

University of Vermont

**UVM ScholarWorks**

---

Family Medicine Clerkship Student Projects

Family Medicine Community

---

2017

## Marijuana Use Counseling During Pregnancy

Adam Petchers

*UVM COM*

Follow this and additional works at: <https://scholarworks.uvm.edu/fmclerk>



Part of the [Medical Education Commons](#), and the [Primary Care Commons](#)

---

### Recommended Citation

Petchers, Adam, "Marijuana Use Counseling During Pregnancy" (2017). *Family Medicine Clerkship Student Projects*. 227.

<https://scholarworks.uvm.edu/fmclerk/227>

This Book is brought to you for free and open access by the Family Medicine Community at UVM ScholarWorks. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of UVM ScholarWorks. For more information, please contact [scholarworks@uvm.edu](mailto:scholarworks@uvm.edu).

# Marijuana Use Counseling During Pregnancy

Adam Petchers & Theresa Flanagan

December/January 2017

Center for Family Medicine at Eastern Maine Medical Center, Bangor, ME

Eric Brown, MD

Sarah Irving, MD, FAAFP

# Problem Identification

- ▶ Approximately 7.5% of women age 18-25 use marijuana during pregnancy
  - ▶ 4% overall, currently increasing (Brown, 2016)
- ▶ Marijuana use during pregnancy linked with adverse outcomes in neonatal, childhood and young adult periods (Volkow, 2016).
- ▶ Currently major focus on opiate, tobacco, and alcohol counseling
  - ▶ Relatively little attention paid to marijuana by comparison (Holland, 2016)
- ▶ Patients want information, are overall unsatisfied with marijuana counseling
  - ▶ Turn to friends, family, internet, and social media for information (Jarlenski, 2015)

# Public Health Cost in Host Community

- ▶ Marijuana use during pregnancy leads to increased chance of NICU admission (Gunn, 2016)
- ▶ Total cost of treating ADHD due to marijuana use during pregnancy (including medication, therapy, and education costs) not well studied or quantified
- ▶ Penobscott county, and the surrounding Penquis region, has among the highest rates of marijuana use in the nation and Maine has among the lowest rates of viewing marijuana as harmful (Hughes, 2016)
- ▶ In 2016 Maine voted to legalize recreational use of marijuana

# Community Perspective

- ▶ The general public frequently views marijuana as benign
  - ▶ *“It has just been made legal, which many see as a mark of safety, and people don’t draw the parallel with alcohol being legal and also harmful during pregnancy.”<sup>1</sup>*
- ▶ The providers do not feel comfortable with the extent of and their familiarity with the research
  - ▶ *“A glass of wine versus smoking a joint during pregnancy? I really don’t know how to compare them, I don’t think anyone does.”<sup>2</sup>*
- ▶ General belief that most patients who are using marijuana during pregnancy are resistant to stopping, even if informed of the risks of use
  - ▶ *“What resonates the most with people is the neurodevelopmental impact, but even then few people quit”<sup>1</sup>*

1. Nurse Practitioner at CFM EMMC  
2. Faculty Physician at CFM EMMC

# Methodology and Intervention

- ▶ Survey sent out to EMMC CFM providers via SurveyMonkey
  - ▶ 29 resident physicians
  - ▶ 12 faculty physicians
  - ▶ 3 nurse practitioners
  - ▶ 2 behavioral health specialists
  - ▶ 4 osteopathic fellows
- ▶ Assessed knowledge base, counseling practices, and overall views of marijuana use during pregnancy
- ▶ Based on the data in the survey and a review of the literature, created an information sheet for use by the EMMC CFM providers as a guide for marijuana use counseling<sup>3</sup>
  - ▶ Existing information sheet for patients not specific enough for use by clinicians

3. See appendix

# Data and Results

- ▶ 22 of 50 responses to survey
- ▶ 24% were trained to counsel pregnant patients on marijuana use versus 81% on tobacco cessation
  - ▶ Lower rates of marijuana counseling than tobacco or other drug use
- ▶ 64% indicated that “Many” or “Almost All” of their pregnant patients use marijuana
- ▶ 2/3 of providers ranked the priority of marijuana counseling lower than alcohol, cocaine, opioid, and tobacco counseling
  - ▶ The remaining 1/3 ranked it second to last
- ▶ Patient perception of marijuana listed as largest barrier to counseling
  - ▶ 58% also stated marijuana as a lower priority than other medical issues

# Effectiveness Measures and Limitations

## Effectiveness

- ▶ Immediate measure of effectiveness would be provider frequency and accuracy of counseling
- ▶ Long term measures of effectiveness
  - ▶ Public view of marijuana in Penobscot County
  - ▶ Rate of marijuana use during pregnancy
  - ▶ Rate of marijuana cessation during pregnancy

## Limitations

- ▶ Provider level intervention
  - ▶ Does little to directly change public perception of safety of marijuana
  - ▶ Requires provider use of information sheet and behavior change
- ▶ Growing culture of acceptance of marijuana as evidenced by legalization
  - ▶ Research about congenital effects of marijuana still new and limited



# Future Projects or Interventions

- ▶ Patient level data collection
  - ▶ Survey pregnant patients directly on marijuana use and views on marijuana
- ▶ Patient level intervention
  - ▶ Currently questions asked regarding tobacco use, depression, and domestic violence as pregnant patients are being roomed
    - ▶ Can extend questions to include marijuana use
  - ▶ Protocolized marijuana counseling as part of Subutex induction in pregnancy
- ▶ Community level program
  - ▶ Greater statewide informational resources for patients
  - ▶ General warning regarding risks for pregnant women purchasing marijuana as is posted for alcohol and tobacco

# References

- ▶ Brown QL, Sarvet AL, Shmulewitz D, Martins SS, Wall MM, Hasin DS. Trends in Marijuana Use Among Pregnant and Nonpregnant Reproductive-Aged Women, 2002-2014. *JAMA*. 2017;317(2):207-209. doi:10.1001/jama.2016.17383
- ▶ Gunn, J K L et al. “Prenatal Exposure to Cannabis and Maternal and Child Health Outcomes: A Systematic Review and Meta-Analysis.” *BMJ Open* 6.4 (2016): e009986. *PMC*. Web. 13 Jan. 2017.
- ▶ Holland, Cynthia L. et al. “Anything above marijuana takes priority”: Obstetric providers’ attitudes and counseling strategies regarding perinatal marijuana use. *Patient Education and Counseling* , Volume 99 , Issue 9 , 1446 - 1451
- ▶ Hughes, A., Lipari, R.N., and Williams, M.R. *Marijuana use and perceived risk of harm from marijuana use varies within and across states*. The CBHSQ Report: July 26, 2016. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.
- ▶ Jaques SC, Kingsbury A, Henshcke P, et al. : Cannabis, the pregnant woman and her child: weeding out the myths. *J Perinatol*. 2014;34(6):417-424. 10.1038/jp.2013.180
- ▶ Jarlenski, Marian et al. Pregnant Women's Access to Information About Perinatal Marijuana Use: A Qualitative Study. *Women's Health Issues* , Volume 26 , Issue 4 , 452 - 459
- ▶ Volkow ND, Compton WM, Wargo EM. The Risks of Marijuana Use During Pregnancy. *JAMA*. 2017;317(2):129-130. doi:10.1001/jama.2016.18612

# Appendix

## Information Sheet For Providers at CFM EMMC

### Marijuana Use during Pregnancy - Information for Providers

#### Demographics

Nationwide, 4% of pregnant women have used marijuana in the past month (7.5% ages 18-25)  
2-3 times more likely to use marijuana if also use tobacco or other drugs  
Penobscot county has one of the highest rates of marijuana use in the country  
Common perception of marijuana as physiologically benign

#### Gap in Care

Qualitative studies have shown that pregnant women seek information about marijuana use  
Patient and provider perceived risk of regular marijuana use during pregnancy is incongruent  
Maine info brochures are vague and use frightening language  
Patients are unaware or skeptical of risks associated with marijuana use during pregnancy  
Other drug use prioritized and marijuana frequently missed

#### Exposure

THC is lipophilic, crosses BBB and maternal-placental barrier  
Concentrates in fetus and breast milk with repeated use

#### Risks of use

Neonatal effects	Infant effects	Childhood effects	Epigenetic/Multigenerational effects
1.7x more likely to have low birth weight	Mild withdrawal effects, resolve by 1 month	Higher incidence of ADHD and depressive symptoms	Immune suppression
2x more likely NICU admission	No clear structural brain changes	Decreased verbal reasoning performance	Earlier initiation of marijuana use
No increase in neonatal mortality	Continued use associated with higher SIDS frequency	fMRI shows altered executive function	mRNA changes in DA, 5-HT, and cannabinoid receptor expression

#### Steps for Providers

- Verbally screen all pregnant patients for marijuana use
- Assess patient understanding of risk
- Identify underlying reason for use i.e. stress, hyperemesis, pain
- Assess desire to discontinue use
- Recommend against marijuana use during pregnancy or breastfeeding
- Continue to address drug use throughout pregnancy at all visits

#### Resources for Patients

- Information sheet for patients in FP education resources on EMMC Intranet
- State of Maine DHHS [www.maine.gov/dhhs/samh/osa/](http://www.maine.gov/dhhs/samh/osa/)
- Bangor Area Recovery Network [www.bangorrecovery.org](http://www.bangorrecovery.org)
- American Pregnancy Association [www.americanpregnancy.org](http://www.americanpregnancy.org)

#### References

Hughes, A., Lipari, R.N., and Williams, M.R. *Marijuana use and perceived risk of harm from marijuana use varies within and across states.* The CBHSQ Report: July 26, 2016. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD  
Jaques SC, Kingsbury A, Henschke P, et al. : Cannabis, the pregnant woman and her child: weeding out the myths. *J Perinatol.* 2014;34(6):417-424. 10.1038/jp.2013.180  
Mietz, Tom D, et al. Marijuana use in pregnancy and lactation: a review of the evidence. *American Journal of Obstetrics & Gynecology*, Volume 213, Issue 6, 761 - 778

1-19-2017