

PREVALENCE OF ILLICIT SUBSTANCE  
USE AMONG WOMEN AT FIRST  
PRENATAL VISITS

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# HYPOTHESIS

- ❖ Women who are insured, employed, married, and older will have less prevalence of substance use than women who are uninsured/public aid, unemployed, single, and younger.
- ❖ There will be a difference in type of substance used by the pregnant women who are insured compared to the women who are uninsured/public aid.
- ❖ There will be no difference between the data collected at these sites when compared with the national data.

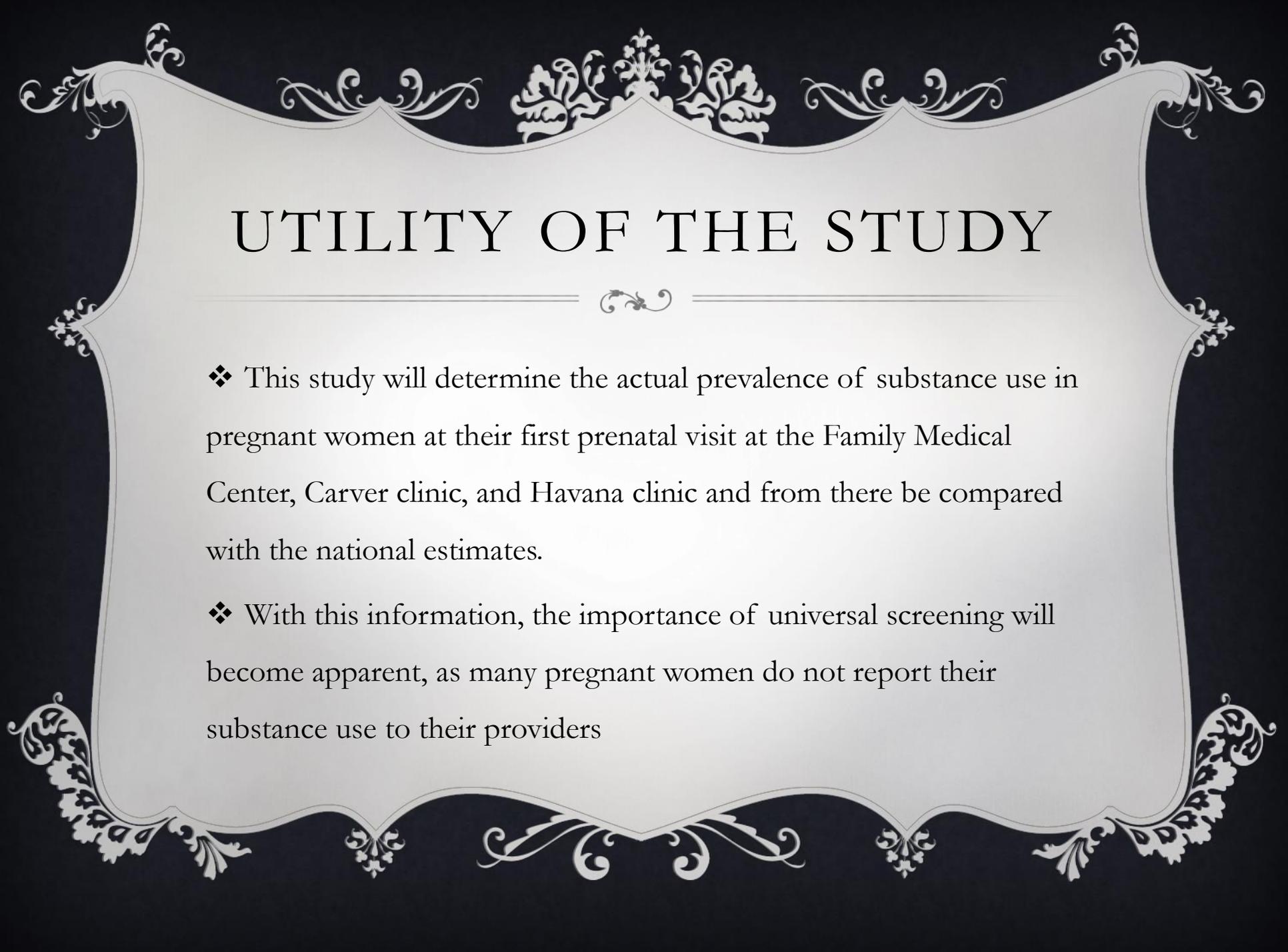
# WHY IS THIS IMPORTANT?

- ❖ According to the National Institute on Drug Abuse, \$11 billion dollars is spent on healthcare due to illicit drug use with an overall cost of \$193 billion a year.
- ❖ Prenatal drug abuse has been associated with potentially devastating and even life-long effects on exposed children with an estimated \$605 million associated with healthcare cost for drug-exposed newborns (1).

# IMPORTANCE

❖ The National Survey on Drug Use and Health from 2008 and 2009 found that within pregnant women ages 15-44 the younger women have a higher prevalence of reported substance use (2), and national estimates of pregnant women ages 15-44 with substance use suggests 1 in 4 pregnant women have used a substance within the past 30 days (3).

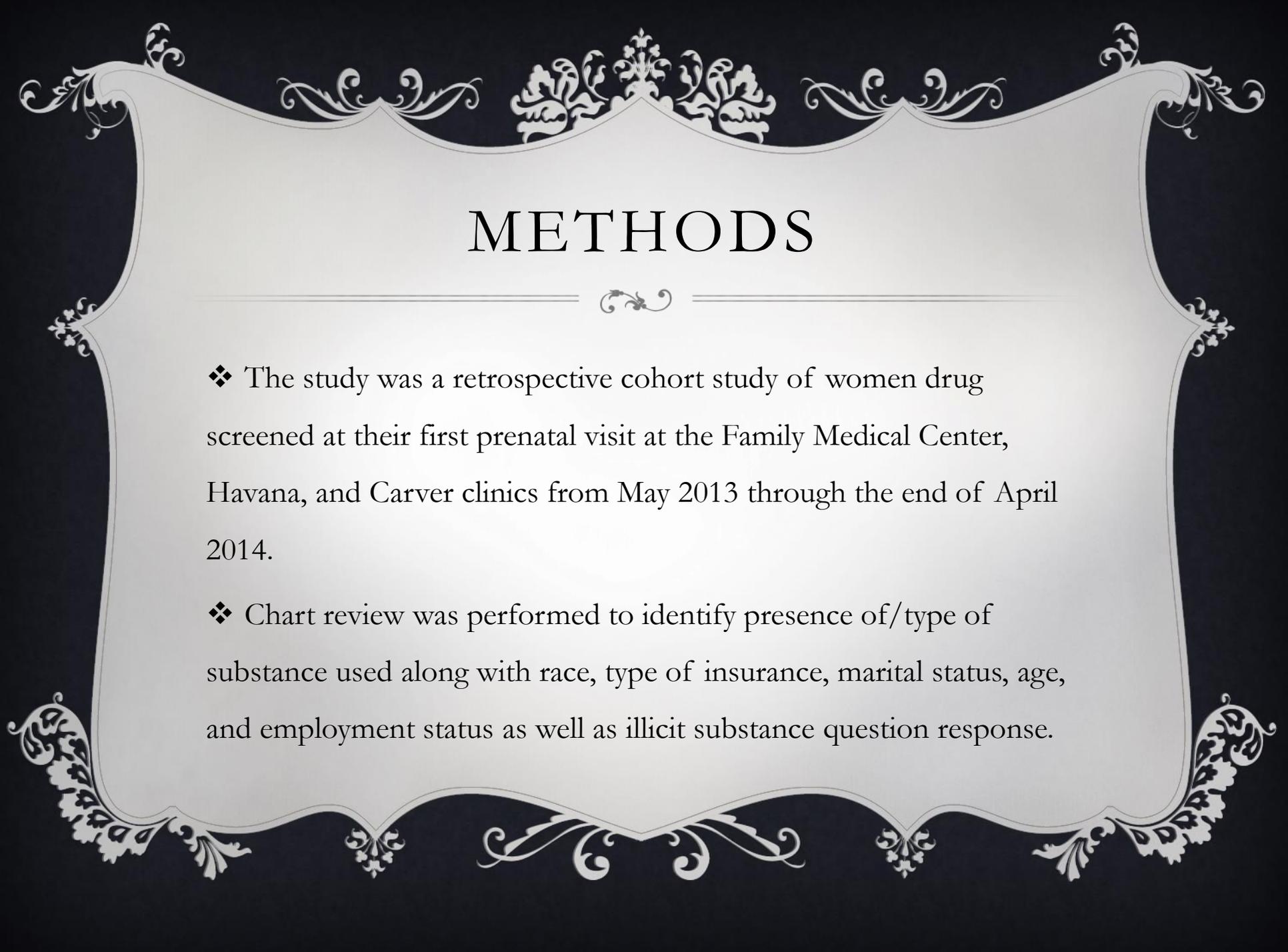
❖ These data are mainly from surveys and are most likely higher in prevalence due to not all pregnant women admitting to their substance use.



# UTILITY OF THE STUDY

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- ❖ This study will determine the actual prevalence of substance use in pregnant women at their first prenatal visit at the Family Medical Center, Carver clinic, and Havana clinic and from there be compared with the national estimates.
- ❖ With this information, the importance of universal screening will become apparent, as many pregnant women do not report their substance use to their providers

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# METHODS

❖ The study was a retrospective cohort study of women drug screened at their first prenatal visit at the Family Medical Center, Havana, and Carver clinics from May 2013 through the end of April 2014.

❖ Chart review was performed to identify presence of/type of substance used along with race, type of insurance, marital status, age, and employment status as well as illicit substance question response.

# CHART REVIEW

❖ 55 Carver clinic and 22 Havana clinic charts were manually reviewed and data placed into excel sheet with presence of/type of substance used along with race, type of insurance, marital status, age, employment status, and illicit substance response.

❖ 216 FMC charts were pulled electronically from HAC for first prenatal visits that occurred from May 2013 through the end of April 2014 with race, age, and marital status pulled from the data and entered into an excel file. Each chart was then manually reviewed to extrapolate the DAU results as well as type of insurance and the illicit substance use response.



# EXCLUSIONS

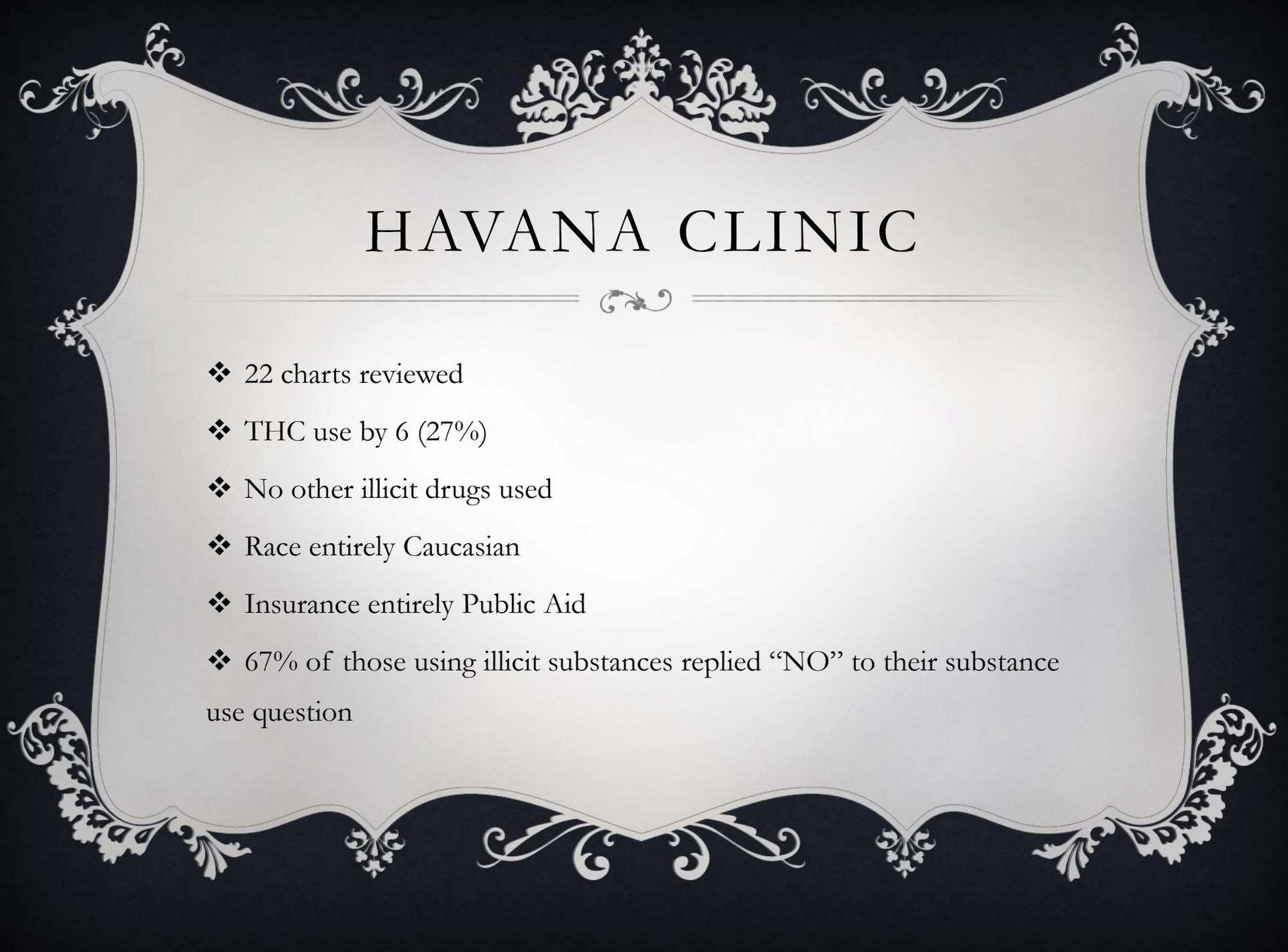
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43 charts were excluded due to missing information

- ❖ 14 transferred care
- ❖ 25 had no DAU results in the chart
- ❖ 4 had no drug use question response documented

# FAMILY MEDICAL CENTER

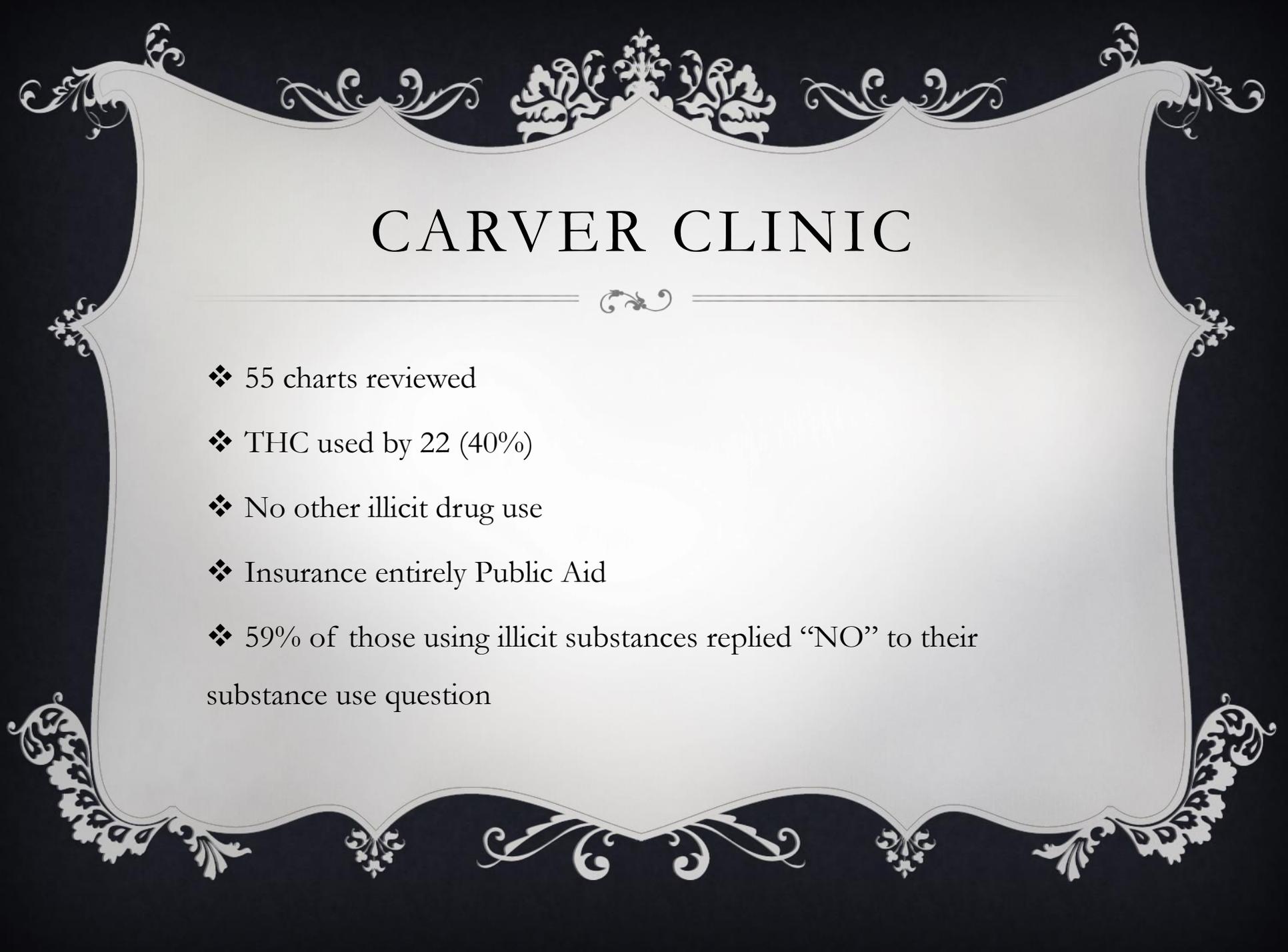
- ❖ 173 charts reviewed
- ❖ THC use by 52
- ❖ Cocaine and THC use by 2
- ❖ Amphetamine use by 2
- ❖ Benzodiazepine and opiate use by 1
- ❖ 33% of charts reviewed were noted to have illicit substance use
- ❖ 86% of those using illicit substances replied “NO” to their substance use question



# HAVANA CLINIC

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- ❖ 22 charts reviewed
- ❖ THC use by 6 (27%)
- ❖ No other illicit drugs used
- ❖ Race entirely Caucasian
- ❖ Insurance entirely Public Aid
- ❖ 67% of those using illicit substances replied “NO” to their substance use question



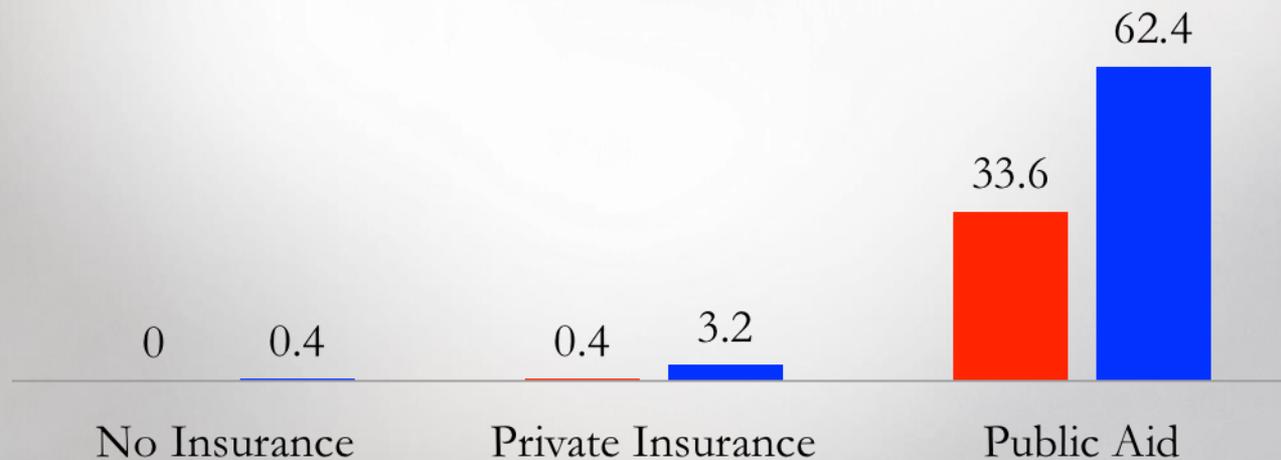
# CARVER CLINIC

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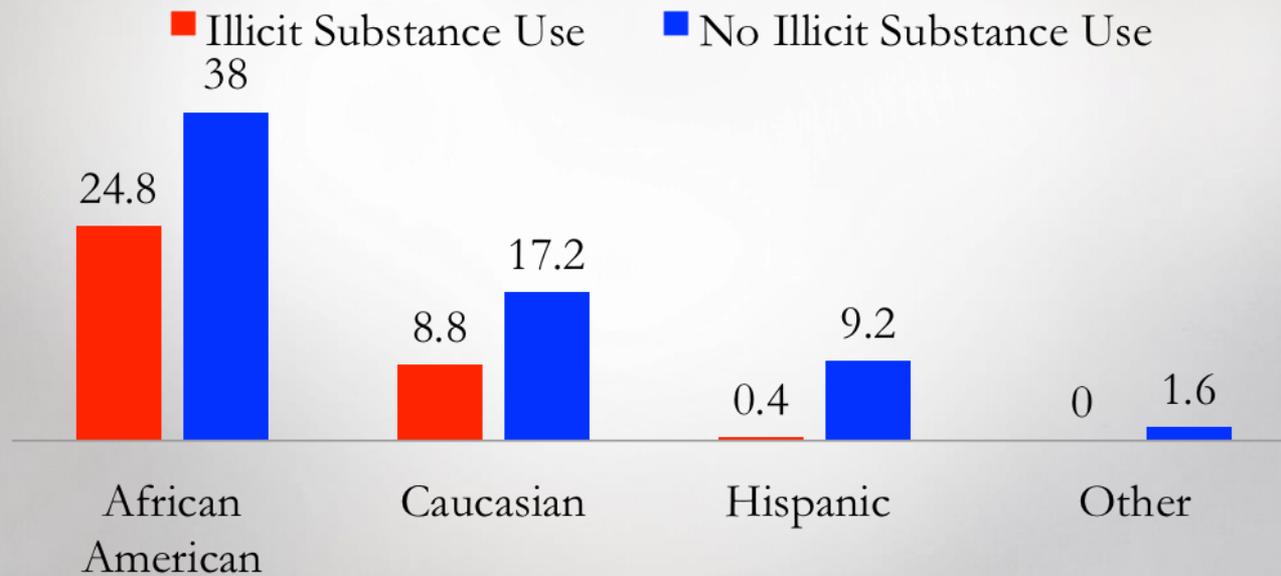
- ❖ 55 charts reviewed
- ❖ THC used by 22 (40%)
- ❖ No other illicit drug use
- ❖ Insurance entirely Public Aid
- ❖ 59% of those using illicit substances replied “NO” to their substance use question

# EFFECT OF INSURANCE ON ILLICIT SUBSTANCE USE

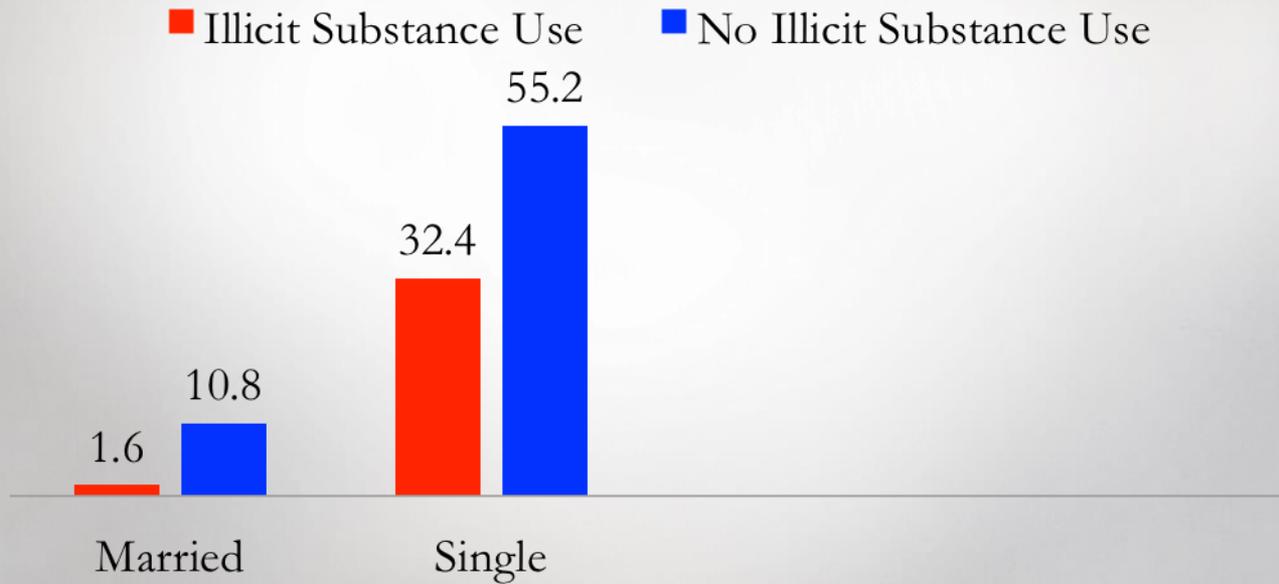
■ Illicit Substance Use    ■ No Illicit Substance Use



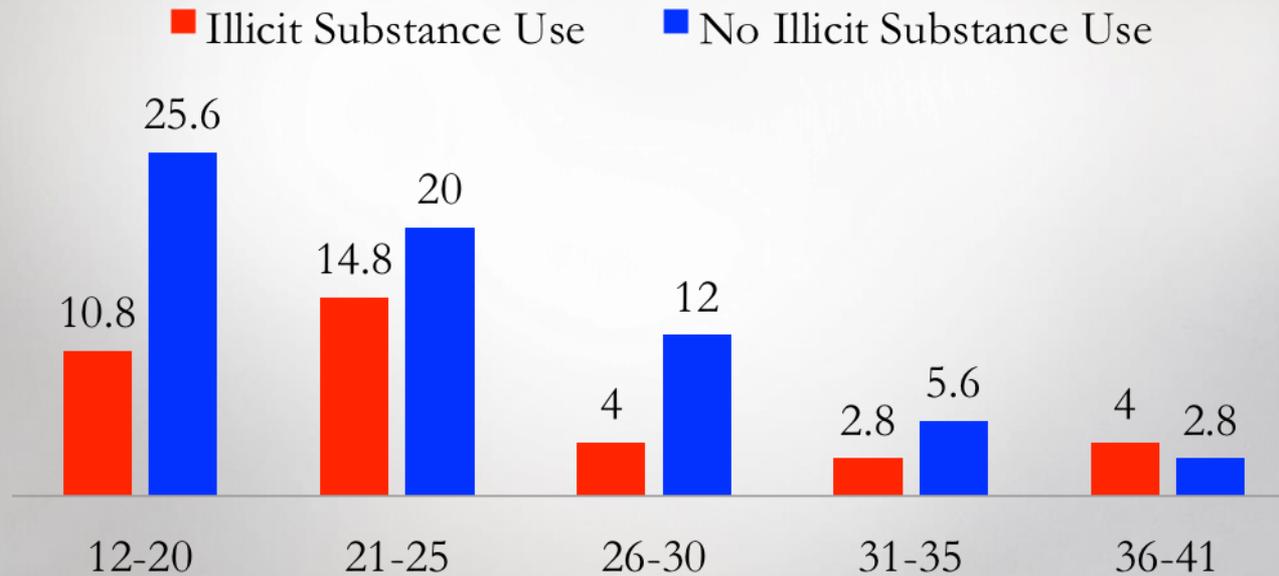
# EFFECT OF RACE ON ILLICIT SUBSTANCE USE



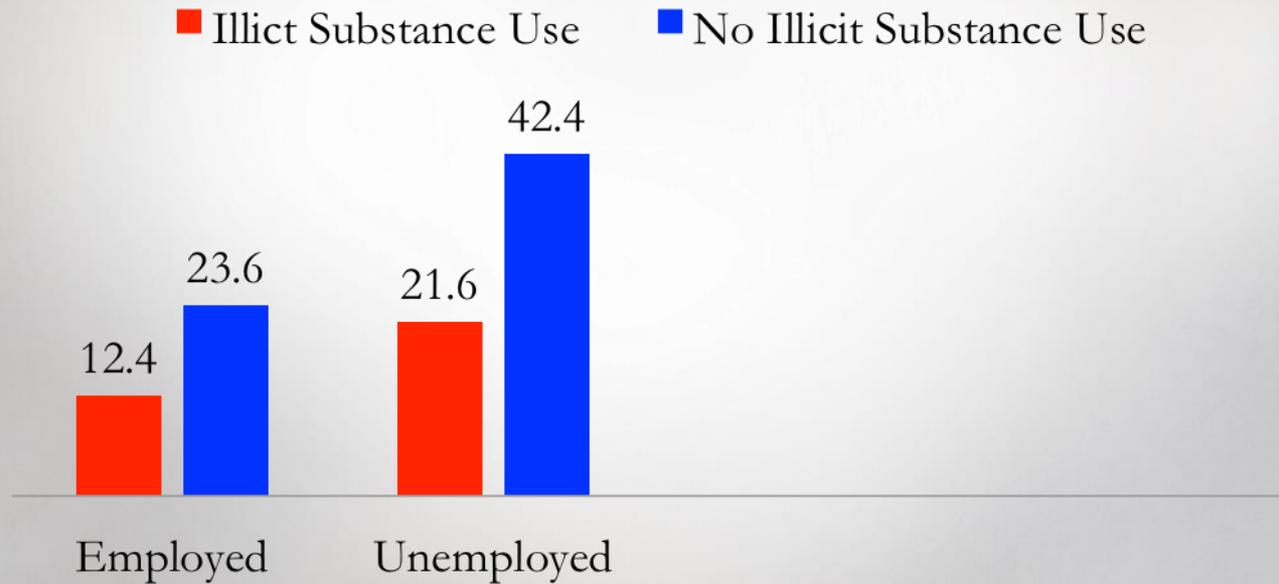
# EFFECT OF MARITAL STATUS ON ILLICIT SUBSTANCE USE



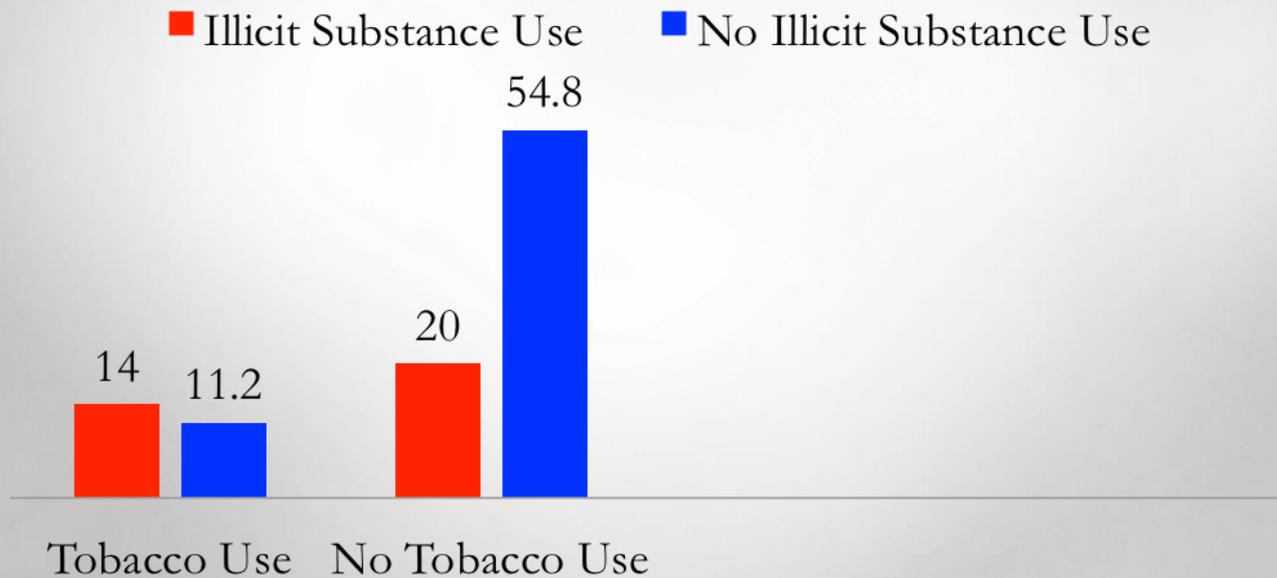
# EFFECT OF AGE GROUP ON ILLICIT SUBSTANCE USE



# EFFECT OF EMPLOYMENT STATUS ON ILLICIT SUBSTANCE USE



# EFFECT OF SMOKING STATUS ON ILLICIT SUBSTANCE USE



# STATISTICAL ANALYSIS

- ❖ In order to assess the effects of insurance, race, marital status, age, employment status and smoking status on illicit substance use, a logistical regression model was used via SAS program 9.4.
- ❖ Initially all variables were included in the model.
- ❖ After the stepwise selection of covariates, only the significant ones were retained in the model.

# LOGISTIC REGRESSION RESULTS

Variable	Sample Number	Odds Ratio (95% CI)	P-Value
<b>Race</b>			0.0137
African American	157	1	
Caucasian	65	0.57 (0.30- 1.11)	0.0982
Hispanic and other	28	0.07 (0.01- 0.56)	0.0119

- ❖ Race has a statistically significant effect on illicit substance use at a significance level of 0.05.
- ❖ Hispanic and other races have a 0.07 times the odds of using illicit substances
- ❖ No statistical significance between Caucasian race vs African American race for using illicit substances

# LOGISTIC REGRESSION RESULTS

	Sample Number	Odds Ratio (95% CI)	P-Value
<b>Smoker</b>			0.0003
No	187	1	
Yes	63	3.24 (1.72- 6.12)	0.0003

- ❖ Smoking status has a statistically significant effect on illicit substance use
- ❖ The odds of using illicit substances for smokers are 3.24 times the odds of using illicit substances for non-smokers, holding the race at a fixed category

# DISCUSSION

- ❖ Race and smoking status were the only factors that showed significance for illicit substance use with Hispanic and other races being a protective factor and smoking tobacco as a risk factor for using illicit substances
- ❖ Compared to the national data of 25% illicit substance use among pregnant women, there was a 9% increase in illicit substance use with 34% of pregnant women using illicit substances in our clinics



# MORE DISCUSSION

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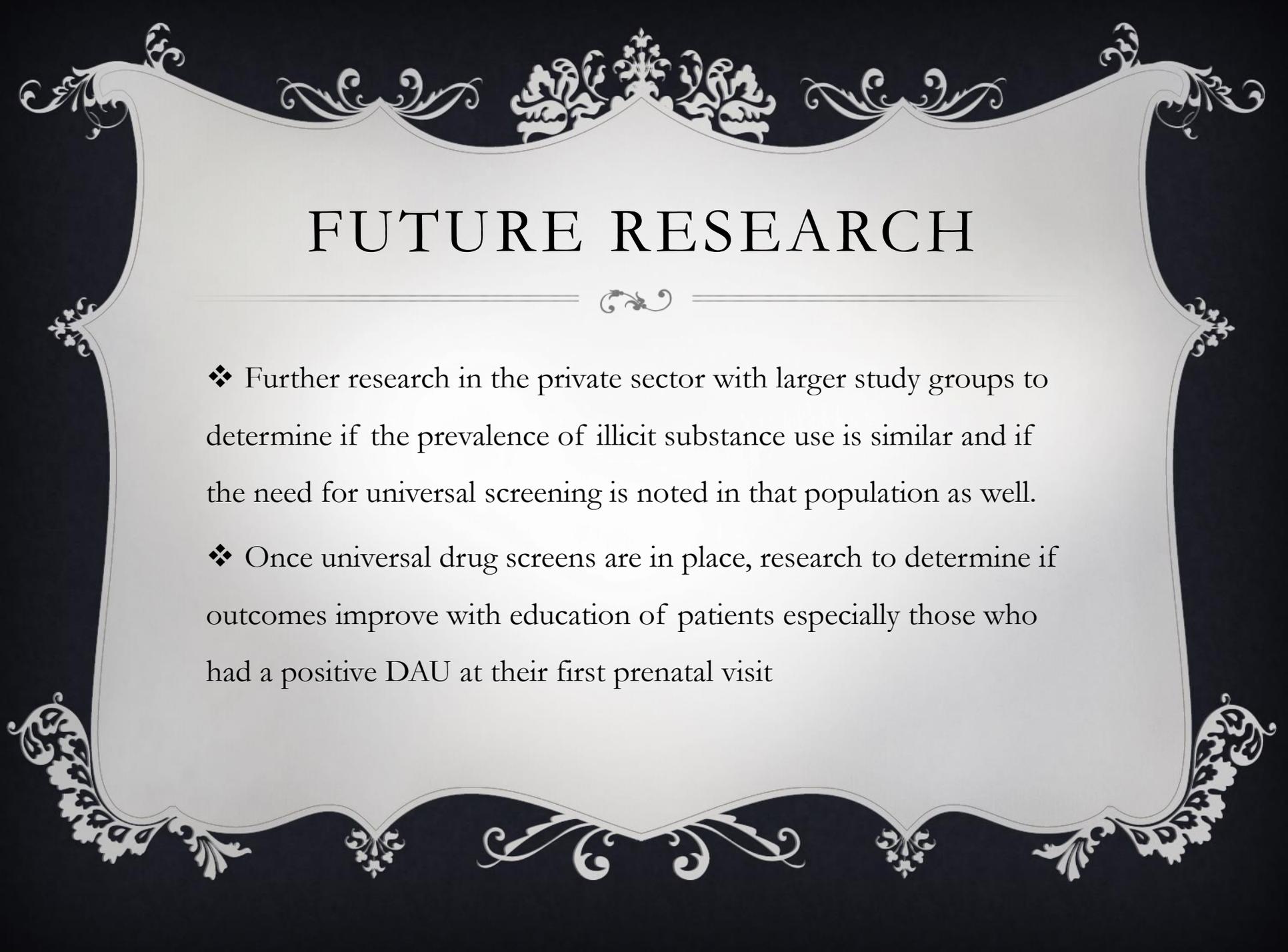
- ❖ 78% of pregnant women using illicit substances in our clinics answered their substance use question as “NO”.
- ❖ The need for universal drug screening was illustrated by the overwhelming results that pregnant women using illicit substances are not forthcoming with that information to their providers



# LIMITATIONS

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- ❖ Small study group
- ❖ Mainly public aid population in all clinics
- ❖ Did not take into account who asked the substance use questions  
(nurse vs physician)



# FUTURE RESEARCH

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- ❖ Further research in the private sector with larger study groups to determine if the prevalence of illicit substance use is similar and if the need for universal screening is noted in that population as well.
- ❖ Once universal drug screens are in place, research to determine if outcomes improve with education of patients especially those who had a positive DAU at their first prenatal visit

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# SOURCES

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- ❖ 1. ACOG.: At-risk drinking and illicit drug use: ethical issues in obstetric and gynecologic practice. ACOG committee opinion number 422. *Obstet Gynecol.* 2008; 112: 1449-1460.
- ❖ 2. Prenatal Exposure to Drugs of Abuse. National Institute on Drug Abuse. May 2011.
- ❖ 3. Havens, J., L.A. Simmons, L. Shannon, and W.F. Hansen. 2009. Factors associated with substance use during pregnancy.: Results from a national sample. *Drug Alcohol Depend* 99 (1-3): 89-95.



# THANK YOU

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- ❖ Dr Trachtenbarg
- ❖ Dr Na'Allah
- ❖ Cindi Abbott, Havana Clinic
- ❖ Carver nurses
- ❖ Yanzhi Wang, statistics
- ❖ IRB



Questions?