Researchers find a more accurate method to gauge prenatal alcohol use

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When health researchers ask pregnant women about their alcohol use, expectant women may underreport their drinking, hampering efforts to minimize alcohol use in pregnancy and prevent development of fetal

alcohol spectrum disorders (FASD) in children.

In a recently published study in *Alcoholism: Clinical & Experimental Research*, University of New Mexico scientists found that pregnant women's reporting of their own risky drinking varies greatly depending on how key questions are worded.

Most women know that alcohol use during pregnancy may harm their unborn child—and that leads to fear of being stigmatized or facing legal consequences when they admit to drinking, says lead author Ludmila Bakhireva, MD, Ph.D., MPH, professor and director of the Substance Use Research and Education (SURE) Center in the UNM College of Pharmacy.

"We are trying to destigmatize this and get more accurate reports," Bakhireva said. "We're trying to do it in a compassionate way without blaming the mother or inducing shame. Since as many as half of the pregnancies in the U.S. are unplanned, many women may be drinking before they know they are pregnant."

Existing self-reporting tools are suitable for identifying chronic heavy drinking, Bakhireva said, but are less likely to detect episodic binge drinking or moderate alcohol use—which still may pose a risk to the developing fetus.

Bakhireva was joined in the study by SURE Center colleagues Melissa Roberts, Ph.D., and Dominique Rodriguez, MA, along with Lawrence Leeman, MD, MPH, professor in the UNM Department of Family & Community Medicine, and Sandra Jacobson, Ph.D., professor in the Wayne State University School of Medicine.

They worked with 121 pregnant women aged 18 to 43, who enrolled in the Ethanol, Neurodevelopment, Infant and Child Health cohort. Each

woman was interviewed during the second trimester of pregnancy regarding alcohol use during the month around conception, over the weeks since their last menstrual period and pregnancy recognition and during the past 30 days.

The women were not asked directly about using alcohol while pregnant. Instead, they were asked about the number of drinks they consumed the last time they had any alcohol, the most drinks they consumed over 24 hours since their last menstrual period and their drinking on special occasions, such as holidays and birthdays.

Only 3% of the women reported at least one episode that met the criteria for binge drinking (four or more drinks per occasion) since their last menstrual period on a detailed calendar assessment method which captures quantity and frequency of alcohol use.

But the percentages changed when the questions were asked differently. Twenty percent acknowledged drinking on a special occasion, and 52% reported the equivalent of binge drinking the last time they consumed alcohol. When asked about their maximum number of drinks consumed in 24 hours, 89% acknowledged four or more drinks.

Responses reporting higher use are considered likely to be more accurate, so the researchers concluded that brief, targeted questions to pregnant women about their maximum number of drinks in 24 hours and the total number of drinks at their most recent episode of alcohol consumption were likely to result in much higher self-reported alcohol use.

'Binge drinking in early pregnancy, which can represent alcohol use prior to pregnancy recognition for many women, is predictive of risky drinking later in gestation and is associated with adverse perinatal outcomes," they wrote.

"Asking about alcohol consumption during the timeframe since estimated last menstrual period, instead of asking directly about alcohol use 'in pregnancy,' may also elicit more honest responses. These brief and incisive questions, which can readily be asked by the clinician, generate information critical for the long-term health of the mother and infant."

The researchers cautioned that additional studies are needed to estimate validity of these short questions and that women of all socioeconomic and ethnic backgrounds may be at risk of unsafe drinking in pregnancy.

FASD, which causes developmental disabilities affecting as many as 5% of children in the U.S., is commonly undiagnosed or misdiagnosed, underscoring the need for early identification of alcohol use in pregnancy.

More information: Ludmila N. Bakhireva et al, You Didn't Drink during Pregnancy, Did You?, *Alcoholism: Clinical and Experimental Research* (2021). DOI: 10.1111/acer.14545

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