Trends in Marijuana, Alcohol, and Opioid Use in Pregnant and Postpartum Women with HIV

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Abstract #0780

OBJECTIVE

To evaluate trends over time in marijuana, alcohol, and opioid use during pregnancy and in the first year postpartum among United States (US) women living with HIV (WLHIV)

BACKGROUND

- 1-3% of pregnant and reproductive age women engage in non-medical opioid use, with recent steep increases in use concurrent with the national opioid epidemic
- Marijuana is the most commonly used recreational drug during pregnancy
- Opioid and marijuana use during pregnancy both have implications for maternal and perinatal health
- Prior data about substance use among WLHIV suggests low prevalence, but this work pre-dates the opioid epidemic and legalization of marijuana in many states
- Postpartum patterns of alcohol and marijuana use among WLHIV have not been studied extensively

METHODS

- **Study population:** Biological mothers enrolled in the Surveillance Monitoring for ART Toxicities (SMARTT) Dynamic Cohort of the Pediatric HIV/AIDS Cohort Study
  - Pregnant WLHIV were enrolled at 22 US sites
  - Marijuana, alcohol, and opioid data were collected during pregnancy; marijuana and alcohol data were collected postpartum
- **Eligibility:** SMARTT-enrolled pregnant WLHIV from 2007-2019 with self-reported substance use data available in pregnancy, at 1 year postpartum, or both time periods
- **Hypothesis:** Increased prevalence of opioid and marijuana use will be observed over time among pregnant and postpartum women, without a similar increase in the prevalence of alcohol use.
- **Analysis:**
  - Prevalence of marijuana, alcohol, opioid, and concomitant alcohol and marijuana use was calculated by delivery year
  - Pregnancy and postpartum periods analyzed separately
  - Multivariable log-binomial general estimated equation models were constructed to evaluate linear trends in use over time, accounting for repeat pregnancies and adjusting for maternal age and race/ethnicity

RESULTS

Figure 1. Study population

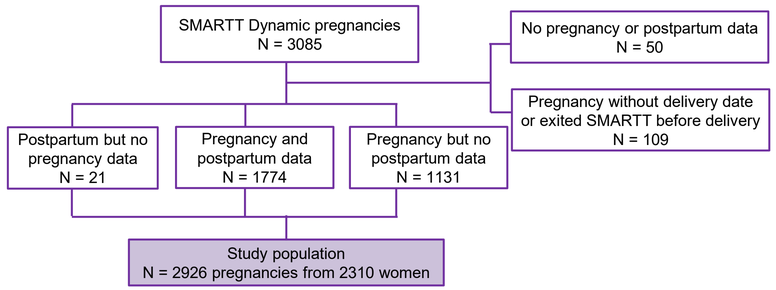


Table 1. Cohort characteristics

Characteristics		Total (N=2926)
Age at conception, years	< 21	223 (7.6%)
	21-30	1,594 (54.5%)
	31-40	1,006 (34.4%)
	≥ 41	103 (3.5%)
Maternal race/ethnicity	White non-Hispanic	185 (6.3%)
	Black non-Hispanic	1,859 (63.5%)
	Hispanic (regardless of race)	822 (28.1%)
	More than one race	24 (0.8%)
	Other	24 (0.8%)
	Not known/not reported	12 (0.4%)
Household income	≤ $10,000	1,210 (44.6%)
	$10,001-$20,000	623 (23.0%)
	$20,001-$30,000	334 (12.3%)
	≥ $30,001	395 (14.6%)
Education	High school/GED or above	2,001 (68.9%)
Mode of delivery	Vaginal	1,235 (42.7%)
Maternal PHIV status	Perinatally-acquired HIV	302 (11.1%)

Figure 2. Maternal substance use by trimester (N=2905)

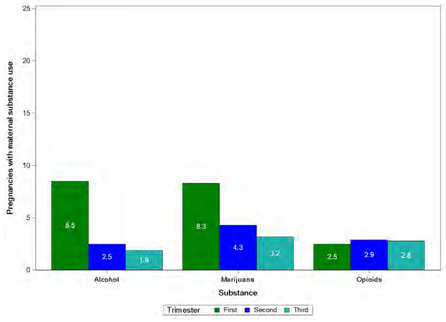
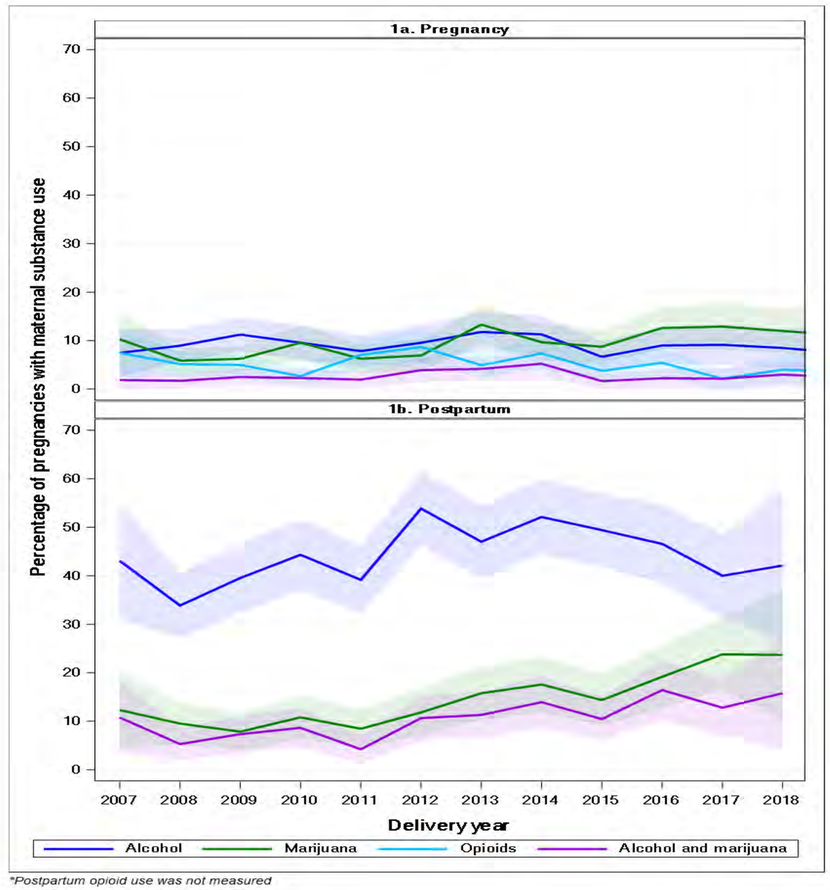


Table 2. Adjusted relative risk of substance use per additional delivery year

Substance	aRR (95% CI)*
Pregnancy	
Marijuana	1.07 (1.03-1.10)
Alcohol	0.99 (0.95-1.02)
Opioids	0.97 (0.93-1.02)
Marijuana + alcohol	1.02 (0.97-1.09)
Postpartum	
Marijuana	1.11 (1.07-1.16)
Alcohol	1.02 (1.00-1.04)
Marijuana + alcohol	1.10 (1.05-1.15)

*Adjusted for maternal race/ethnicity and age and accounting for repeat pregnancies

Figure 3. Maternal alcohol and substance use in pregnancy and the postpartum period by delivery year among WLHIV in the US



*Postpartum opioid use was not measured

CONCLUSIONS

- Opioid use among pregnant WLHIV in SMARTT remained low and stable despite the US opioid epidemic, whereas the prevalence of marijuana use during pregnancy and postpartum increased between 2007 and 2019, as did postpartum concomitant marijuana and alcohol use.
- Alcohol use during pregnancy and postpartum remained stable.
- Increasing marijuana use in pregnant and postpartum WLHIV warrants further attention, particularly given the potential maternal and child health implications.

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