Vermont PRAMS Data on Maternal Substance Use

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Overview

- Background: PRAMS
- Prevalence of Alcohol, Tobacco & Marijuana Use, 2001-2017 PRAMS
- Substance use before pregnancy: 2016-17 Births
- Substance use during pregnancy: 2016-17 Births
- Next steps for VT PRAMS
PRAMS Overview

Vermont Department of Health
Goal of PRAMS

- To reduce infant morbidity and mortality and promote maternal health by influencing MCH programs, policies, and maternal behaviors

- Improving the health of mothers and infants
PRAMS Data Collection

- **Data sources**
  - Birth Certificate data
    - Sample frame: each state’s stratified sample design
    - Population demographics
  - PRAMS Questionnaire data (self reported data by mail or phone)
    - Currently on eighth version (“Phase 8”)
    - Includes items asked by all PRAMS sites and state-added options
Vermont has been participating in PRAMS since 2001, collecting alcohol and cigarette use data.

Vermont PRAMS has asked about marijuana use since 2009.

81. During any of the following time periods, did you smoke marijuana or hash? For each time period, check No if you did not smoke then or Yes if you smoked then.

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<tr>
<th>No</th>
<th>Yes</th>
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- a. During the 12 months before I got pregnant ...........................................
- b. During my most recent pregnancy......
- c. Since my new baby was born ..........
65. During the month before you got pregnant, did you take or use any of the following drugs for any reason? Your answers are strictly confidential. For each item, check No if you did not use it or Yes if you did.

- a. Over-the-counter pain relievers such as aspirin, Advil®, Aleve®, or Tylenol®
- b. Prescription pain relievers such as hydrocodone (Vicodin®), oxycodone (Percocet®), or codeine
- c. Adderall®, Ritalin® or another stimulant
- d. Marijuana or hash
- e. Synthetic marijuana (K2, Spice)
- f. Heroin (smack, junk, Black Tar)
- g. Amphetamines (uppers, speed, crystal meth, crank, ice)
- h. Cocaine (crack, rock, coke, blow, snow)

66. During your most recent pregnancy, did you take or use any of the following drugs for any reason? Your answers are strictly confidential. For each item, check No if you did not use it or Yes if you did.

- a. Over-the-counter pain relievers such as aspirin, Advil®, Aleve®, or Tylenol®
- b. Prescription pain relievers such as hydrocodone (Vicodin®), oxycodone (Percocet®), or codeine
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Background

Substance Use Before Pregnancy
VT PRAMS 2001-2017

- Drank any alcohol; 3 months before pregnancy
- Smoked cigarettes; 3 months before pregnancy
- Any drinking binges; 3 months before pregnancy
- Used marijuana before* pregnancy

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Alcohol Use During Pregnancy
2015 PRAMS Sites

Vermont Department of Health
Background

Any Drinking During Pregnancy 2016 PRAMS*

- CO: 17%
- VT: 17%
- CT: 11%
- WA: 10%
- NE: 9%
- MD: 9%
- NJ: 9%
- VA: 8%
- US: 8%
- TX: 8%
- ME: 8%
- PA: 7%
- WY: 7%
- DE: 6%
- NY: 6%
- LA: 5%
- MO: 5%
- AK: 4%

Any Drinking During Pregnancy 2017 PRAMS*

- CO: 15%
- VT: 15%
- NJ: 11%
- NC: 10%
- CT: 9%
- PA: 8%
- US: 8%
- SD: 8%
- MD: 8%
- WY: 8%
- NY: 7%
- AK: 6%
- LA: 6%
- MO: 6%
- GA: 6%
Background

Drinking and Provider Advice Not to Drink by Age

Drank During Pregnancy
Vermont PRAMS 2016-2017

Recieved Provider Advice* to Not Drink
Vermont PRAMS 2016-2017

*Among all women who received prenatal care (about 99% of the total maternal population)
Background

Smoking, 2016 VT and US Vital Records

- Smoked Before Pregnancy: VT 18%, US 9%
- Smoked During Pregnancy: VT 16%, US 7%
- Quit Before Pregnancy: VT 25%
- Quit During Pregnancy: VT 19%, US 21%

Vermont Department of Health
Background

**Smoked During Pregnancy**
**Vermont PRAMS 2016-2017**

**Advised to Quit (Smokers)**
**Vermont PRAMS 2016-2017**

Vermont Department of Health
Background

Smoking & Advice, By Other Demographics
Vermont PRAMS 2016-2017

- Medicaid Delivery Payer
- Private Delivery Payer
- No College Education
- Any College Education

- Blue: Smoked During Pregnancy
- Yellow: Advised to Quit (Smokers)

Vermont Department of Health
Background
Background

- Vermont PRAMS has shown persistently high rates of alcohol use before and during pregnancy.
  - Providers appear to be targeting lower age groups, who are less likely to drink, with advice not to drink.
- PRAMS and birth certificate data show high rates of tobacco use during pregnancy in Vermont.
- Prevalence of prenatal marijuana exposure has not decreased.
Vermont’s High Rates of Substance Use in Pregnancy

The use of alcohol, tobacco, and illicit drugs before and during pregnancy is associated with multiple negative maternal, fetal, and early life outcomes.

Reducing use around conception and during pregnancy is a priority for Vermont.
What is the prevalence of illicit drug use, prescription pain reliever use, tobacco use, and alcohol use among Vermont mothers before and during pregnancy?

Can we detect any patterns in drug use that can help prevention/treatment/recovery efforts?
Substance Use before Pregnancy

Substance Use Before* Pregnancy
2016-2017 Vermont PRAMS

- Drank, 3 months before: 70%
- Smoked, 3 months: 23%
- Other drug use, one month: 18%

* Alcohol/Tobacco use and other drug use indicators reflect different time lengths before pregnancy, so use may not be concurrent

Vermont Department of Health
* Alcohol/Tobacco use and other drug use indicators reflect different time lengths before pregnancy

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Substance Use and Unintended Pregnancies

- In the three months leading up to pregnancy, 61% of women whose pregnancies were unintended drank alcohol, and 75% of those with intended pregnancies drank.
  - 22% of those with unintended pregnancies had at least one drinking binge during these three months, and 36% smoked cigarettes.
  - 25% of those whose pregnancies were unintended used a drug (other than alcohol or tobacco) during the month leading up to pregnancy.

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Substance Use before Pregnancy

Other Drug Use, One Month Before Pregnancy
2016-2017 Vermont PRAMS

- Marijuana/hash: 15%
- Rx painkiller: 4%
- Adderall/stimulant: 2%
- Cocaine: 1%
- Heroin: 1%
- Amphetamines: §

§ denotes suppressed (N<10)
* Interpret with caution (N<30)

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Substance Use before Pregnancy

Other Drug Use, by Cigarette/Alcohol Use Before Pregnancy*
2016-2017 Vermont PRAMS

* Alcohol/Tobacco use and other drug use indicators reflect different time lengths before pregnancy, so use may not be concurrent

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Cigarette smokers and binge drinkers were more likely to use marijuana in the month before pregnancy.
Substance Use before Pregnancy

Alcohol Use Before Pregnancy
Vermont PRAMS 2016-2017

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Cigarette smokers were more likely than non-smokers to use a prescription pain reliever in the month before pregnancy. No association with drinking was observed.
There were too few respondents to compare cocaine use by drinking or cigarette smoking before pregnancy.
Use of other drugs before pregnancy was highly prevalent among cigarette smokers.

- Before pregnancy, around half of marijuana smokers and/or users of prescription opioids smoked cigarettes.

- Binge drinking was associated with the use of marijuana.
Substance Use during Pregnancy

Used Any Substance* During Pregnancy
Vermont PRAMS 2016-2017

Any Substance Use, 33.3%
No Substance Use, 66.7%

*alcohol, tobacco, or another drug included in the PRAMS questionnaire

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Substance Use during Pregnancy

Substance Use During Pregnancy
2016-2017 Vermont PRAMS

13% Smoked cigarettes
16% Drank alcohol
11% Used other drugs

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Demographics of Substance Use during Pregnancy

Substance Use During Pregnancy
Vermont PRAMS 2016-2017

* Denotes need to interpret with caution (N<30)

Vermont Department of Health
Results: Substance Use during Pregnancy

Other Drug Use During Pregnancy
By Cigarette/Alcohol Use
2016 -2017 Vermont PRAMS

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Cigarette Smokers</td>
<td>29%</td>
</tr>
<tr>
<td>Non-smokers</td>
<td>9%</td>
</tr>
<tr>
<td>Drinkers</td>
<td>13%</td>
</tr>
<tr>
<td>Non-drinkers</td>
<td>11%</td>
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</tbody>
</table>

Vermont Department of Health
Results: Substance Use during Pregnancy

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette Smokers</td>
<td>5%</td>
<td>*</td>
</tr>
<tr>
<td>Non-smokers</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Drinkers</td>
<td>4%</td>
<td>*</td>
</tr>
<tr>
<td>Non-drinkers</td>
<td>4%</td>
<td></td>
</tr>
</tbody>
</table>

* Denotes need to interpret with caution (N<30)

There was no observed association between prescription pain reliever use during pregnancy and alcohol or cigarette use.

Vermont Department of Health
Results: Substance Use during Pregnancy

Cigarette smokers were significantly more likely to use marijuana during pregnancy.

- Cigarette Smokers: 25% *
- Non-Smokers: 5%
- Drinkers: 11%
- Non-drinkers: 7%

* Denotes need to interpret with caution (N<30)
Marijuana and Cigarette use were strongly associated. Alcohol use was significantly higher among older women and those with any college education. Alcohol users, however, were not less likely to use marijuana than were non-drinkers.
Medication Assisted Treatment

MAT Use Before, During and After Pregnancy
2016-2017 Vermont PRAMS

- 3.2% 12 Months Before
- 3.5% During Pregnancy
- 4.0% Since Delivery

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Substance Use Before Pregnancy, By MAT Use
Vermont PRAMS 2016-2017

- Smoked Cigarettes, 3 Months Before: 95% (MAT Users) vs. 21% (Non-MAT)
- Used Marijuana: 43% (MAT Users) vs. 14% (Non-MAT) * Denotes need to interpret with caution (N<30)
- Drank Alcohol: 37% (MAT Users) vs. 71% (Non-MAT)

Vermont Department of Health
Medication Assisted Treatment

Substance Use During Pregnancy, by MAT Use
2016-2017 Vermont PRAMS

- Smoked Cigarettes: 86% MAT Users, 11% Non-MAT
- Used Marijuana: 27% MAT Users, 7% Non-MAT
- Drank Alcohol: § (16% MAT Users, § denotes suppressed (N <10)).

Vermont Department of Health
Medication Assisted Treatment

Cigarette Smoking Since Delivery, by MAT Use
2016-2017 Vermont PRAMS

MAT Users 91%
Non-MAT 12%

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Women who smoked before or during pregnancy were more likely to use other drugs.

Over one-third (39.6%; 95% CI: 34.6%-44.8%) of women who smoked in the three months before pregnancy used a prescription pain reliever or illicit drug in the month before pregnancy.
Conclusions: Tobacco and Other Drug Use

- Women who smoked before or during pregnancy were more likely to use other drugs.
  - Close to one-third of women (28.7%; 22.8%-35.4%) who smoked during pregnancy also used a prescription pain reliever or illicit drug during pregnancy.
  - Smoking was **highly** prevalent among users of MAT before, during and after pregnancy.
Conclusions: Alcohol and Other Drug Use

- Women who binge drank before pregnancy were more likely to use other drugs.
- Vermont continues to experience high rates of drinking during pregnancy.
Conclusions

- While substance use was less frequent during pregnancy than before pregnancy, it is still a concern due to Vermont’s high rates of cigarette and alcohol use during pregnancy.
Next Steps: PRAMS

- Vermont PRAMS recently began collecting supplemental data relating to prescription opioid use during pregnancy.
- These data will be available late 2020.
Next Steps: Opioid Supplement

- During your most recent pregnancy, did you use any of the following over-the-counter pain relievers?
- During your most recent pregnancy, did you use any of the following prescription pain relievers?
- Where did you get the prescription pain relievers that you used during your most recent pregnancy?
- What were your reasons for using prescription pain relievers during your most recent pregnancy?
Next Steps: Opioid Supplement

- In each of the following time periods during your pregnancy, for how many weeks or months did you use prescription pain relievers?
- During your most recent pregnancy, did you want or need to cut down or stop using prescription pain relievers?
- During your most recent pregnancy, did you have trouble cutting down or stopping use of the prescription pain relievers?
Next Steps: Opioid Supplement

- During your most recent pregnancy, did you get help from a doctor, nurse, or other health care worker to cut down or stop using prescription pain relievers?

- During your most recent pregnancy, did you receive medication-assisted treatment to help you stop using prescription pain relievers? This is when a doctor prescribes medicines such as methadone, buprenorphine, Suboxone®, Subutex®, or naltrexone (Vivitrol®).
Next Steps: Opioid Supplement

☐ Do you think the use of prescription pain relievers could be harmful to a woman’s own health?

☐ At any time during your most recent pregnancy, did a doctor, nurse, or other health care worker talk with you about how using prescription pain relievers during pregnancy could affect a baby?

Vermont Department of Health
Next Steps: Opioid Supplement

- During your most recent pregnancy, did you take or use any of the following medications or drugs for any reason?
  - Medication for depression (like Prozac®, Zoloft®, Lexapro®, Paxil®, or Celexa®)
  - Medication for anxiety (like Valium®, Xanax®, Ativan®, Klonopin®, or other “benzos” (benzodiazepines))
  - Methadone, Subutex®, Suboxone®, or buprenorphine
  - Naloxone
  - Cannabidiol (CBD) products
Questions?

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