



Vermont PRAMS Data on Maternal Substance Use

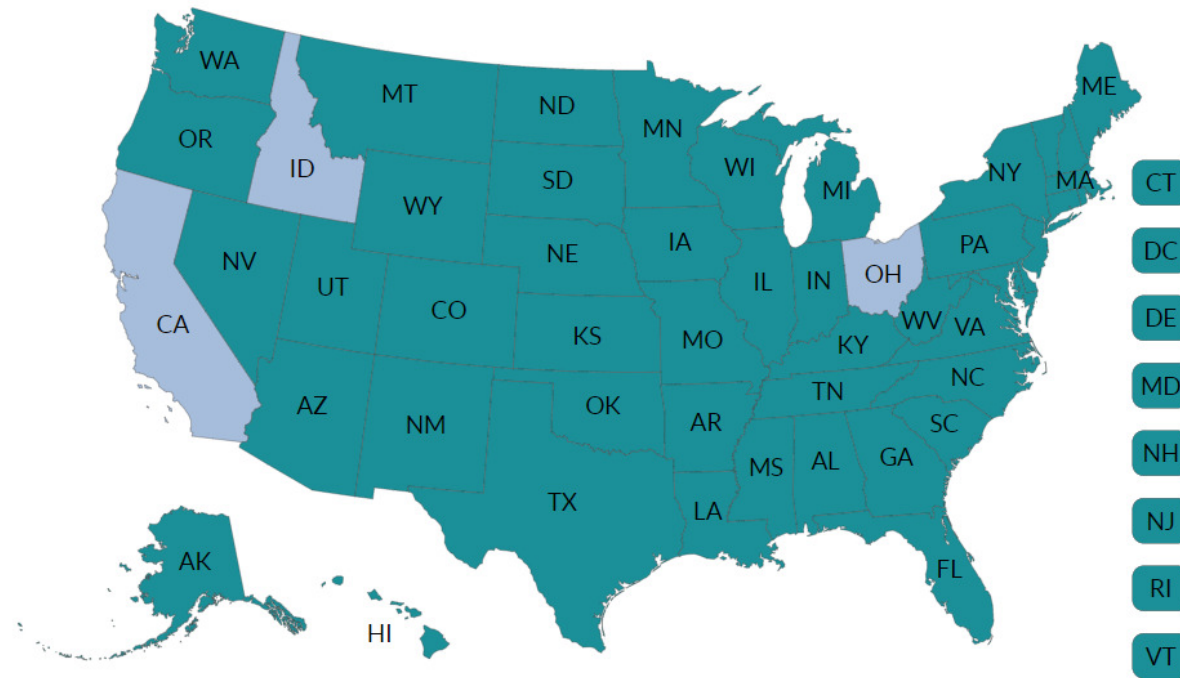
John Davy, Peggy Brozicevic, Mike Nyland-Funke, Teri Hata, Michael Kenny; Vermont PRAMS

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



Cities NYC

Territories PR



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

Background

- 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.

	No	Yes
a. During the 12 months before I got pregnant	<input type="checkbox"/>	<input type="checkbox"/>
b. During my most recent pregnancy	<input type="checkbox"/>	<input type="checkbox"/>
c. Since my new baby was born	<input type="checkbox"/>	<input type="checkbox"/>

Phase 8 (2016-2020) drug use questions

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.

- | | No | Yes |
|--|--------------------------|--------------------------|
| a. Over-the-counter pain relievers such as aspirin, Advil®, Aleve®, or Tylenol® | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Prescription pain relievers such as hydrocodone (Vicodin®), oxycodone (Percocet®), or codeine | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Adderall®, Ritalin® or another stimulant... | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Marijuana or hash..... | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Synthetic marijuana (K2, Spice)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Heroin (smack, junk, Black Tar) | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Amphetamines (uppers, speed, crystal meth, crank, ice)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Cocaine (crack, rock, coke, blow, snow) ... | <input type="checkbox"/> | <input type="checkbox"/> |

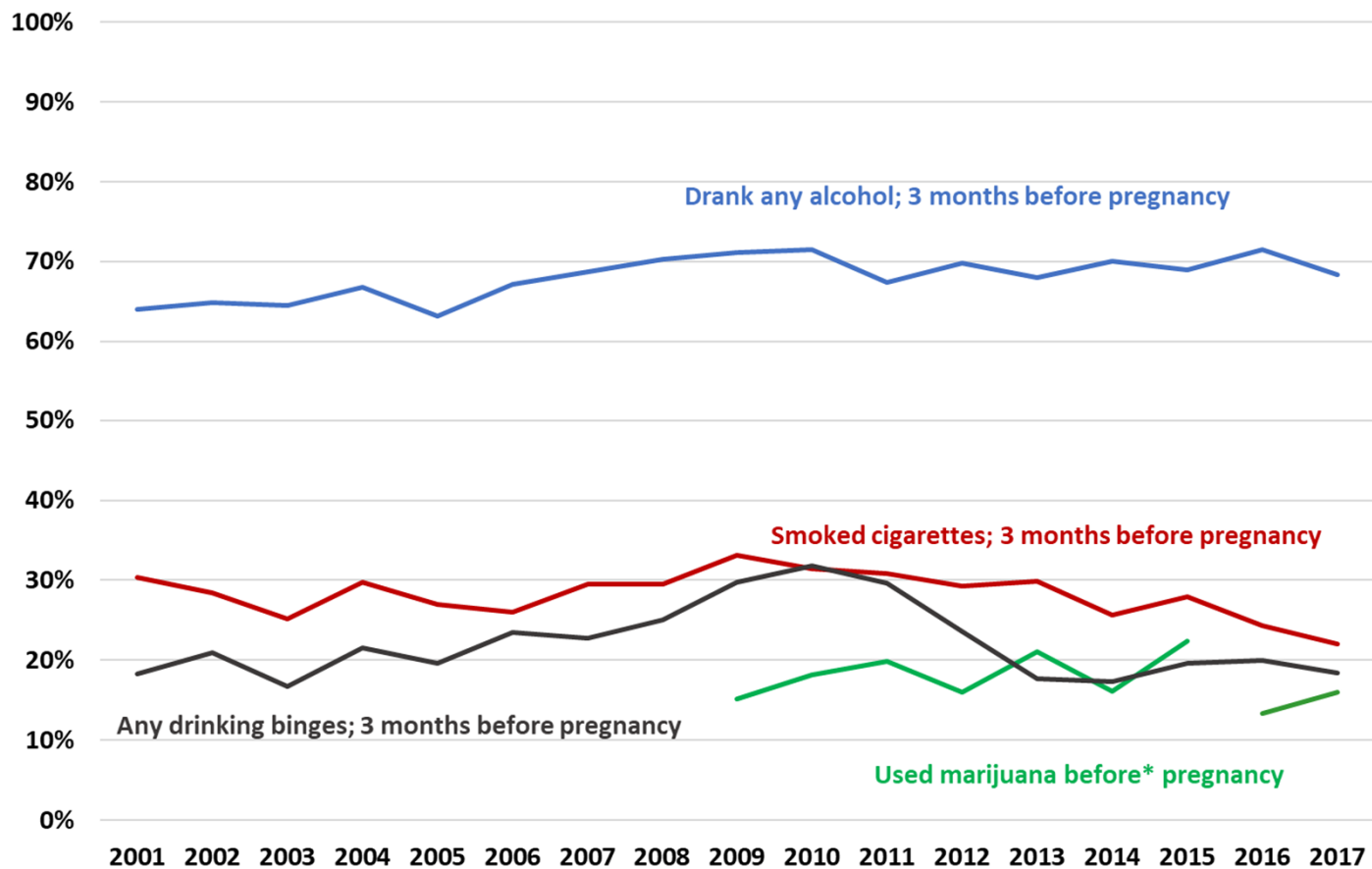
66. During your *most recent pregnancy*, did you take or use any of the following drugs for any reason? Your answers are strictly confidential. For each item, check **No** if you did not use it or **Yes** if you did.

- | | No | Yes |
|--|--------------------------|--------------------------|
| a. Over-the-counter pain relievers such as aspirin, Advil®, Aleve®, or Tylenol® | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Prescription pain relievers such as hydrocodone (Vicodin®), oxycodone (Percocet®), or codeine | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Adderall®, Ritalin® or another stimulant... | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Marijuana or hash..... | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Synthetic marijuana (K2, Spice)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Heroin (smack, junk, Black Tar) | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Amphetamines (uppers, speed, crystal meth, crank, ice)..... | <input type="checkbox"/> | <input type="checkbox"/> |
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Background

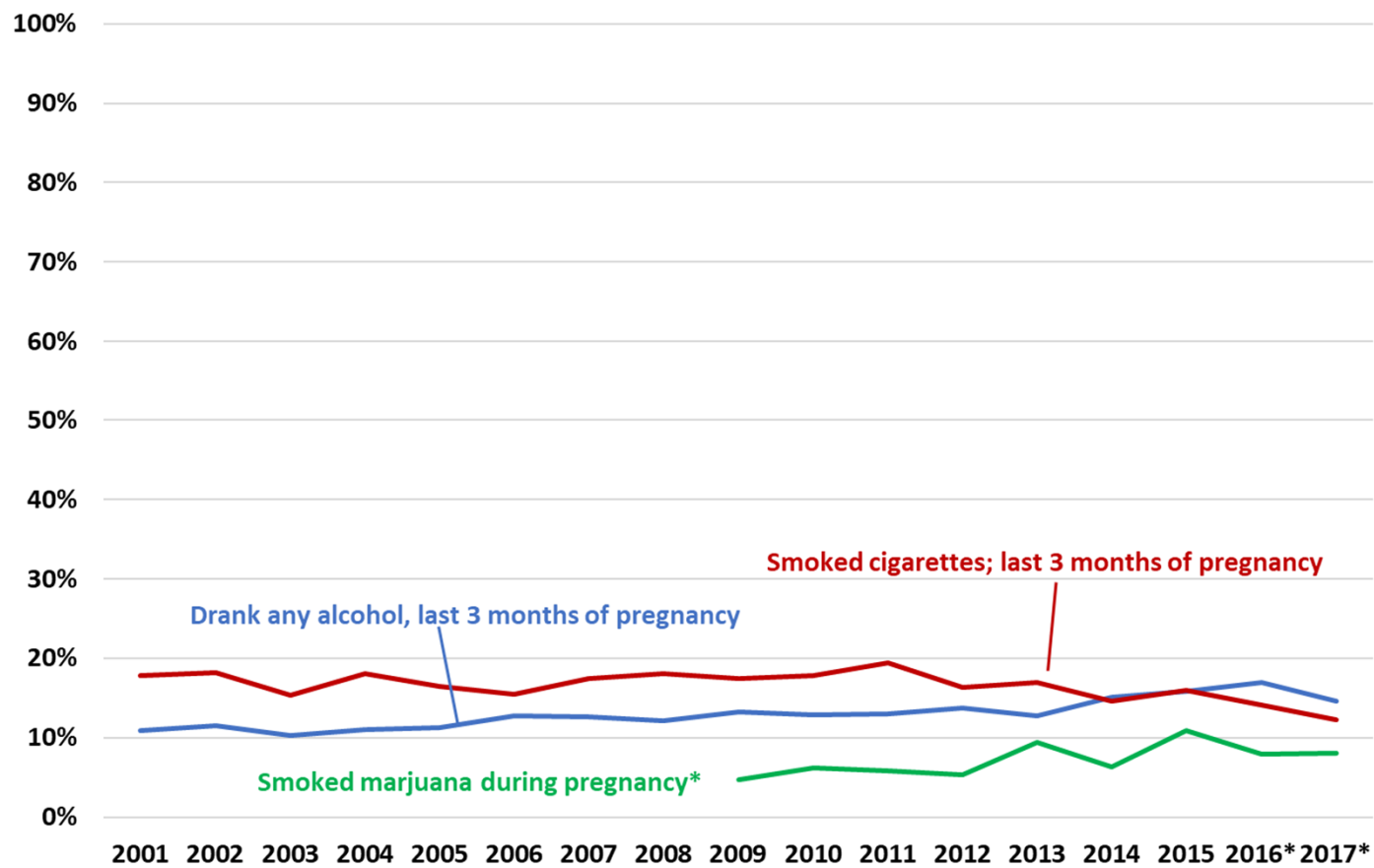
Substance Use Before Pregnancy

VT PRAMS 2001-2017



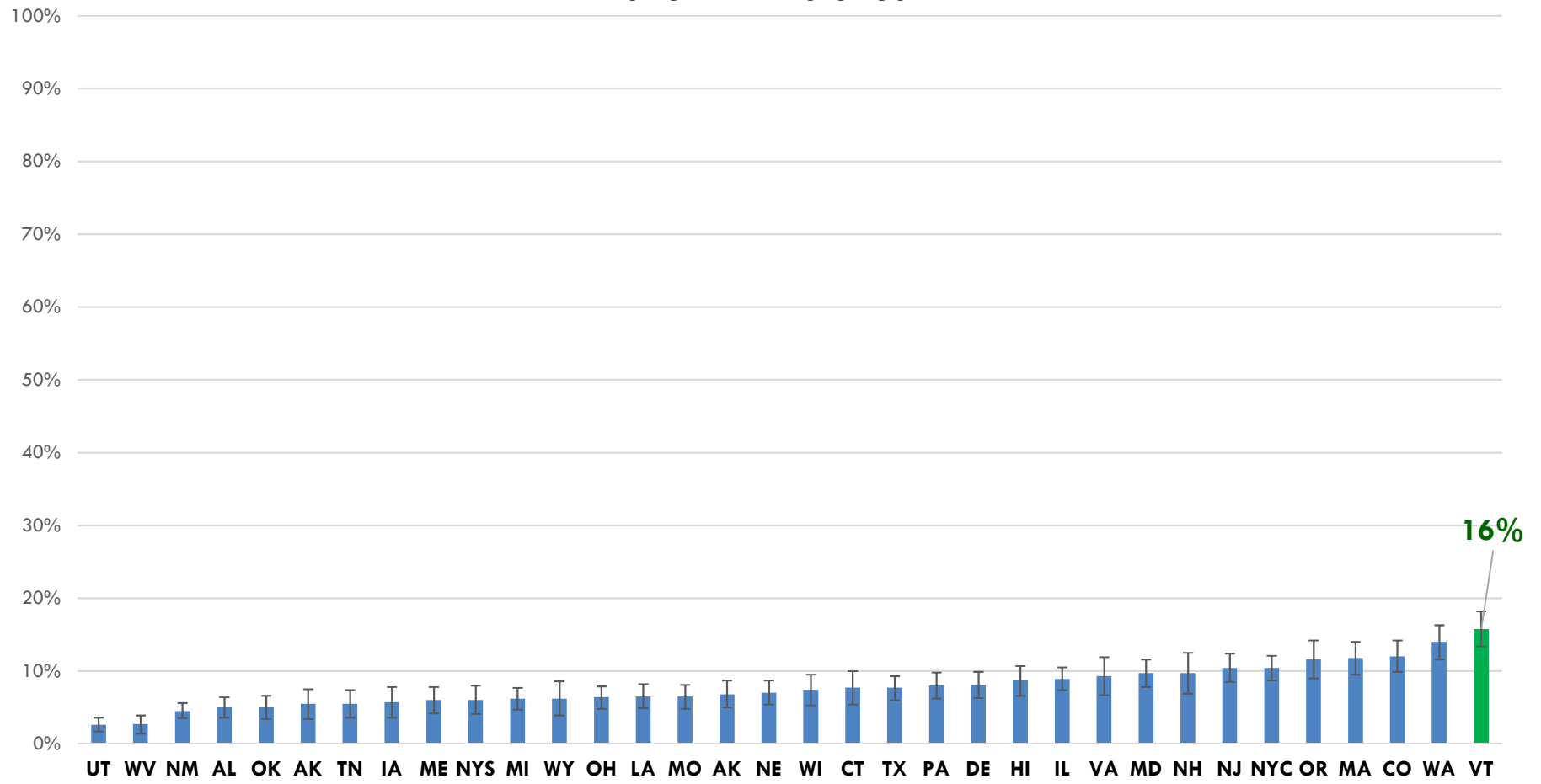
Background

Substance Use During Pregnancy Vermont PRAMS 2001-2017



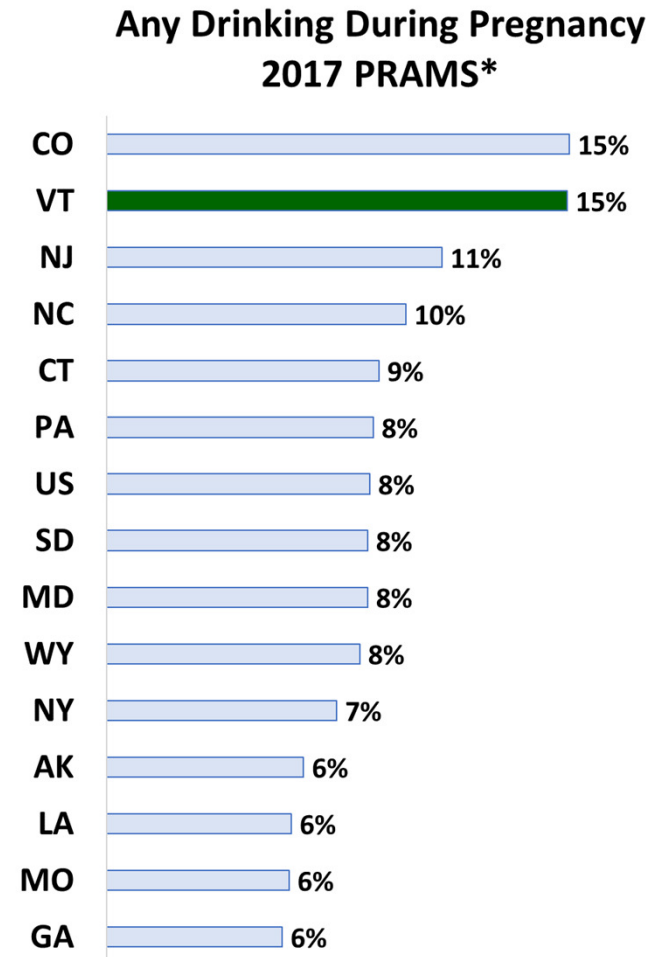
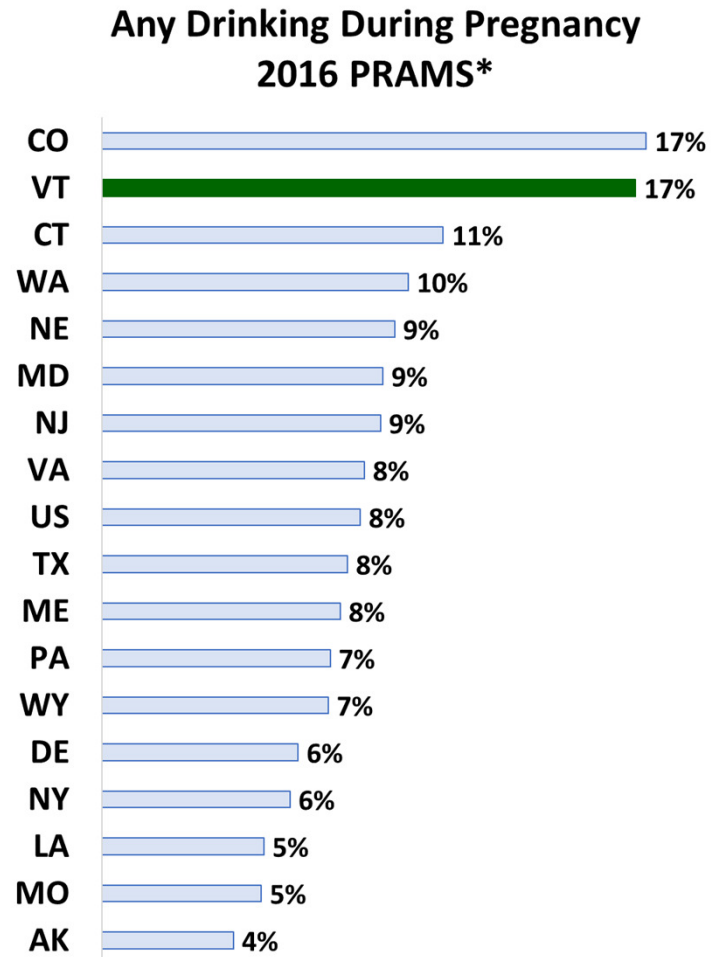
Background

Alcohol Use During Pregnancy 2015 PRAMS Sites



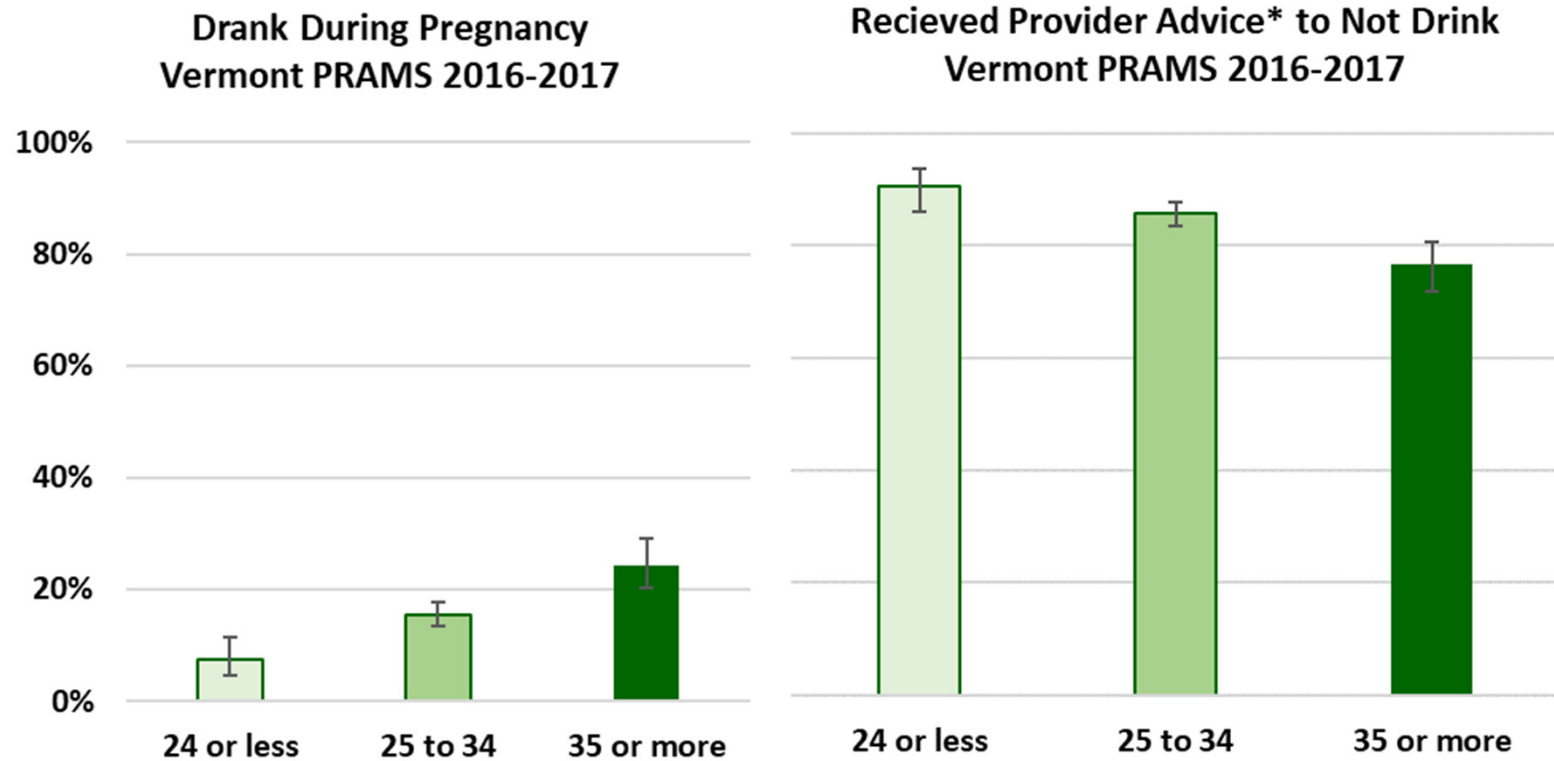
Vermont Department of Health

Background



Background

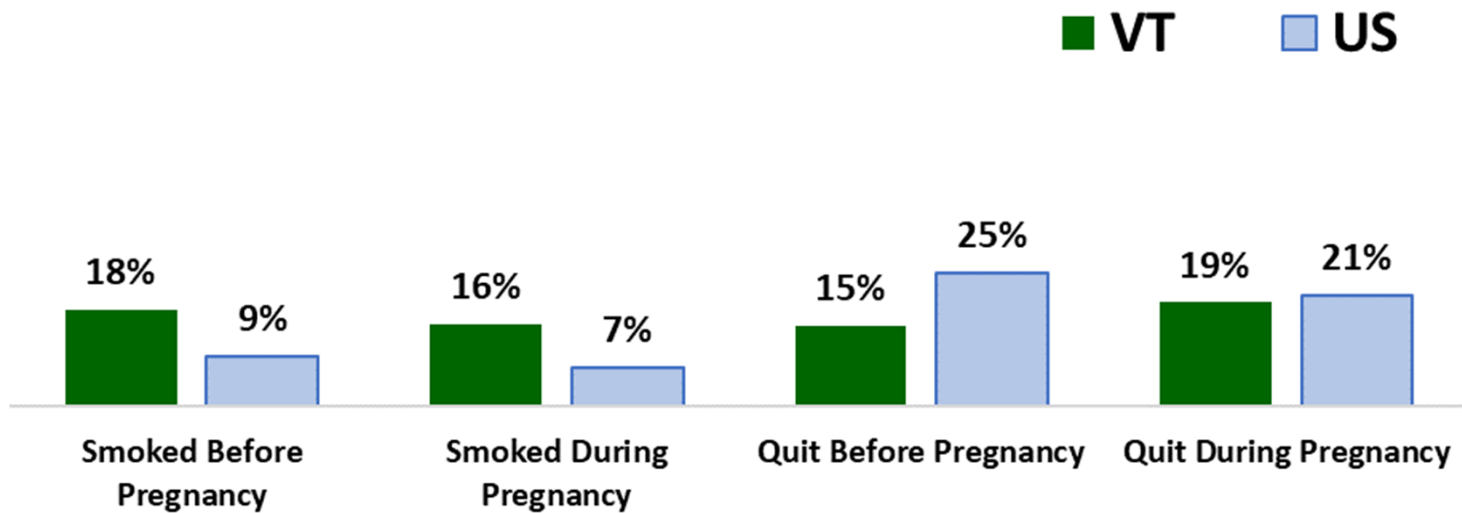
Drinking and Provider Advice Not to Drink by Age



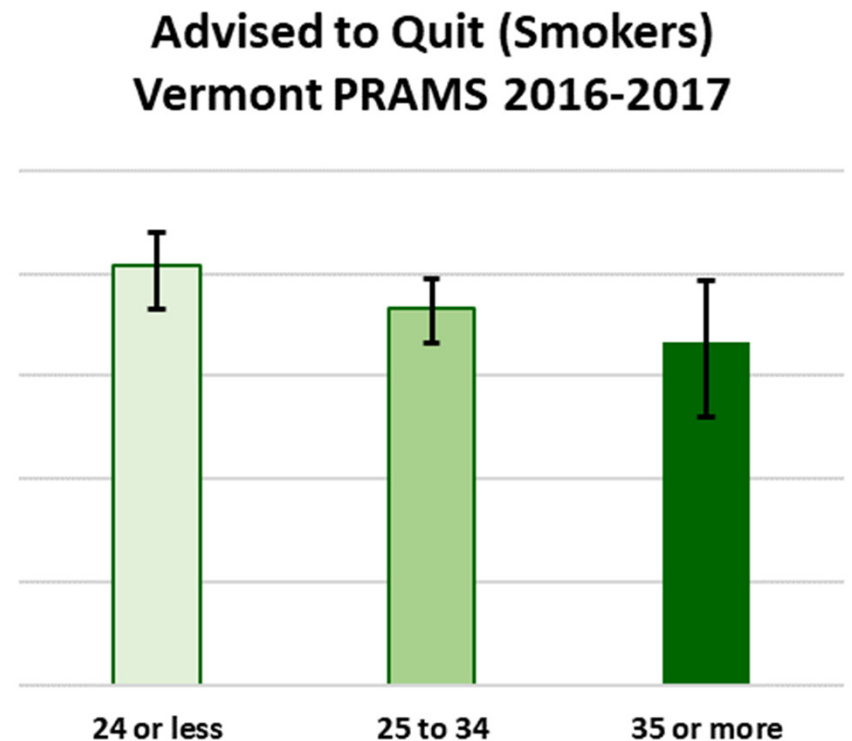
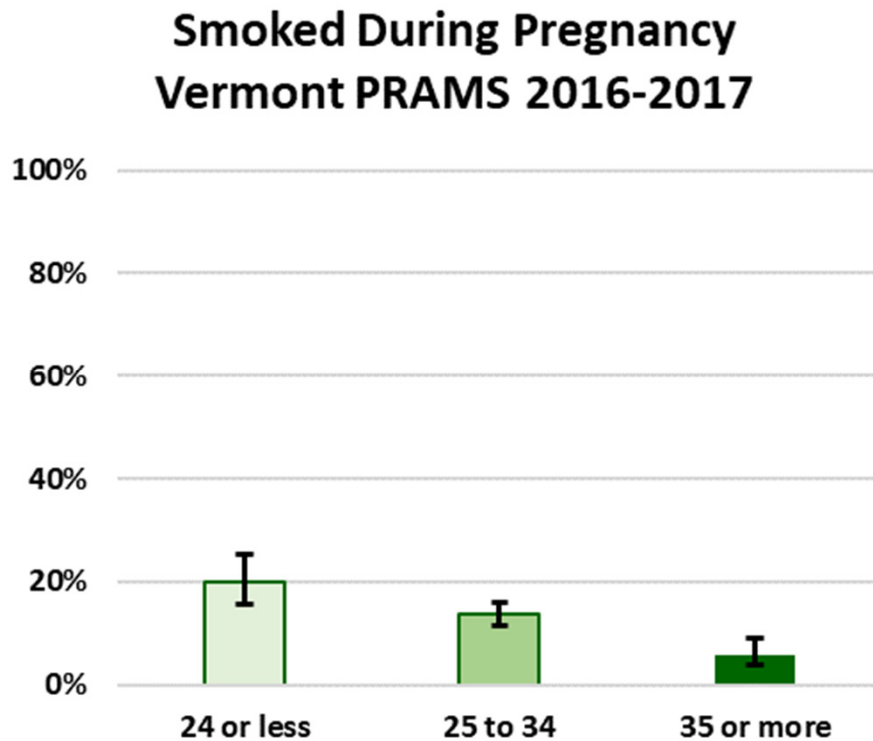
***Among all women who received prenatal care (about 99% of the total maternal population)**

Background

Smoking, 2016 VT and US Vital Records

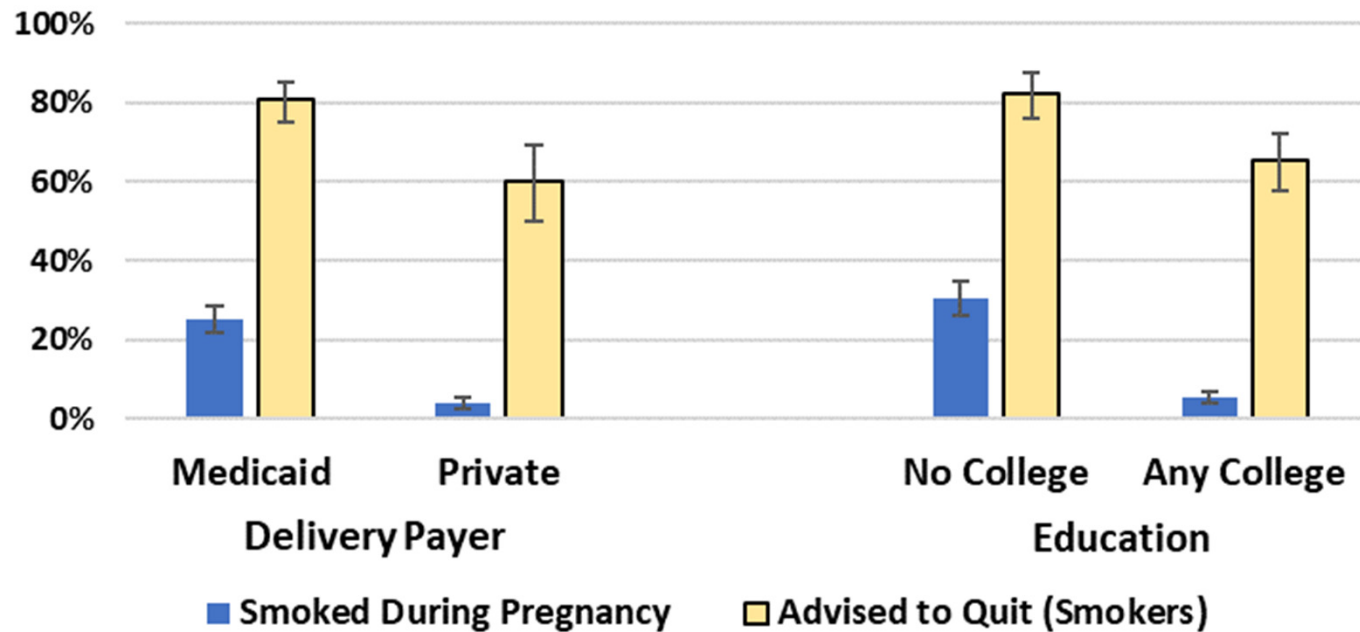


Background



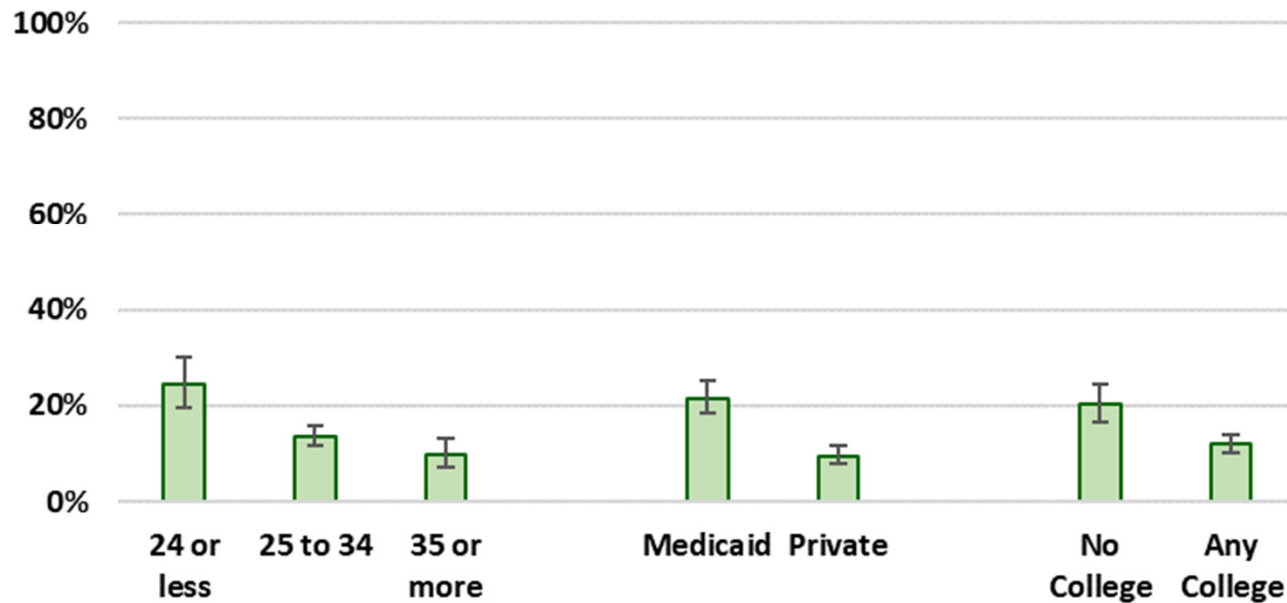
Background

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



Background

Marijuana Use, One Month Before Pregnancy Vermont PRAMS 2016-2017



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.

Substance Use Before and During Pregnancy

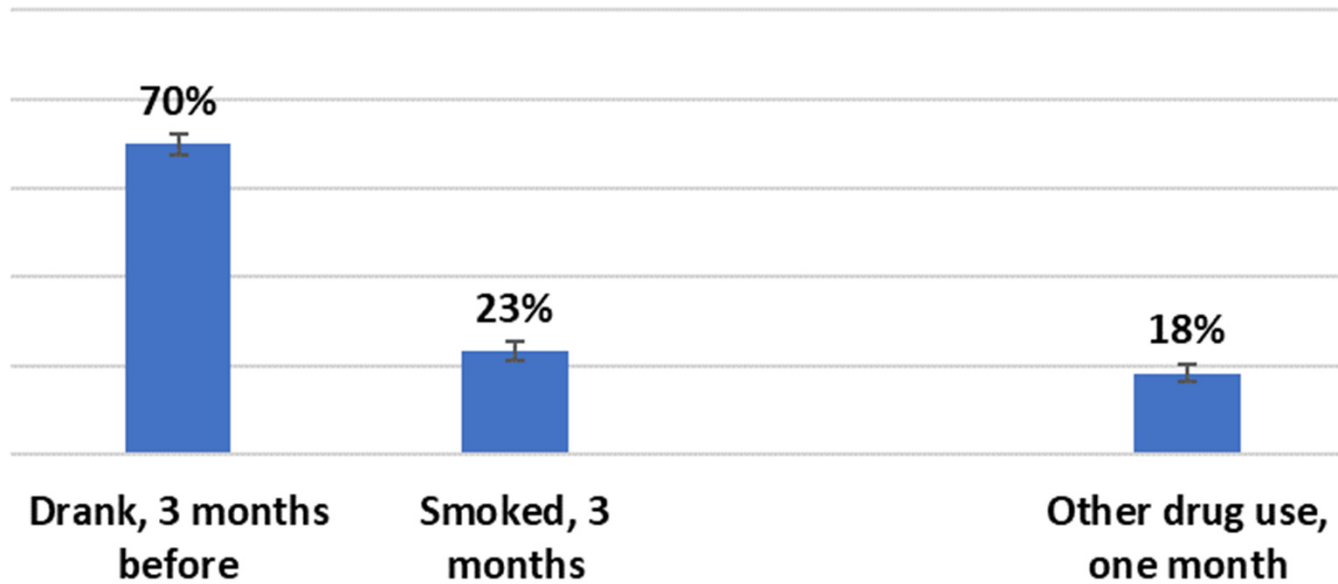


What is the prevalence of illicit drug use, prescription pain reliever use, tobacco use, and alcohol use among Vermont mothers before and during pregnancy?

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

Substance Use before Pregnancy

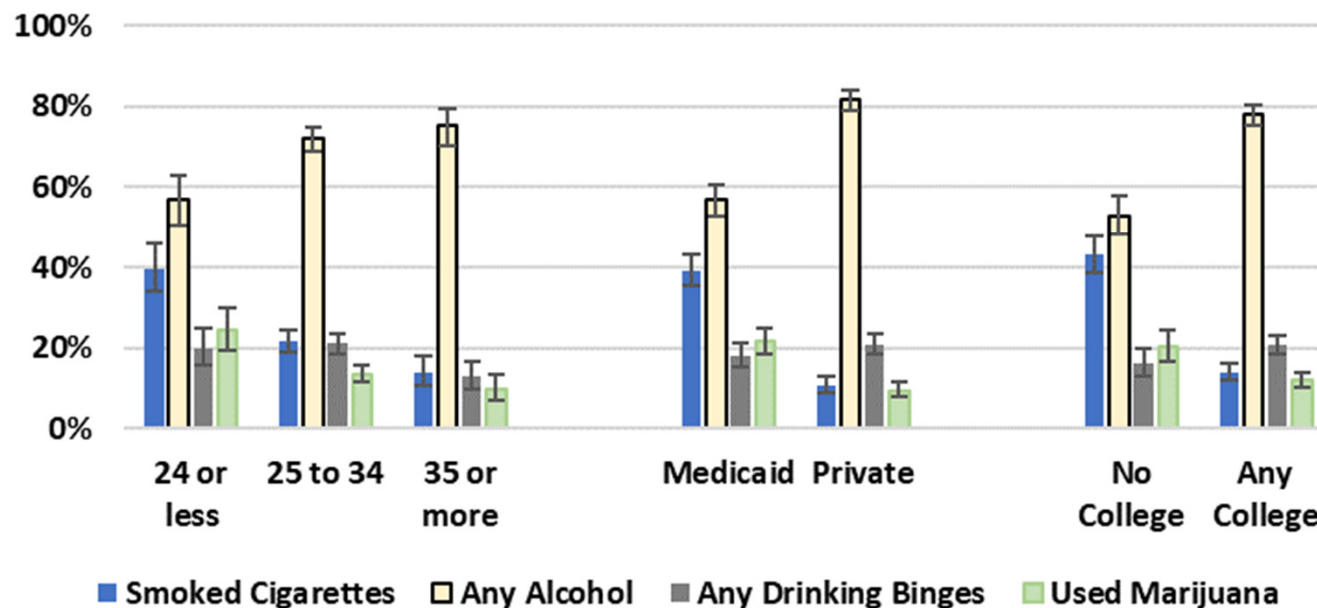
Substance Use Before* Pregnancy 2016-2017 Vermont PRAMS



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

Demographics of Substance Use before Pregnancy

Substance Use Before Pregnancy Vermont PRAMS 2016-2017

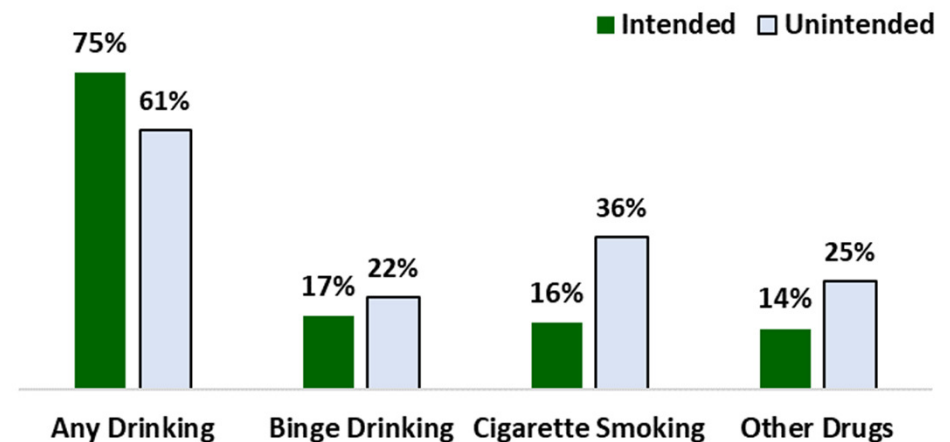


* Alcohol/Tobacco use and other drug use indicators reflect different time lengths before pregnancy

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.

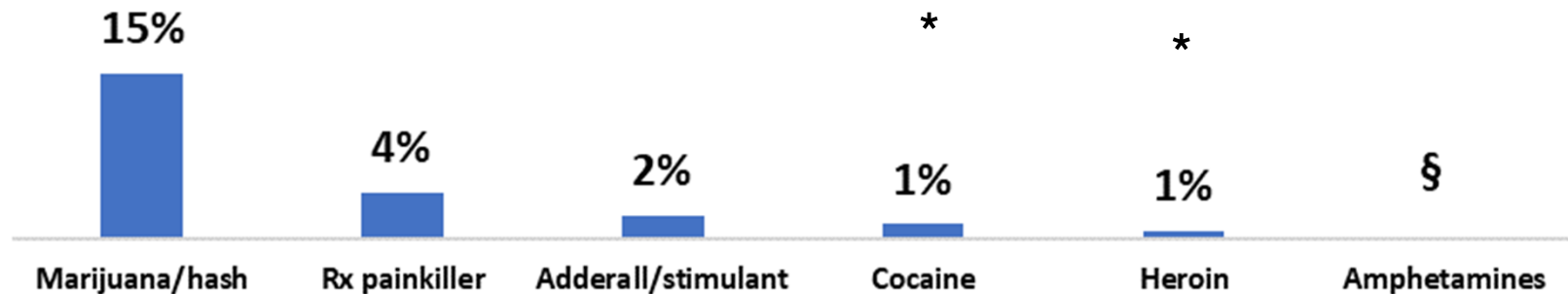
Substance Use Before Pregnancy by Intendedness
2016-2017 Vermont PRAMS



Smoking, drinking and alcohol: three months before pregnancy
Other drugs: one month before pregnancy

Substance Use before Pregnancy

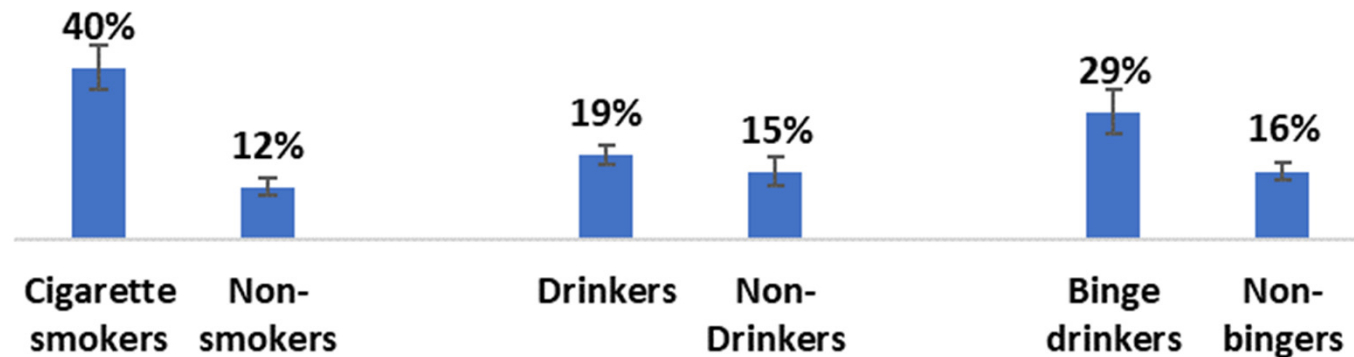
Other Drug Use, One Month Before Pregnancy 2016-2017 Vermont PRAMS



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

Substance Use before Pregnancy

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

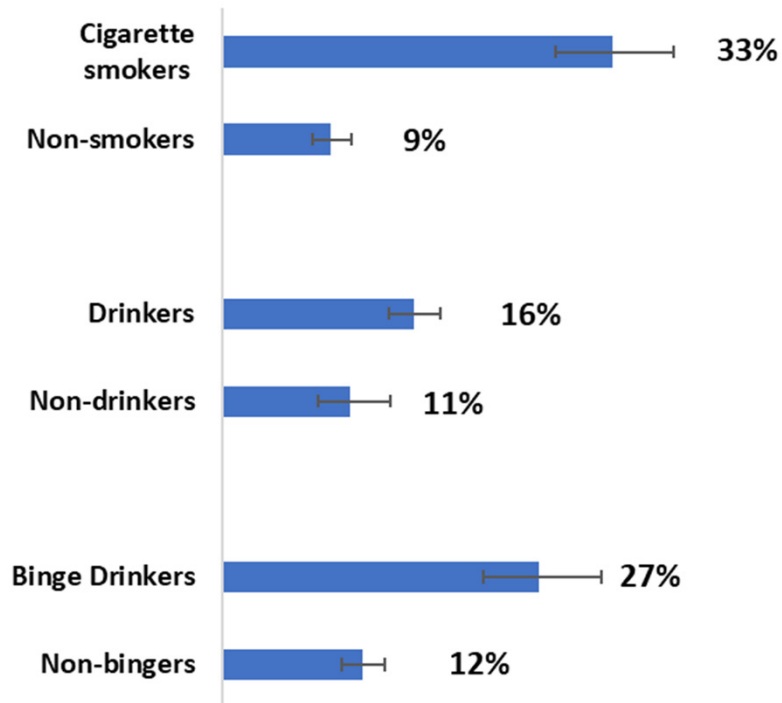


* Alcohol/Tobacco use and other drug use indicators reflect different time lengths before pregnancy, so use may not be concurrent

Vermont Department of Health

Substance Use before Pregnancy

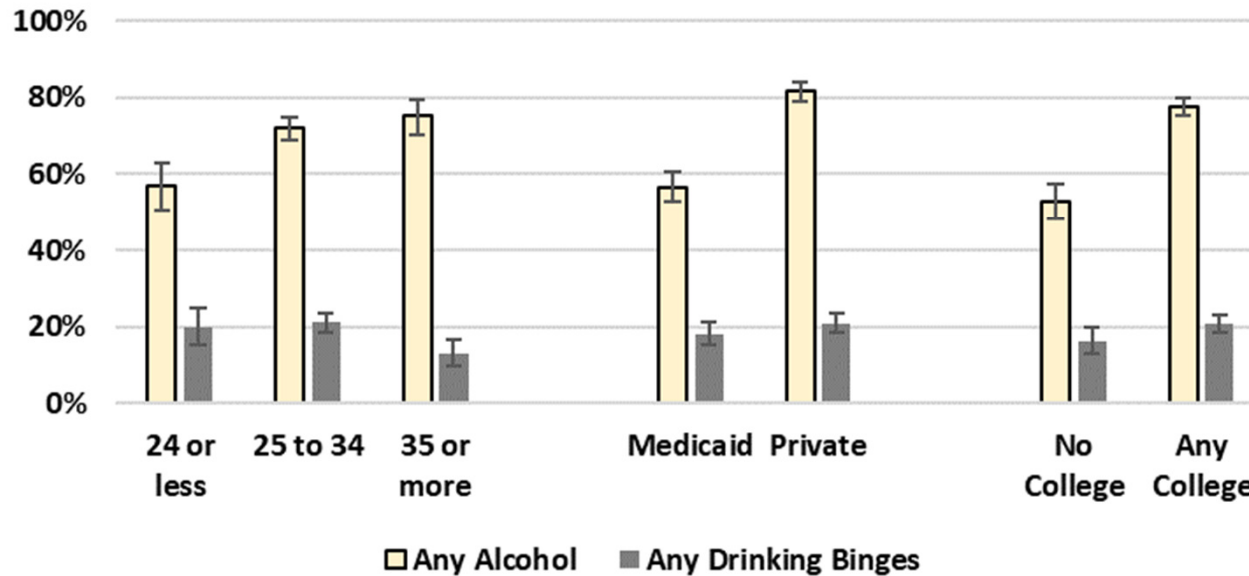
Marijuana Use Month Before Pregnancy
By Alcohol/Tobacco Use
2016-2017 Vermont PRAMS



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

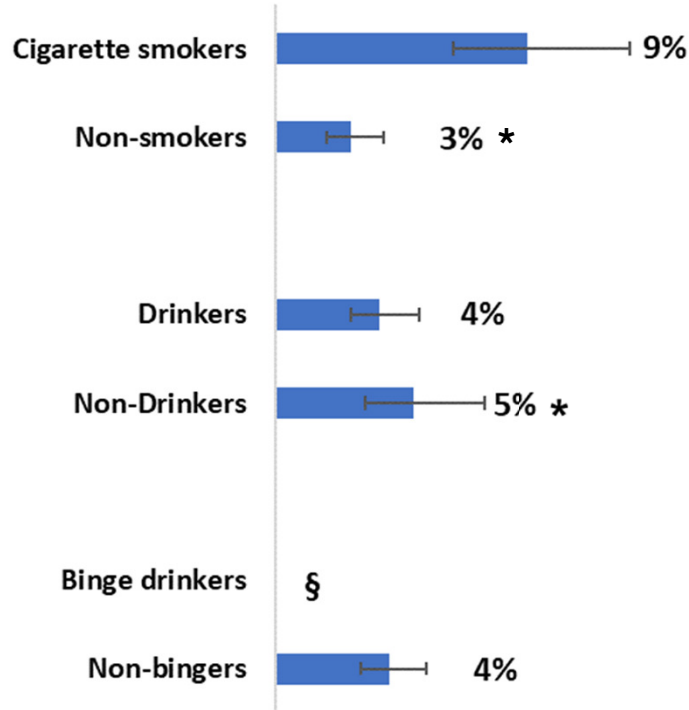
Substance Use before Pregnancy

Alcohol Use Before Pregnancy Vermont PRAMS 2016-2017



Substance Use before Pregnancy

Rx Pain Relief Use, Month Before Pregnancy
By Tobacco/Alcohol Use
2016-2017 Vermont PRAMS



§ denotes suppressed (N < 10)

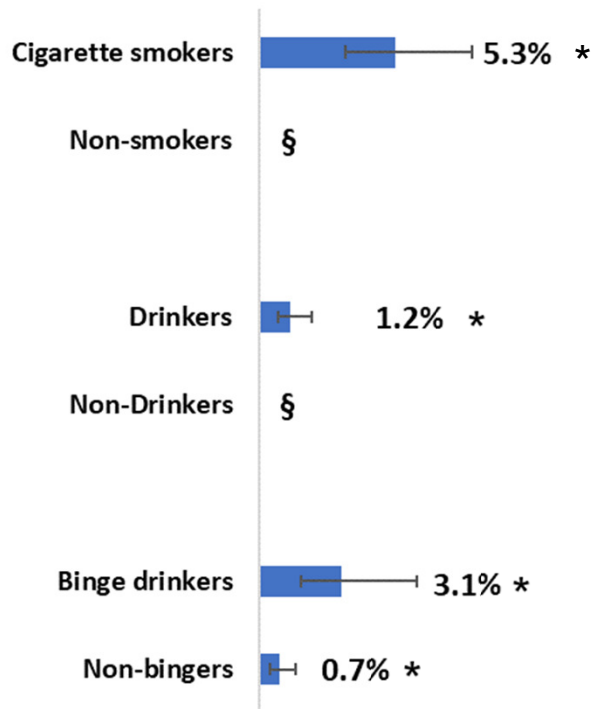
* Interpret with caution (N < 30)

Vermont Department of Health

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.

Substance Use before Pregnancy

Cocaine Use, Before Pregnancy
By Alcohol/Tobacco Use
2016-2017 Vermont PRAMS



* Denotes need to interpret with caution (N<30)
§ denotes suppressed (N <10).

There were too few respondents to compare cocaine use by drinking or cigarette smoking before pregnancy.

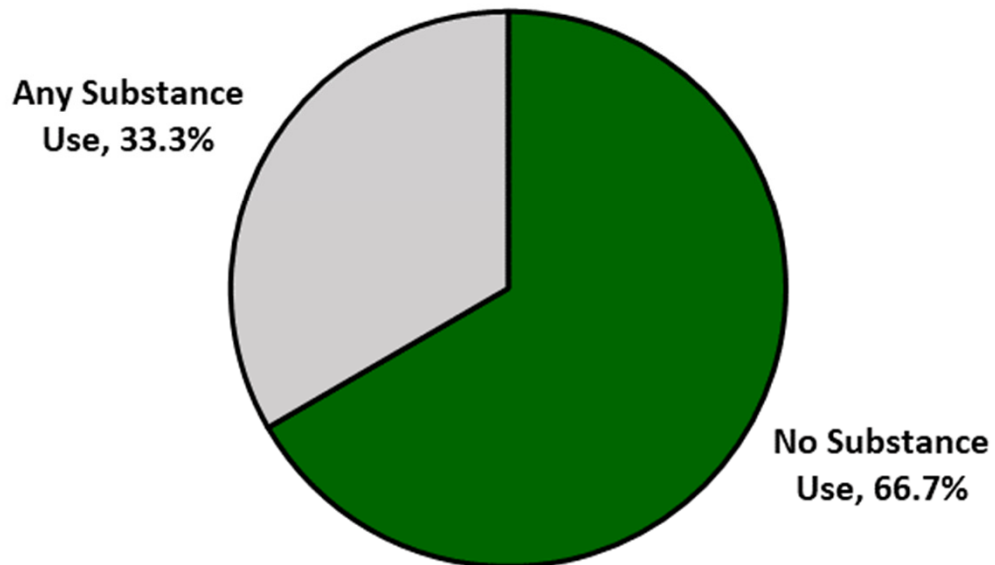
Summary: Substance Use Before Pregnancy



- 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

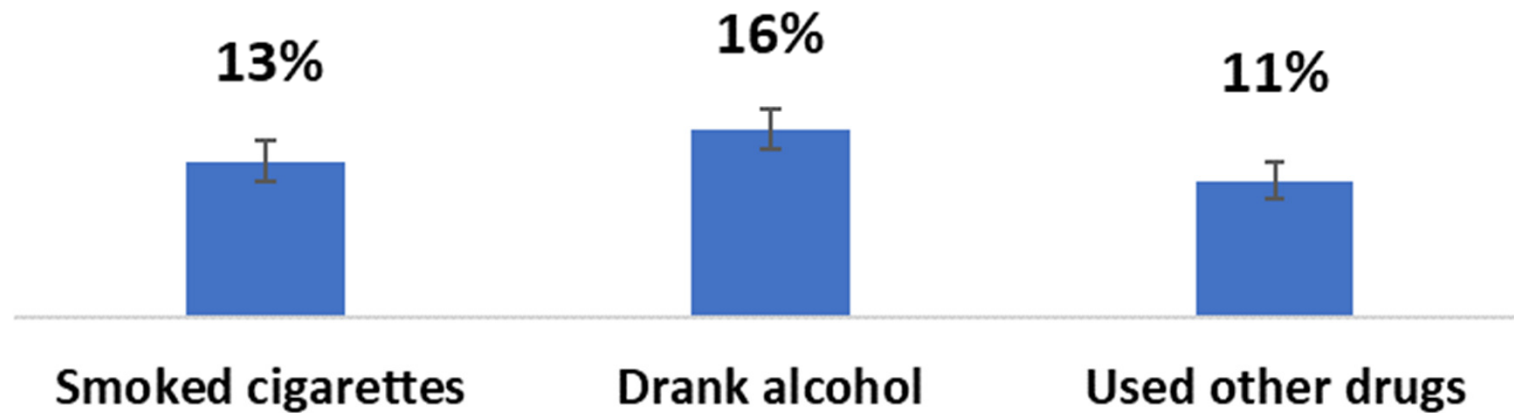
Used Any Substance* During Pregnancy Vermont PRAMS 2016-2017



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

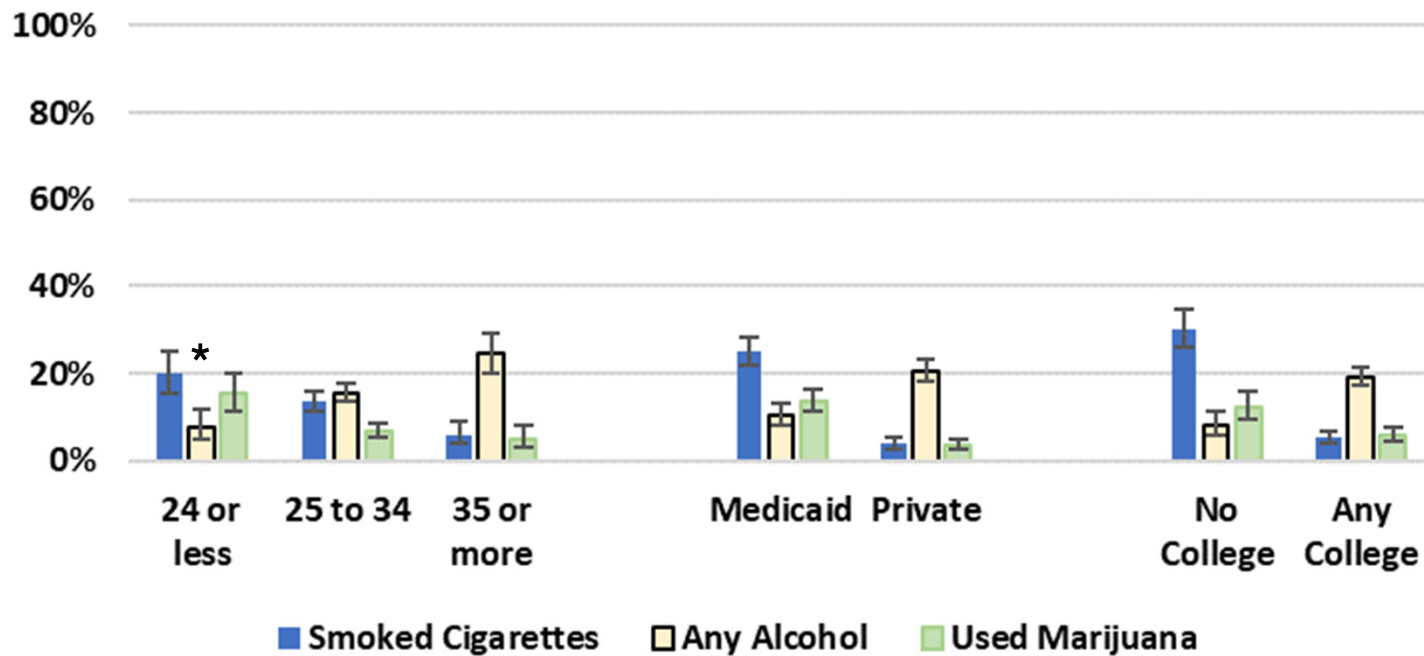
Substance Use during Pregnancy

Substance Use During Pregnancy 2016-2017 Vermont PRAMS



Demographics of Substance Use during Pregnancy

Substance Use During Pregnancy Vermont PRAMS 2016-2017



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

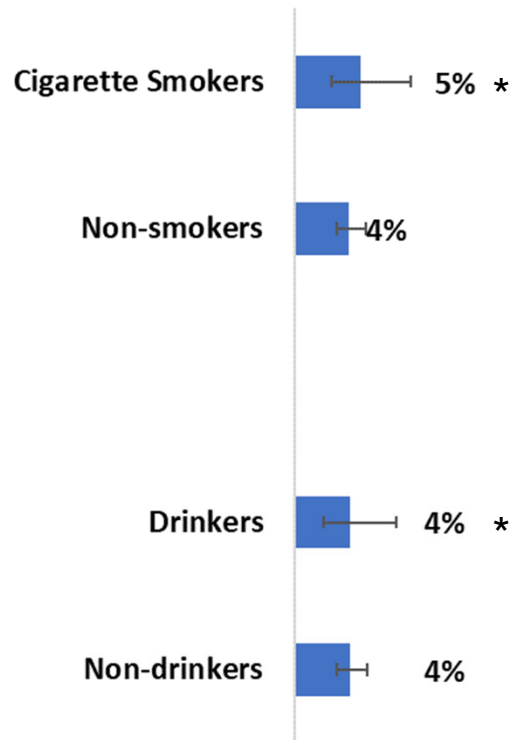
Results: Substance Use during Pregnancy

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



Results: Substance Use during Pregnancy

Rx Pain Reliever Use During Pregnancy
By Alcohol/Cigarette Use
2016-2017 Vermont PRAMS

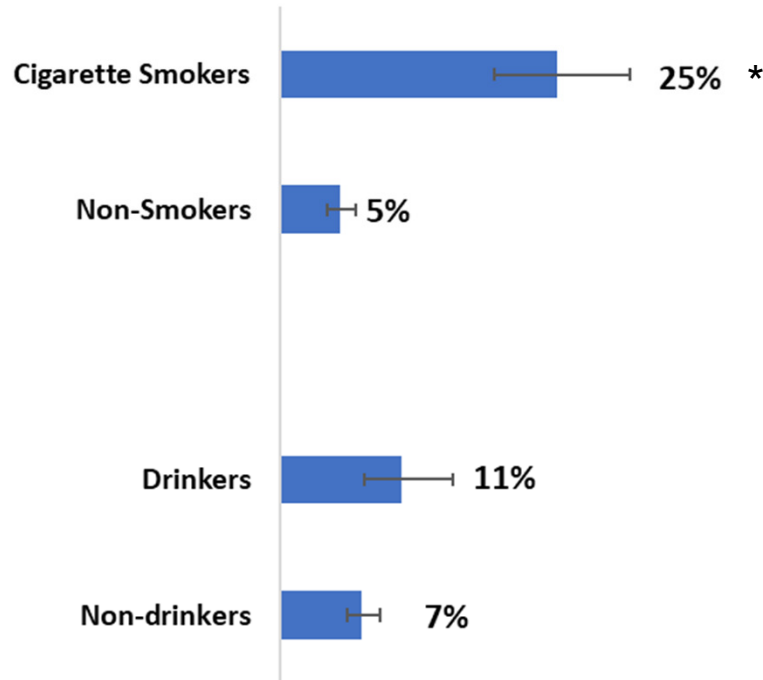


* Denotes need to interpret with caution (N<30)

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

Results: Substance Use during Pregnancy

**Marijuana Use During Pregnancy
By Alcohol/Cigarette Use
2016-2017 Vermont PRAMS**



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

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

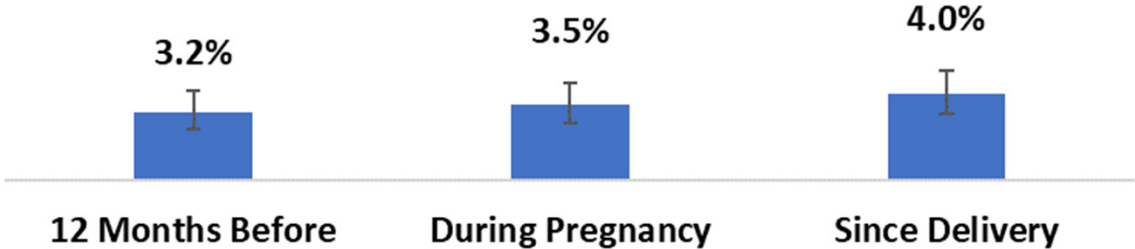
Summary: Substance Use During Pregnancy



- 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

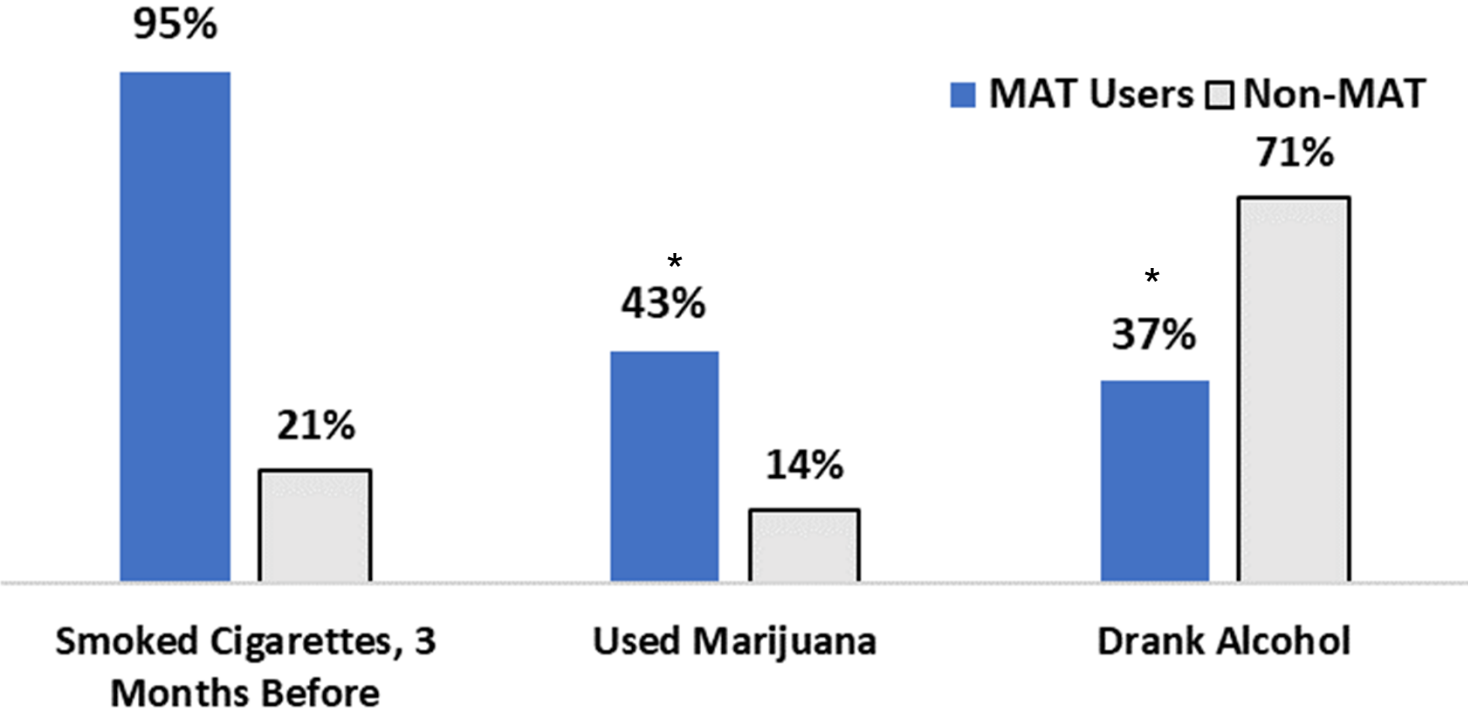
Medication Assisted Treatment

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



Medication Assisted Treatment

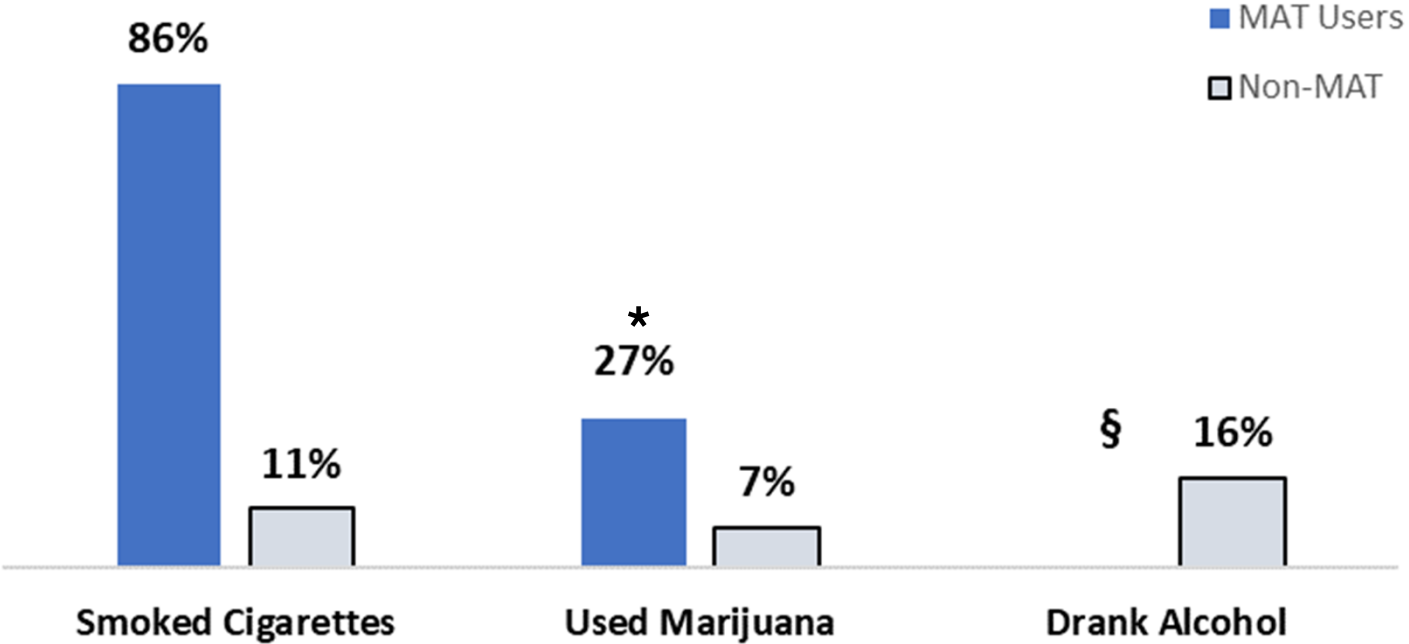
Substance Use Before Pregnancy, By MAT Use Vermont PRAMS 2016-2017



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

Medication Assisted Treatment

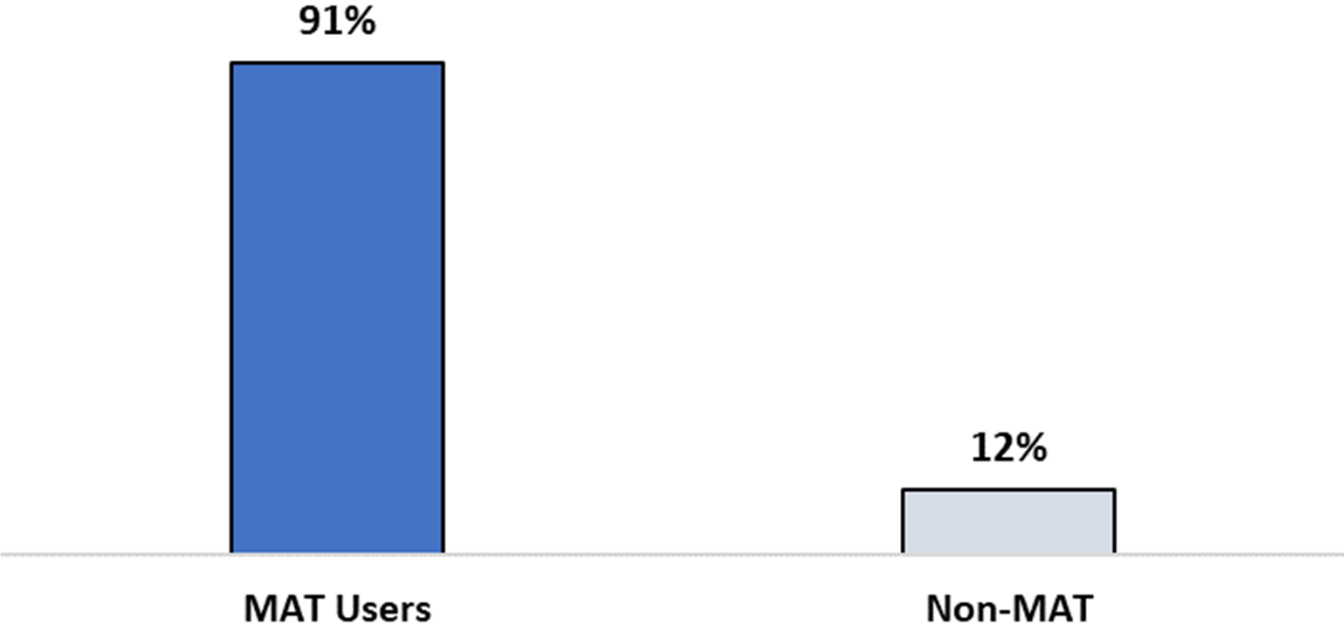
Substance Use During Pregnancy, by MAT Use 2016-2017 Vermont PRAMS



§ denotes suppressed (N <10).

Medication Assisted Treatment

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



Conclusions: Tobacco and Other Drug Use



- 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?

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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