)
20-24 years	52.0 (49.8-54.2)	26.0 (24.1-28.0)
25-34 years	47.1 (45.7-48.6)	17.7 (16.6-18.9)
35 or more years	43.1 (40.8-45.4)	11.6 (10.1-13.3)
Maternal Education		
Less than High School	30.8 (27.3-34.5)	17.0 (14.3-20.2)
High School	44.5 (42.7-46.2)	21.1 (19.7-22.6)
Some College	49.4 (47.3-51.4)	19.7 (18.1-21.4)
College Graduate	52.5 (50.5-54.4)	14.6 (13.2-16.0)
Marital Status		
Married	46.1 (44.9-47.4)	15.5 (14.6-16.4)
Unmarried	47.1 (45.3-49.0)	24.4 (22.9-26.1)
Health Insurance Prior to Pregnancy		
Private Insurance	51.0 (49.7-52.2)	18.6 (17.7-19.7)
Medicaid/QUEST	34.3 (31.9-36.8)	16.6 (14.8-18.6)
Self-Pay	42.3 (39.5-45.3)	21.9 (19.5-24.4)
County of Residence		
Hawai'i	47.5 (44.5-50.5)	19.7 (17.4-22.3)
Honolulu	45.2 (44.0-46.4)	18.0 (17.0-19.0)
Maui	52.3 (47.5-57.2)	20.9 (17.2-25.3)
Kauai	51.1 (47.9-54.4)	20.8 (18.2-23.6)
Parity		
First Birth	54.1 (52.5-55.7)	24.1 (22.7-25.5)
Second or Third Birth	43.2 (41.7-44.7)	15.2 (14.1-16.4)
Fourth or more Birth	32.4 (29.5-35.5)	13.1 (11.0-15.5)
Overall	46.5 (45.5-47.5)	18.7 (17.8-19.5)

* 95% CI refers to the 95% confidence interval around estimate.

Characteristics of Mothers with Preconception Alcohol Use

In Hawai'i, almost half of women (46.5%) consume alcohol during the preconception period and nearly 1 in 5 women (18.7%) engage in binge drinking. Characteristics highly associated with both any alcohol use and binge drinking in the three months prior to pregnancy were women who were smokers, of White or Hawaiian race/ethnicity, or had just given birth for the first time. Binge drinking was much more common among unmarried women compared to married women. Any alcohol use and particularly binge drinking were more common among mothers 20-24 years of age compared to other age groups.

Suggested Citation

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"I think mothers need to be more aware of the dangers of smoking, alcohol, and drug use while pregnant. I don't think enough people realize how serious this is. What kind of damage it can do to their unborn child."

--Hawai'i PRAMS Participant

Discussion

This analysis highlights estimates of alcohol use and binge drinking in the three months prior to pregnancy among women who recently had a live birth and provides important information on characteristics associated with these behaviors. This may help bring an increased awareness and discussion of the negative effects of alcohol before and during the first few weeks of pregnancy, especially as recently pregnant women may underreport their alcohol use. Therefore, it is imperative to: increase public awareness of the detrimental effects of alcohol on a developing fetus, inform all women of the importance of abstaining from alcohol when contemplating pregnancy, as well as screen and counsel all pregnant women as early as possible.

In Hawai'i, 46.5% of women reported drinking alcohol in the 3 months prior to pregnancy, however only 5.8% reported alcohol use during their last trimester, equivalent to an 87.7% cessation rate. Comparatively, 18.7% of women reported binge drinking in the 3 months prior to pregnancy, while 0.9% reported binge drinking during the last trimester, resulting in a 96% cessation rate. These high cessation rates are encouraging, but extension of cessation into the postpartum period is desired.

PRAMS indicates that approximately forty-two percent of pregnancies in Hawai'i are unintended, suggesting that women are most likely not preparing their bodies for pregnancy. Therefore, reducing alcohol use and particularly binge drinking among women of reproductive age is an important way to promote healthy pregnancies and minimize the likelihood of FASD. Promoting abstinence from any alcohol during pregnancy is an objective of the Hawai'i FASD Task Force, which also seek to train and educate local communities and professionals on screening of pregnant women and identifying, diagnosing, and treating FASD in children.

More information on these efforts is available at:

<http://www.fasdcenter.samhsa.gov/statesystemsofcare/states/hawaii.cfm>

References

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- [2] Streissguth AP, Aase JM, Clarren SK, Randels SP, LaDue RA, Smith DF. Fetal alcohol syndrome in adolescents and adults. JAMA. 1991;265:1961-1967.
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- [4] Chasnoff IJ et al. The 4P's Plus screen for substance abuse in pregnancy: clinical application and outcomes. Journal of Perinatology. 2005;25(6):368-74.