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Which women are missed by primary health-care based interventions for alcohol and drug use?

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HIGHLIGHTS

- 59% of women seeking pregnancy termination had a usual source of health care (USOC)
- Some of these women were unable to terminate their pregnancies and gave birth
- Fewer women with than without an alcohol problem symptom reported having a USOC
- Interventions to prevent alcohol exposed pregnancies may not reach women at risk

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ABSTRACT

Background: Women of reproductive age who binge drink or have alcohol-related problem symptoms (APS) and who do not use contraception are considered at risk of an alcohol-exposed pregnancy (AEP). In the U.S., efforts to prevent AEPs focus largely on delivering interventions in primary health care settings. While research suggests that these interventions are efficacious for women reached, it is unclear to what extent these interventions are likely to reach women at risk of AEPs.
Methods: Data are from the Turnaway Study, a study of 956 women seeking pregnancy termination at 30 U.S. facilities between 2008 and 2010, some of whom received and some of whom were denied terminations because they were past the gestational limit. We examined associations between binge drinking, APS, and drug use prior to pregnancy recognition and having a usual source of health care (USOC).
Results: Overall, 59% reported having a USOC. A smaller proportion with than without an APS reported a USOC (44 vs. 60%, $p < .05$) and a smaller proportion using than not using drugs reported a USOC (51 vs. 61%, $p < .05$). This pattern was not observed for binge drinking. In multivariate analyses, an APS continued to be associated with lack of a USOC, while drug use was no longer associated with lack of a USOC.
Conclusions: As more than 40% did not have a USOC, with higher proportions among women with an APS, primary health-care based approaches to AEP prevention seem unlikely to reach the majority of women who have an APS and are at risk of an unintended pregnancy.

1. Introduction

Women of reproductive age who drink alcohol – especially those who binge drink or have alcohol-related problem symptoms – and who do not use contraception are considered to be at risk of having an alcohol-exposed pregnancy (AEP). Alcohol-exposed pregnancies are of concern, as alcohol is a known teratogen that causes fetal alcohol syndrome and a range of other harms to the fetus (Sokol, Delaney-Black, & Nordstrom, 2003; May et al., 2008; Russell & Skinner, 1988; Strandberg-Larsen, Gronboek, Andersen, Andersen, & Olsen, 2009). While there is no known safe level of alcohol consumption during pregnancy, women who drink heavily and in binge patterns are at higher risk of adverse effects (May et al., 2008; May et al., 2005; Whitehead & Lipscomb, 2003; Jacobson, Jacobson, Sokol, & Ager, 1998; Maier & West, 2001; Sayal et al., 2009).

Most women, including women with unintended or unwanted pregnancies, reduce or stop drinking upon discovering pregnancy (Roberts, Wilsnack, Foster, & Delucchi, 2014a; Terplan, Cheng, & Chisolm, 2013; Alvik, Heyerdahl, Haldorsen, & Lindemann, 2006; Harrison & Sidebottom, 2009). Yet, as emphasized by organizations working to prevent AEPs, many women do not discover their pregnancies until midway through the first trimester (Floyd, Decoufle, & Hungerford, 1999). Thus, even if women reduce or eliminate alcohol use upon discovering

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pregnancy, this reduction often occurs after some negative effects related to alcohol exposure may have already occurred.

As a strategy to reduce the frequency of AEPs, the U.S. Centers for Disease Control and Prevention has developed and promoted an intervention called Project CHOICES (CDC, 2015). Project CHOICES seeks to identify women in the preconception period who are considered at risk of an AEP and deliver brief interventions about the importance of reducing binge or problematic drinking, increasing use of effective contraception, or both (Floyd et al., 2007). Project CHOICES has been shown to reduce drinking, increase use of effective contraception, or both (Floyd et al., 2007). The primary focus has been on delivering the Project CHOICES intervention in primary health care settings, including community health centers, private primary care offices, and gynecologic clinics (Velasquez, von Sternberg, & Parrish, 2013), the types of settings in which general practitioners provide care.

Previous studies have established that about 4–9% of women in primary care and gynecologic clinic settings are at risk of an AEP (Floyd et al., 2007; PCR Group, 2002), indicating that delivering AEP-prevention interventions in these settings will reach some of the intended population. However, the success of these interventions on a population-level depends on what proportion of women at risk of an AEP have a usual source of primary or gynecologic care. If a large proportion of women at risk of an AEP do not have a usual source of care, the current focus on primary health care delivery of these interventions may be misplaced. Thus, research examining whether women at greatest risk of an AEP are likely to be reached by a health-care based intervention is warranted.

While other interventions address both alcohol and drug use during pregnancy (USPSTF, 2008; USPSTF, 2013), to date, Project CHOICES-like interventions have not been tested or developed for women who use drugs. Hesitance to apply the Project CHOICES model to drug use likely stems from the existence of heavily criticized interventions in the U.S. that pay women who use drugs to use long-acting reversible or permanent contraception, a court system that uses such contraception methods as part of women's punishment for using drugs (Roberts, 1999; Shatila, MacMaster, Jones, & Chaffin, 2005; Lucke & Hall, 2012), and the lack of evidence for specific irreversible harms associated with the drugs most commonly used during pregnancy (Schempf, 2007; Frank, Augustyn, Knight, Pell, & Zuckerman, 2001). Thus, the absence of a Project CHOICES approach for prevention of drug use during pregnancy is understandable. However, the American College of Obstetrics and Gynecology does recommend providing brief interventions about drug use to women of reproductive age (ACOG, 2008). Also, supporting women to stop drug use prior to pregnancy may be able to help them avoid the risks of being reported to Child Protective Services or of being prosecuted that they might face if they continued to use drugs during pregnancy (Roberts, 1999; Roberts & Pies, 2011; Paltrow & Flavin, 2013). As previous research indicates that women who use drugs during pregnancy are less likely than other pregnant women to receive early and adequate prenatal health care (Melnikow, Alemagno, Rottman, & Zyzanski, 1991; Kelly et al., 1999; Pagnini & Reichman, 2000; Maupin et al., 2004), examining whether women who use drugs and may become pregnant are likely to be reached by primary health care based interventions also seems warranted.

To begin to fill these gaps, this paper uses data from a study of women with unwanted pregnancies (defined here as pregnancies they sought to terminate) to:

1) Examine associations between binge drinking, alcohol-related problem symptoms, and drug use prior to pregnancy recognition and having a usual source of health care
2) Seek to identify factors associated with not having a usual source of care among women who report binge drinking, having an alcohol-related problem symptom, or using drugs prior to pregnancy recognition.

2. Methods

2.1. Data

This study uses baseline interview data from the Turnaway Study, a prospective cohort study of women seeking pregnancy termination at 30 U.S. facilities between 2008 and 2010. The Turnaway Study was designed to assess the effects of receiving versus being denied a pregnancy termination on women's physical, mental, and socio-economic well-being. Potential recruitment sites were identified using the National Abortion Federation directory of pregnancy termination providers. Eligible sites had the highest gestational age limit of any provider within 150 miles. Details about the study sites have been described in detail elsewhere (Dobkin et al., 2014; Upadhyay, Weitz, Jones, Barar, & Foster, 2014; Roberts, Rocca, & Foster, 2014b).

Women were eligible to participate if they presented for pregnancy termination care up to three weeks over a facility's gestational age limit and were denied care ('Turnaways'), up to two weeks under the limit and received a termination ('Near Limit Termination Group'), or under the limit, in the first trimester of pregnancy, and received a pregnancy termination ('First Trimester Group'). Gestational age limits varied by clinic due to both facility-level and state-specific restrictions, and ranged from 10 weeks to the end of the second trimester. Eligibility was also restricted to English- or Spanish-speaking women, aged 15 years or older, with no known fetal anomalies or demise.

Among eligible women approached to participate, 37.5% ($n = 1132$) consented. Of those who consented, 84.5% ($n = 956$) completed a baseline interview. Although not the focus of the analyses presented in this paper, after the baseline interview, interviews were repeated every six months for a period of 5 years. All study activities were approved by the University of California, San Francisco Committee for Human Research.

For the current analysis, we utilize data from the baseline interview. We combine women from all three study groups for all analyses.

2.2. Measures

2.2.1. Usual source of care

Women's response to the question "*Is there a specific place like a clinic or doctor's office you usually go to when you are sick or want advice about your health*" was used to generate our primary outcome of interest: having a usual source of health care (USOC). Women who responded doctor's office, clinic, health department clinic, or Planned Parenthood clinic were classified as having a USOC. Women who responded that this place was an emergency room, hospital, or urgent care center, or who responded that they didn't know of a place, were classified as not having a USOC.

2.2.2. Alcohol and drug use

Women were asked to describe their alcohol and drug use in the month before they discovered they were pregnant. Binge drinking was defined as consuming five or more drinks on a single occasion one or more times during the month before discovering pregnancy. Having an alcohol problem symptom (APS) was defined as reporting having a drink first thing in the morning to steady their nerves or get rid of hangover (eye-opener), or being unable to remember what happened the night before because of drinking (black out) one or more times during the month before discovering pregnancy. Drug use was defined as use of any illicit drug or prescription drug used for recreational purposes, including marijuana one or more times during the month before discovering pregnancy.

2.2.3. Other covariates

As covariates we used several measures of social and demographic characteristics, including age, race/ethnicity (white, African American,