

Influences of Marijuana Use on Adolescent HIV/STI Acquisition and Care

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Marijuana and HIV/STI Risk

- Indirect effects:
 - Predisposition for risky behaviors
 - Drug using social networks
 - High risk sexual networks
- Direct effect:
 - Executive function and decision making

Objective 1

- To highlight findings from Bayview Network Study (NIAID-funded) on link between marijuana and HIV/STI risk networks

Objective 2

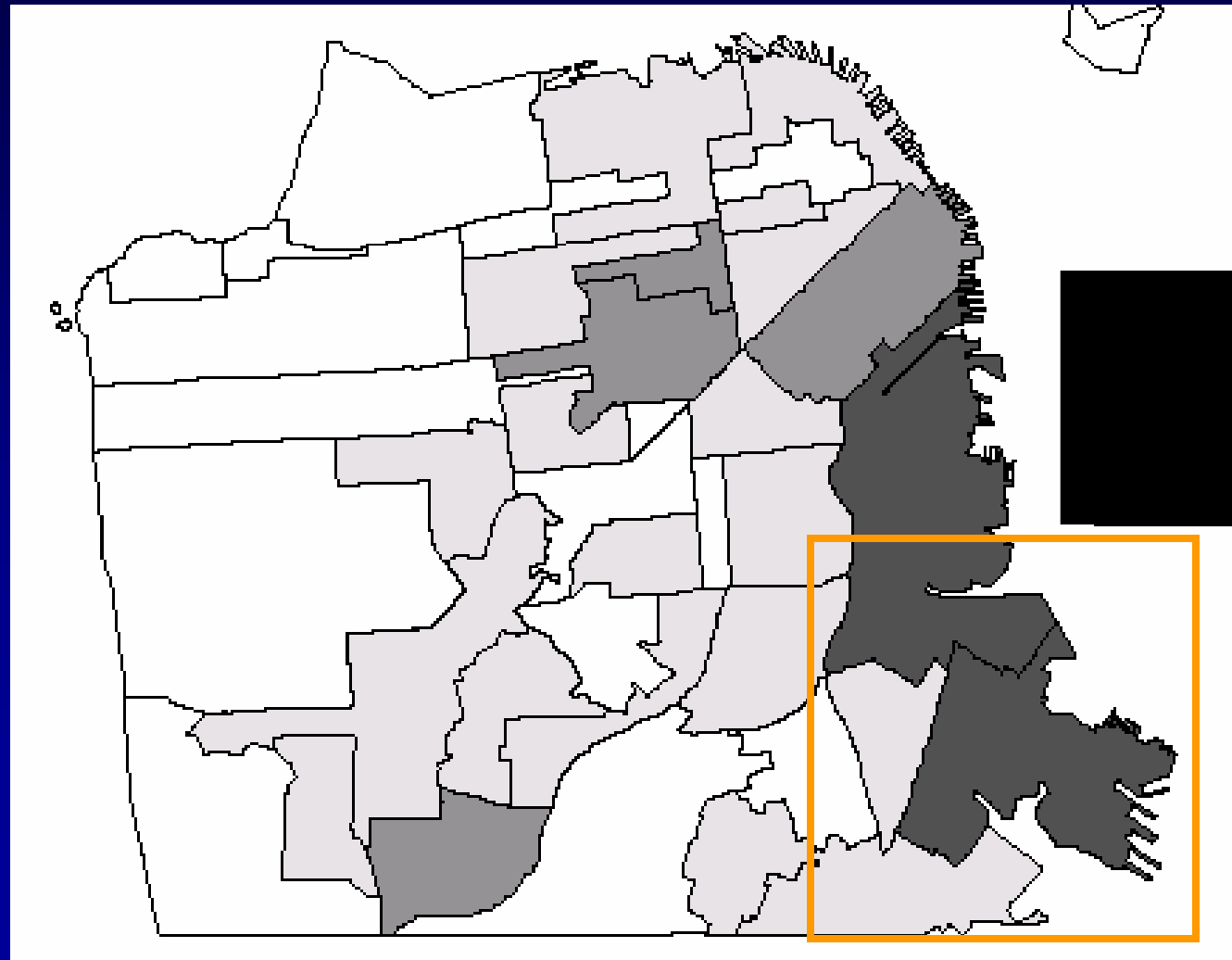
- To highlight findings from Adolescent HIV Prevention Trials Network (ATN) Study 009 (NIDA- and NICHD-funded) on link between marijuana and appointment keeping in HIV infected young women

Bayview Network Study

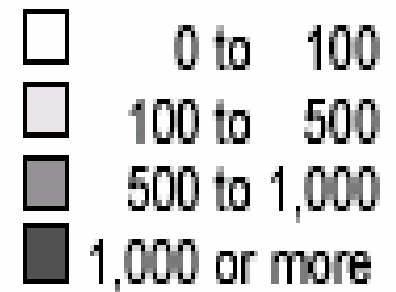
Objective

- To determine the association between sexual networks and STIs in African-American adolescents, 15-19 years old, residing in Bayview area of San Francisco, CA

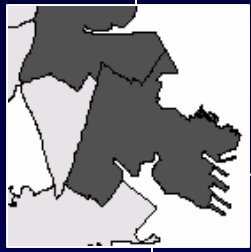
Gonorrhea rates in adolescents, San Francisco, 2000



Cases per 100,000



Bayview
Hunter's Point



BASELINE
2000-2001

**RANDOM
SAMPLE
(INDEXES)**

FRIENDS

Gen 1 SEX PARTNERS

Gen 2 SEX PARTNERS

Gen 3 SEX PARTNERS

12 MONTH FOLLOW-UP
2001-2002

INDEXES

FRIENDS

Gen 1 SEX PARTNERS

Gen 2 SEX PARTNERS

Gen 3 SEX PARTNERS

Network position

Position

Individual

Partner

1



1

1

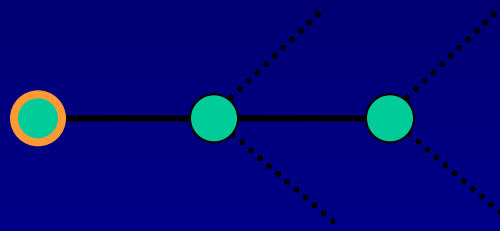
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1

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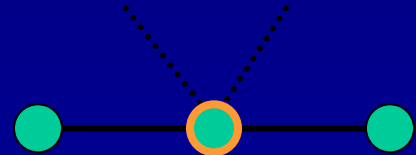
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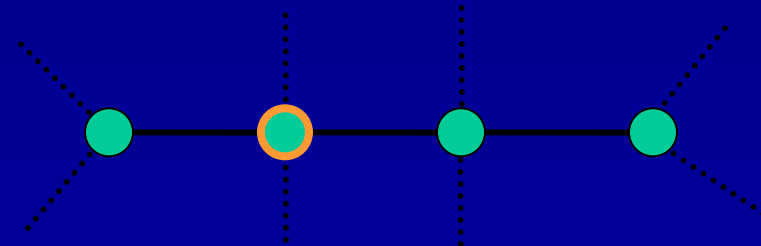
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Logistic regression results

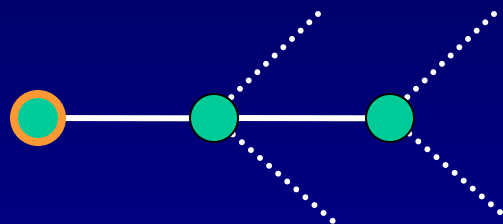
OR* [95%CI]



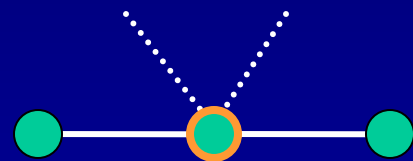
Reference



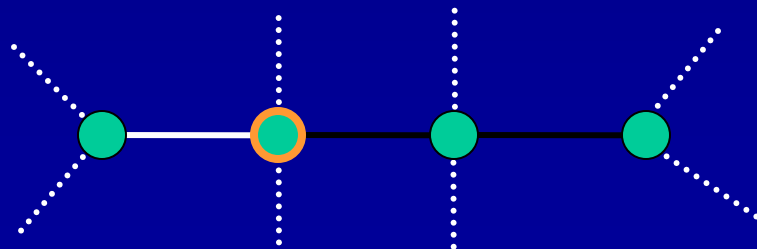
2.8 [0.9- 9.4]



4.3 [1.4-13.5]





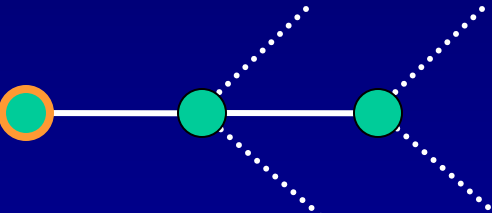
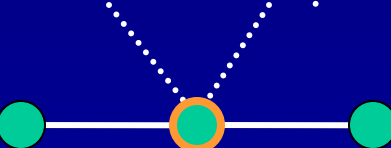
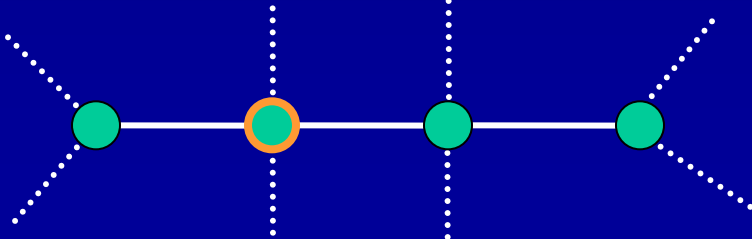
6.6 [2.1-20.9]



6.4 [2.1-19.0]

* Adjusted for age, gender, condom use, study wave and participant type

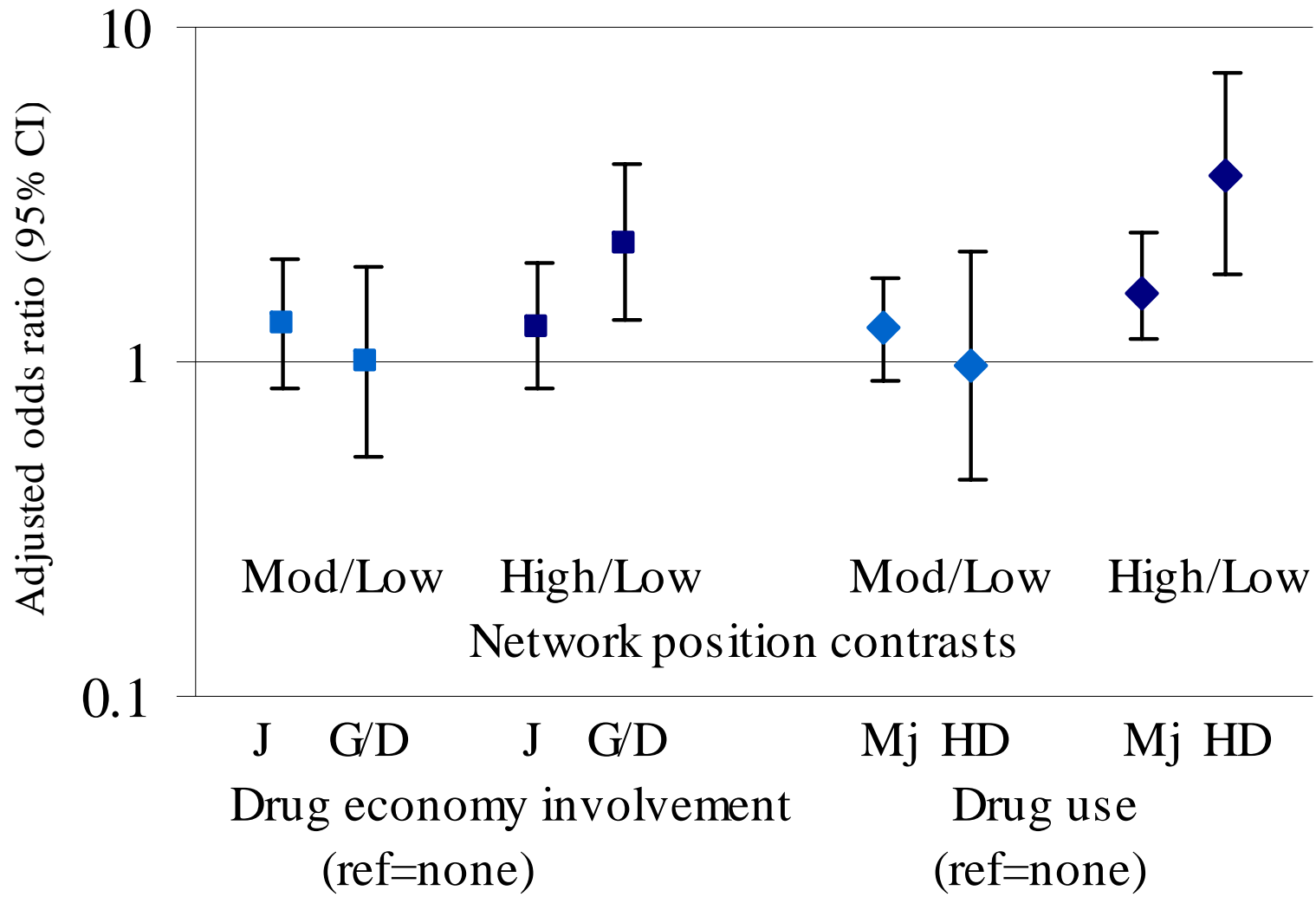
Simplified network position

	<u>OR [95%CI]</u>	<u>3 level</u>
	Reference	Low
	2.8 [0.9- 9.4]	Moderate
	4.3 [1.4-13.5]	
	6.6 [2.1-20.9]	High
	6.4 [2.1-19.0]	

Drug-Related Risks (n=1107)

Drug Economy	
None	64%
Jail Only	23%
Gang or Drug Dealing	13%
Drug Use	
None	45%
MJ only	47%
Other Drugs	8%

Multivariate Associations



Summary

- Network position is associated with STI risk
- Marijuana use is associated with being in STI risk position in network (center of network)

ATN 009

Objective

- To determine whether marijuana use, independent of mental health disorders and social support predict HIV-infected females adherence to scheduled HIV appointment

Study Design and Methods

- Sexually HIV-infected adolescent females age 13-24 years old recruited between 1/30/2003 and 12/9/2004
- Interviewed at baseline and every three months for 18 months

Baseline Index Interview

- ACASI
- DISC
 - computer-administered mental health diagnostic interview
- Urine drug screening
- Debriefing/referral

Health Care Utilization

- Staff review of appointment activity weekly
 - Scheduled and unscheduled visits
 - Appointments made or missed

Participant Characteristics (N=178)

Age, mean	20.6 years
Race/ethnicity	
African American	92%
Other	8%
Viral Load, mean	67,000 copies
CD4 Count, mean	470 cells
HAART	48%

Substance Use and Mental Health

	Baseline	Varied over time
Marijuana use \geq once in past 90 days*	37.3%	28%
THC on urine drug screening	24.2%	N/A
Alcohol use \geq once in past 90 days*	46.6%	38%
Mood disorder on DISC	10.4%	N/A
CES-D score \geq 16*	42.1%	39%

*Assessed every six months

Other Baseline Variable

	Mean (SD)	Potential Range
Social Network Support	74.5 (11.3)	24-96
Health Care Satisfaction	14.3 (4.3)	11-45
HIV Stigma	58.4 (12.1)	21-84

Scheduled Visits

Number attended	3.5
Number missed	1.6
% Attended	67.3

Relative Risk of Number Visits Attended

	Unadjusted	Adjusted**
CES-D	0.95	
MJ use	0.83*	0.89*
Alcohol use	0.94	
Mood Disorder	0.95	
Social Support	1.0	
Health Care Satisfaction	1.0	
HIV Stigma	1.0	

*p<0.05 **Adjusted for CD4 Count and ART

Summary

- HIV infected adolescent and young adult females adhere to scheduled care ~ 67% of time
- Marijuana users 11% less likely to attend a scheduled appointment
- Other commonly reported predictors of adherence were not predictive in this study
 - Chronic care versus routine care
 - Adolescent females versus adults

Conclusion

- Marijuana indirectly increases HIV/STI risk, in part, through its influence on sexual network position
- Marijuana use may also complicate care among those with HIV
- Further research into causal pathways are essential if we are to reduce risks for HIV/STIs associated with marijuana use

Collaborators

- C. Fichtenberg
- D. Murphy
- G. Harper
- L. Leonard
- L. Perez
- G. Clum
- L. Muentz