



Department of Health and Social Services
Valerie J. Davidson, Commissioner

3601 C Street, Suite 540
Anchorage, Alaska 99503 <http://www.epi.Alaska.gov>

Division of Public Health
Jay C. Butler, MD, Chief Medical Officer
and Director
Local (907) 269-8000
24 Hour Emergency (800) 478-0084

Editors:
Joe McLaughlin, MD, MPH
Louisa Castrodale, DVM, MPH

Bulletin No. 5 February 24, 2015

Marijuana Use among Women Delivering Live Births in Alaska, 2002–2011

Background

In November 2014, Alaska voters approved an initiative legalizing recreational marijuana use. Medical marijuana has been legal in Alaska since 1998. Limited research on women of childbearing age indicates higher marijuana use among younger, less educated, and lower income women.^{1,2} This analysis summarizes self-reported marijuana use among Alaska women who delivered a live birth during 2002–2011.

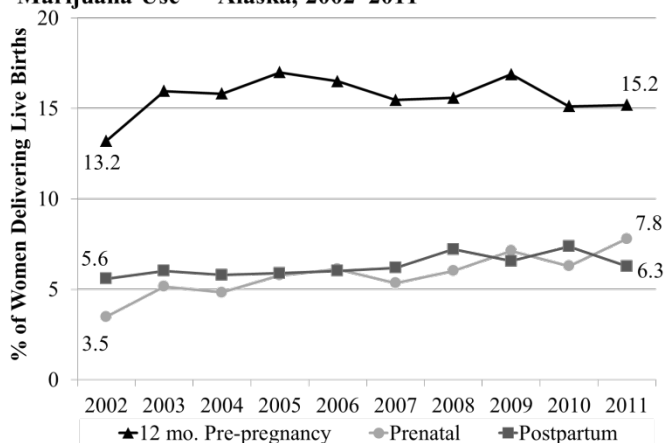
Methods

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing, population-based, randomized survey completed by about 18% of mothers delivering a live-born infant in Alaska. The PRAMS survey asks women about their history of smoking marijuana or hash during three specific time periods: during the 12 months before pregnancy, during the most recent pregnancy (i.e., prenatal exposure), and since the mother's most recent baby was born. On average, women respond (either by mail or phone) 3.9 months postpartum (range: 2–9 months).

Results

During 2002–2011, marijuana use during the 12 months prior to pregnancy was reported by over 15% of Alaska women every year except for 2002, and was consistently close to double that of prenatal or postpartum use. Over the 10-year analysis window, marijuana use during pregnancy significantly increased ($p < 0.01$), while no significant change in pre-pregnancy or postpartum use occurred (Figure).

Figure. Pre-Pregnancy, Prenatal, and Postpartum Marijuana Use — Alaska, 2002–2011



During 2009–2011, marijuana use during all three time periods around pregnancy decreased with increasing maternal age; teenage mothers (aged <20 years) reported proportionally more use during any time period. Residents of the Northern and Southeast regions of the state reported higher marijuana use both prenatally and any use around pregnancy. Alaska Native women's prenatal marijuana use (11.0%) was nearly double that of white women (5.8%) and those of other race (5.6%; $p < 0.01$). Women whose prenatal care was at least partially covered by Medicaid were 3.6 times as likely to report marijuana use during pregnancy than non-Medicaid covered women ($p < 0.01$; Table).

Discussion

Even prior to legalization, prenatal marijuana use in some Alaska populations was almost as high as prenatal cigarette use.³ At 7.1%, the overall prevalence of prenatal marijuana use was nearly three times as high as reported in a similar study; Hawaii cited 2.6% prenatal marijuana use using similar PRAMS methodology and years (2009–2011).²

Table. Marijuana Use, Alaska, 2009–2011

	% Used During Pregnancy	% Used Overall*
Overall	7.1	16.6
Maternal Age		
<20 years	13.2	33.2
20–24 years	10.6	23.7
25–34 years	4.9	11.5
35+ years	3.8	10.6
Maternal Race		
White	5.8	13.7
Alaska Native	11.0	25.7
Other	5.6	13.0
Maternal Region		
Anchorage/ Mat-Su	6.1	13.7
Gulf Coast	7.6	18.1
Interior	5.5	14.7
Northern	14.0	29.8
Southeast	13.8	28.3
Southwest	5.5	19.8
Prenatal Medicaid		
No	3.2	9.0
Yes	11.4	25.3

* 12 mos. pre-pregnancy, during pregnancy, or postpartum

In Alaska, marijuana use before and during pregnancy was more common among younger women. Prenatal use among Alaska Native women and residents of the Northern and Southeast regions was nearly twice that of their comparison groups. It should be noted, however, that an important limitation of PRAMS is that it is based on self-reported data.

The active compound of cannabis, THC, passes freely through the placental barrier. Current studies indicate that prenatal cannabis exposure is associated with an increased risk of neurobehavioral problems in offspring, including issues with attention, memory, and problem solving.^{4,5} Additional studies are needed to determine the health impacts associated with marijuana use around the time of pregnancy.

Recommendations

1. Health care providers should counsel women who report using marijuana and plan to become pregnant of the potential harmful effects of marijuana on the fetus (see: http://here.doh.wa.gov/materials/guidelines-substance-abuse-pregnancy/13_PregSubs_E14L.pdf).
2. Screen women of childbearing age for substance use and for pregnancy intention to support contraceptive needs to reduce exposure risk to an unplanned pregnancy (see: http://www.integration.samhsa.gov/clinical-practice/sbirt/Brief_Intervention-ASSIST.pdf).
3. For more facts about the health effects of marijuana, see: <http://www.dhss.alaska.gov/dph/Director/Pages/marijuana/default.aspx>

References

1. Van Gelder MM, Reefhuis J, Caton AR, et al. Maternal periconceptional illicit drug use and the risk of congenital malformations. *Epidemiology* 2009;20(1):60-66.
2. Roberson EK, Patrick WK, Hurwitz EL. Marijuana Use and Maternal experiences of severe nausea during pregnancy in Hawai'i. *Hawaii J Med Pub Health* 2014;73(9):283-87.
3. Newby-Kew AJ, et al. Alaska Maternal and Child Health Data Book 2014: Life Course Edition. Alaska Dept of HSS, p. 35. Available at: <http://dhss.alaska.gov/dph/wcfh/Pages/mchebi/mchdatabook/2014.aspx>
4. Huizink AC. Prenatal cannabis exposure and infant outcomes. *Prog Neuropsychopharmacol Biol Psychiatry* 2014;52:45-52.
5. Trezza V, et al. Cannabis 2008 and the developing brain: insights from behavior. *Eur J Pharmacol* 2008;585(2-3):441-52.