Effects of Cannabis Legalization on the Prenatal Use Rates of Cannabis, Tobacco, and Alcohol

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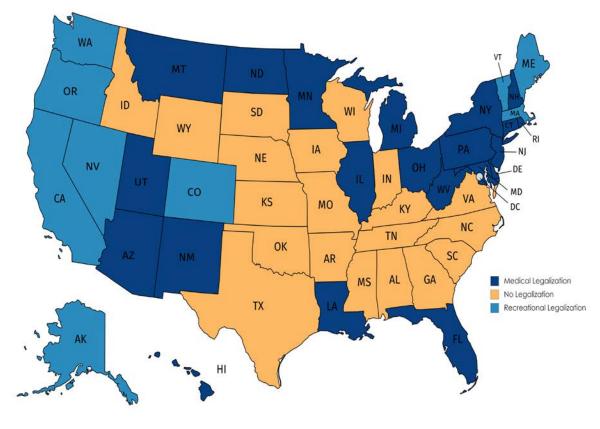**BETTY IRENE MOORE SCHOOL OF NURSING**

Academic Symposium
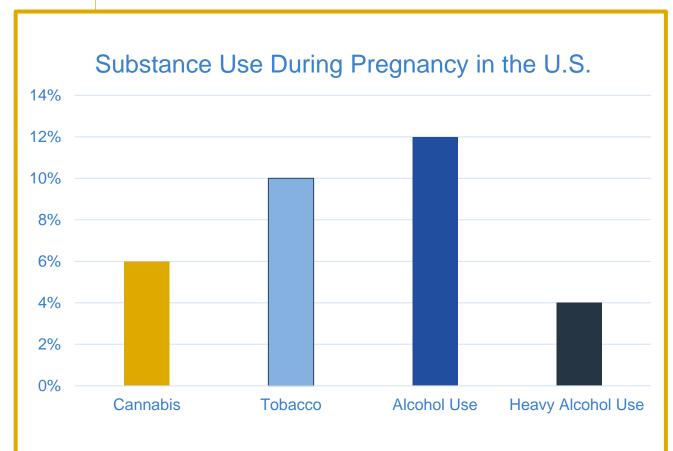
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United States Cannabis Policy

➢ Schedule 1 drug due to "abuse potential, safety concerns, and lack of evidence to support pharmaceutical efficacy" [1]

➢ Changes in 1996 & 2012

➢ Three different types of legalization statuses [3]

  ➢ Recreational

  ➢ Medical

  ➢ No broad legalization

➢ Legalization may impact cannabis use and use of other substance use

Legend:
- Medical Legalization
- No Legalization
- Recreational Legalization

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Prenatal Substance Use

Substance Use During Pregnancy in the U.S.

Bar chart — Substance Use During Pregnancy in the U.S.:
- Cannabis: 6%
- Tobacco: 10%
- Alcohol Use: 12%
- Heavy Alcohol Use: 4%

Y-axis: 0%, 2%, 4%, 6%, 8%, 10%, 12%, 14%

➢ Cannabis is the most commonly used illicit drug in the United States (6-10%)

➢ Tobacco use rates vary- average ~10%

➢ Alcohol is the most common substance used during pregnancy-12% and rising

➢ All appear to have an impact on fetal and maternal health
  ➢ Low infant birth weight
  ➢ Cognitive delay

[1] Carliner et al., 2017; [2] Wen et al., 2015; [3] Schuermeyer et al., 2014; [4] CDC, 2017

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Problem Statement

Given the changing cannabis policy landscape, further studies need to address how cannabis legalization impacts the use of cannabis, alcohol, and tobacco during pregnancy, as well as factors associated with cannabis use.

Overview of study

Dataset

- Pregnancy Risk Assessment Monitoring System PRAMS

- A population-based surveillance system through CDC

- Used to better understand mother and infant health outcomes

Design

➢ Natural Experiment

➢ Retrospective cross-sectional study

➢ Secondary datasets

➢ Difference-in-differences analysis, logistic regression, and descriptive statistics

➢ Outcome variables included substance use behaviors during preconception, prenatal, and postpartum (paper 2)

Paper 1

Overview

➢ To compare the prevalence rates of alcohol and tobacco use among pregnant women and the association of these rates with cannabis legalization status

Results

➢ 1% increase in prenatal alcohol use in recreational states(OR:1.51)

➢ Cigarette use decreasing overall but a lower rate in both recreationally legal and medically legal states

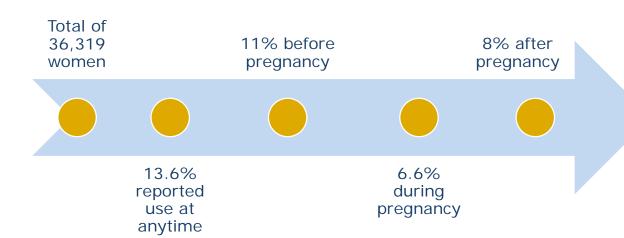➢ Translates to thousands of potentially exposed pregnancies

Paper 2

Overview

➢ Examine the prevalence of cannabis use across the prenatal period

➢ Determine prevalence of co-occurring use of tobacco

➢ Identify factors associated with use during the three time periods

Results

Total of 36,319 women

11% before pregnancy

8% after pregnancy

13.6% reported use at anytime

6.6% during pregnancy

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Significant Findings

Preconception Use

- Increased odds of residence in a medical legal and recreational legal states
- Several other characteristics associated with use: age, marital status, tobacco use, inadequate prenatal care

Prenatal Use

- Residence in recreational states associated with higher odds of cannabis use
- Similar characteristics associated with preconception use

Postpartum Use

- Recreational states again associated with higher use
- Also associated with tobacco use and inadequate prenatal care

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What does this all mean ?

First study to look at effects of recreational cannabis legalization on use of other substances in the pregnant population

Both medical and recreational cannabis legalization are associated with the use of alcohol and tobacco by pregnant women

Shift of attention from public health officials and providers away from other substance use

The recreational legalization of a schedule 1 drug could change perception about using other substances
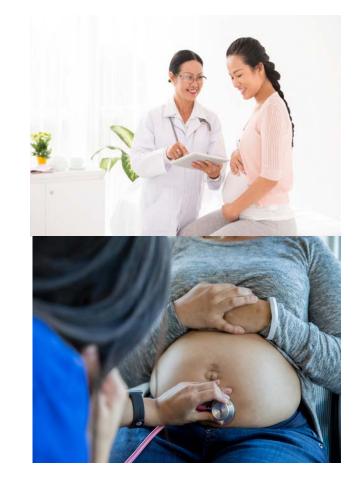
What does this all mean ?

➢ Difference in recreational compared to medical states due to changes in perception of harm or increase access and promotion through dispensaries

➢ Providers may vary in the information they give based on state legalization status

➢ Characteristics associated with use similar to other literature

➢ Tobacco use including e-cigarettes should be standard moving forward

Public Health

Clinical Practice

Policy

My deepest gratitude for

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Thank You and Questions

table and said " forget medical school get a Ph.D." – you are dearly missed and never far from my heart.

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