Drug Use and Sexual Orientation in a Cohort Study of U.S. Youth

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Drug Use in Sexual Minority Youth

- Sexual minority youth are at high risk for illicit drug use

- Few studies have examined:

  - Differences in drug use across a range of sexual orientation groups (e.g., mostly heterosexual)

  - Risk of drug use across a range of different types of drugs (e.g., prescription drugs)

Drug Use in Sexual Minority Youth

- LGB community affiliation may be related to substance use
  - Greater substance use in MSMs living in "gay ghettos" (Stall et al., 2001)
  - Initial involvement in LGB activities is associated with increased marijuana use (Rosario et al., 2004)

- Few national youth studies have examined:
  - How drug use associates with LGB community involvement

Research Aims

- Compare prevalence of drug use in the past year among youth reporting their sexual orientation as:
  - heterosexual
  - mostly heterosexual (MH)
  - lesbian/gay/bisexual (LGB)

- Among sexual minorities, examine how frequency of participation in LGB community social and educational activities associates with risk for drug use

Growing Up Today Study (GUTS)

- Longitudinal cohort of 16,882 adolescents
  - Began in 1996
  - 9,039 females and 7,843 males
  - 9 to 14 years of age at baseline
  - 96% white race/ethnicity
- Children of Nurses' Health Study II participants
- Self-administered questionnaire completed annually or biannually

Current Analysis Sample

- 2003 wave participants who gave information on sexual orientation and illicit drug use

- 5,829 females; 3,468 males

- 55% of original cohort

- Mean age = 18.6 years (range16-23 years)

Sexual Orientation Measure

- *"Which one of the following best describes your feelings?"*
  - *1   completely heterosexual   (CH)*
  - *2   mostly heterosexual   (MH)*
  - *3   bisexual*
  - *4   mostly homosexual*
  - *5   completely homosexual*
  - *6   not sure*
- 3, 4, & 5 combined to represent LGB
- "Not sures" excluded (19 females, 4 males)
- Adapted from Remafedi et al, 1992

Distribution of Sexual Orientation by Gender

	Males n (%)	Females n (%)
Completely heterosexual	3247 (93.6)	5205 (89.3)
Mostly heterosexual	123 (3.6)	469 (8.1)
Bisexual	29 (0.8)	116 (2.0)
Mostly homosexual	25 (0.7)	20 (0.3)
Completely homosexual	44 (1.3)	19 (0.3)

Drug Use Measures

- Past year use of illicit drugs:
  - Marijuana, cocaine, ecstasy (MDMA), & crystal methamphetamine

- Past year use of prescription drugs without a doctor's prescription:
  - Oxycodone (Oxycontin/Percocet/Percodan), Ritalin/Adderal, Valium/Xanax/Librium

- Poly drug use – 2 or more drugs reported

Involvement in LGB Community Social Activities Measure

- *"In the past year, how often did you go to lesbian, gay, or bisexual social events, cafes, dance clubs, bars, or hung around these places?"*
  – Never
  – 1-5 times
  – 6-11 times
  – 1 time a month
  – 2-3 times a month
  – 1 time a week
  – 2 or more times a week

Variable coded from 1 (Never) to 7 (2+/wk)

From Rosario et al. *American Journal of Community Psychology*. 2001;29(1):133-160

Involvement in LGB Community Educational Activities Measure

- *"In the past year, how often did you go to lesbian, gay, or bisexual meetings or educational events at a community center or other place?"*

  - Never
  - 1-5 times
  - 6-11 times
  - 1 time a month
  - 2-3 times a month
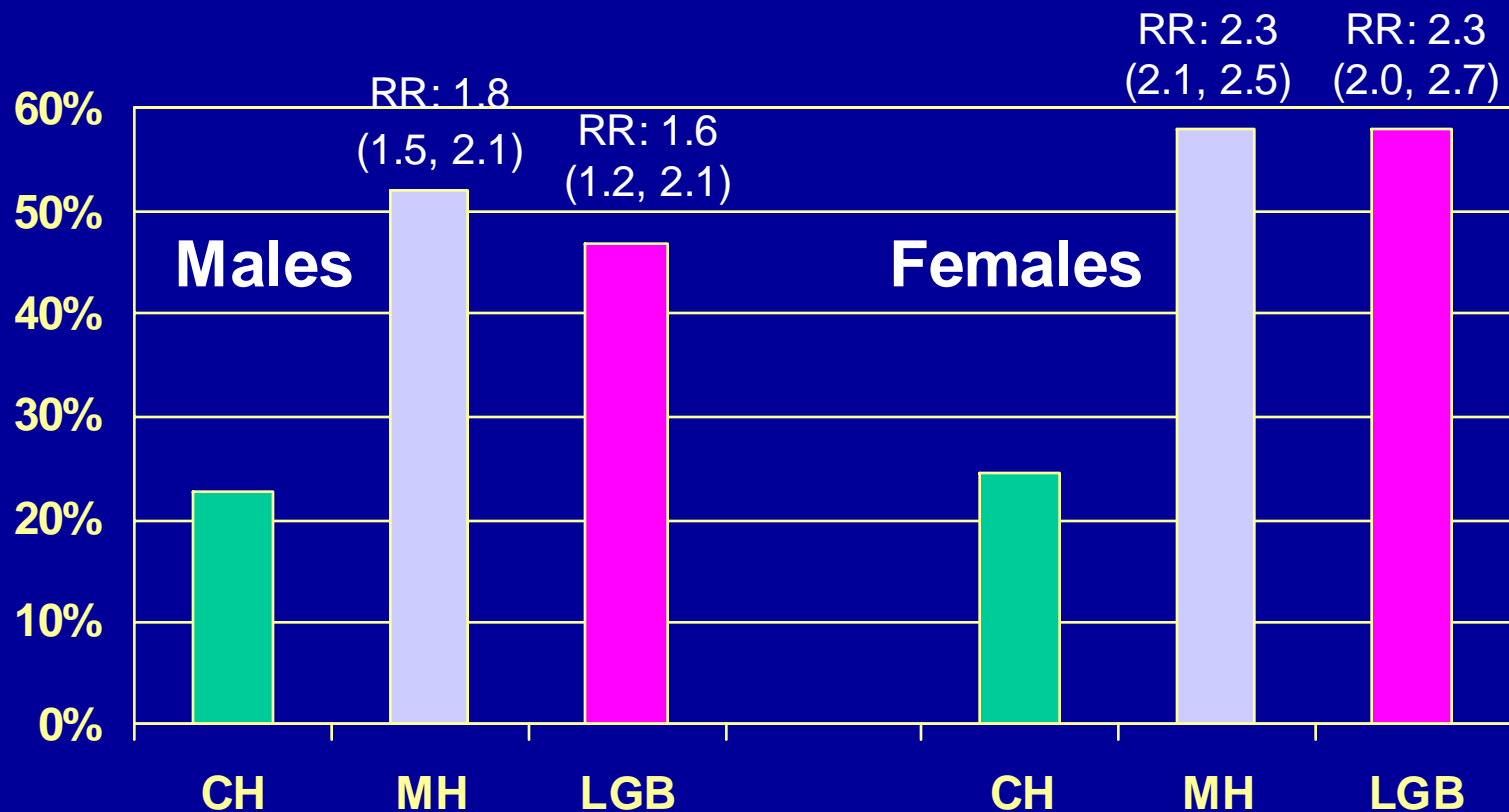 - 1 time a week
  - 2 or more times a week

Variable coded from 1 (Never) to 7 (2+/wk)

From Rosario et al. *American Journal of Community Psychology*. 2001;29(1):133-160
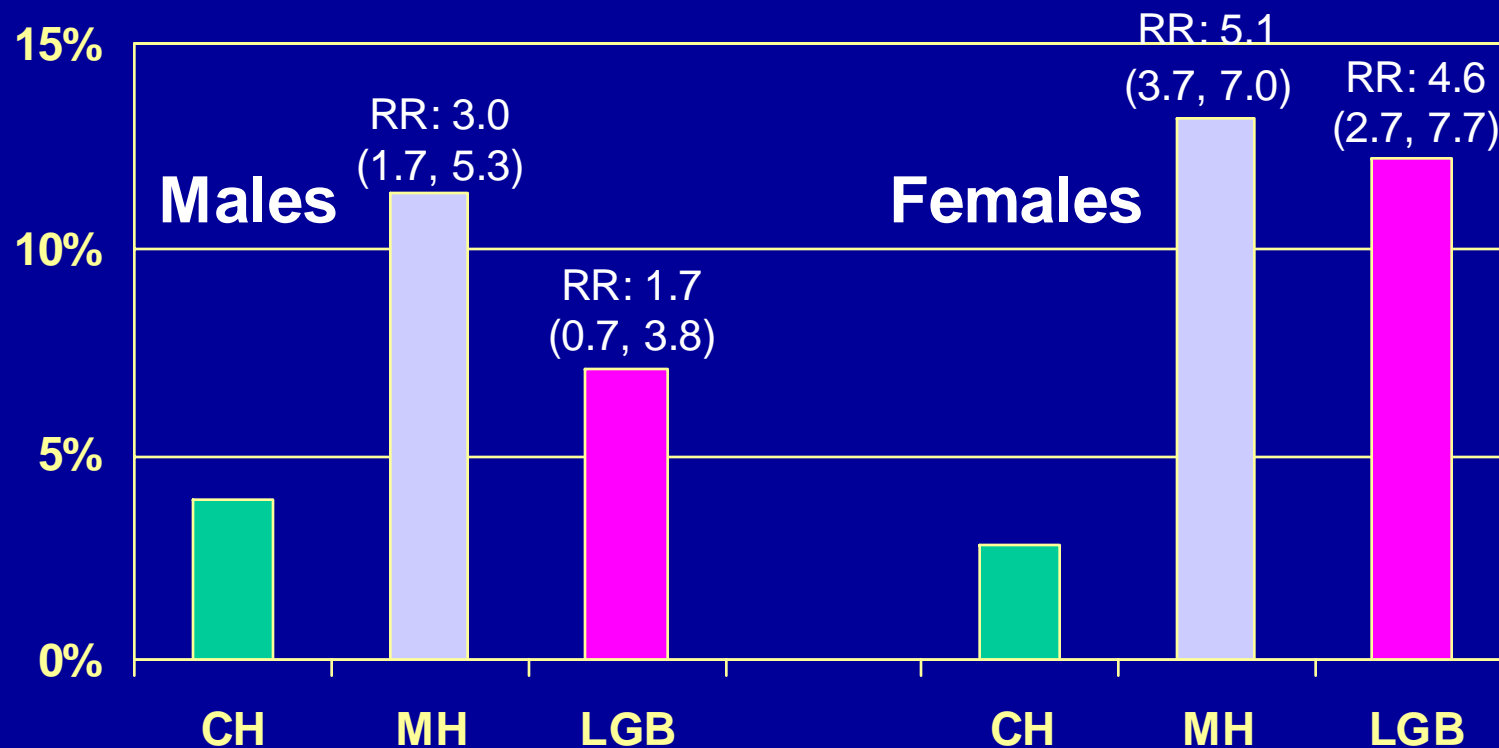
Statistical Methods

- Cross-sectional, gender-stratified

- Logistic regression estimating relative risk (RR) when prevalence of drug use was low (<10%)

- Modified Poisson regression estimating RR when prevalence of drug use was higher (>10%)

- All models control for age

- Completely heterosexual (CH) is referent group

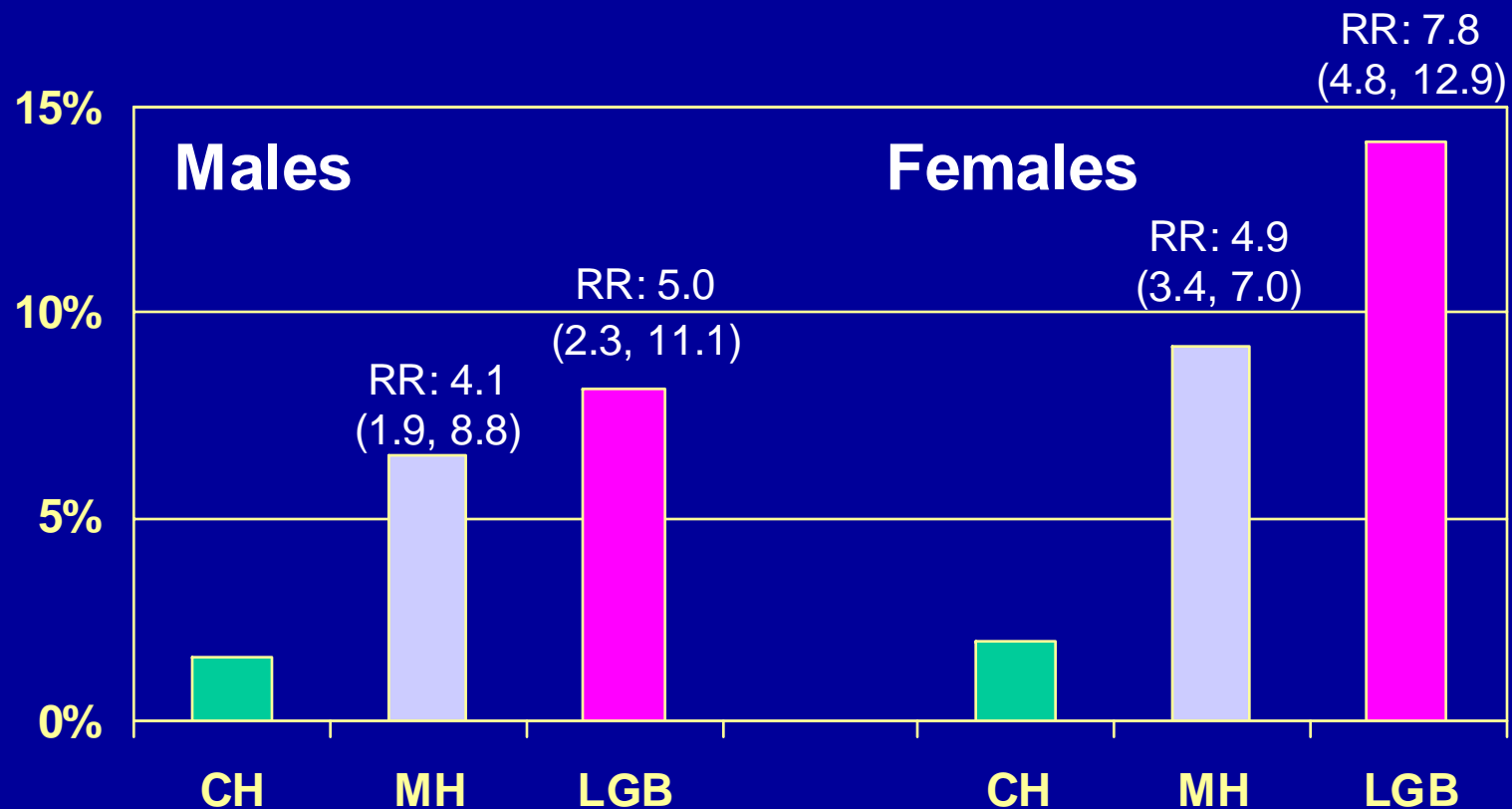Prevalence of Past-Year Marijuana Use by Sexual Orientation and Gender

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Prevalence of Past-Year Cocaine Use by Sexual Orientation and Gender

Males

Females

RR: 3.0 (1.7, 5.3)

RR: 1.7 (0.7, 3.8)

RR: 5.1 (3.7, 7.0)

RR: 4.6 (2.7, 7.7)

15%

10%

5%

0%

CH   MH   LGB   CH   MH   LGB
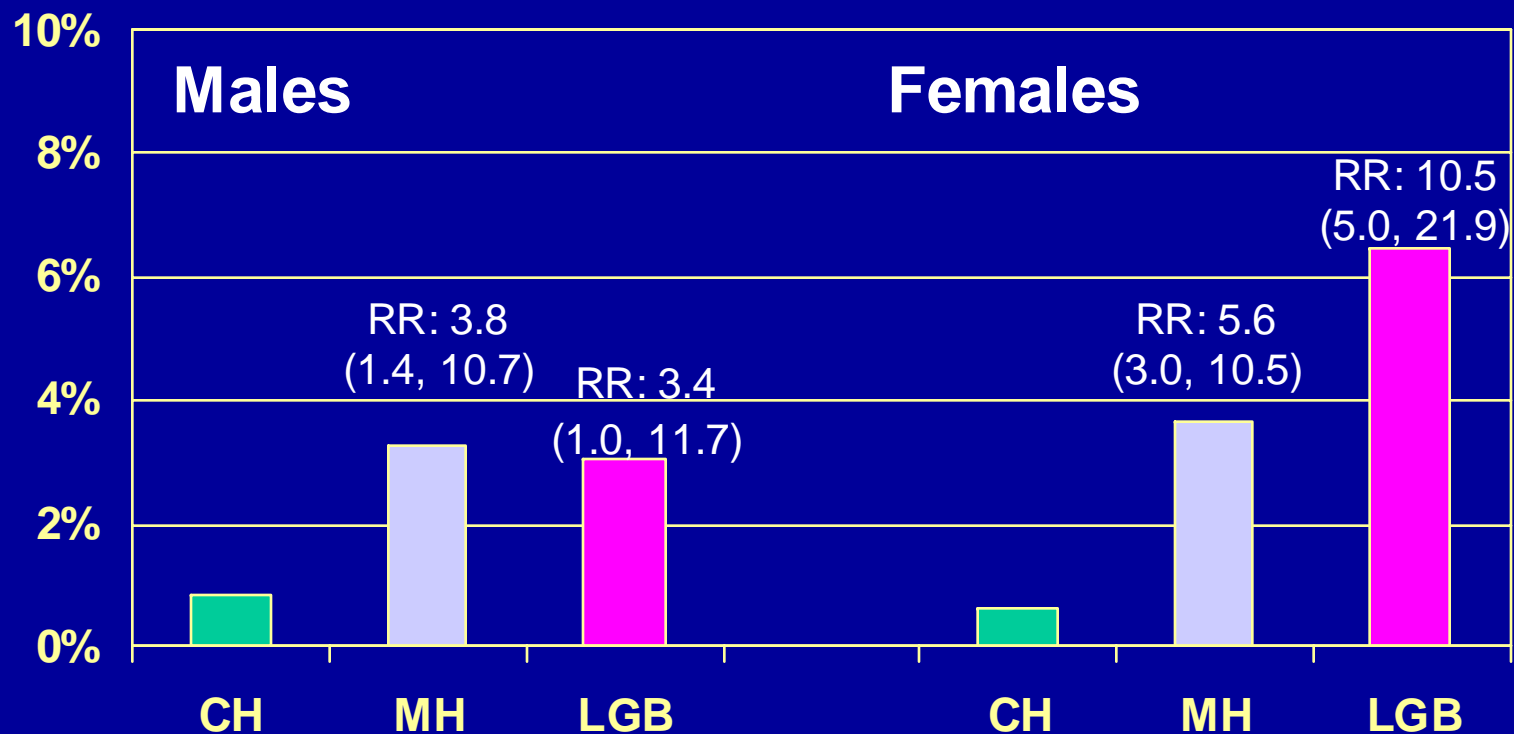
Relative risks are adjusted for age; 95% CIs are shown in parentheses

Prevalence of Past-Year Ecstasy (MDMA) Use by Sexual Orientation and Gender

Males   Females

RR: 7.8 (4.8, 12.9)
RR: 4.9 (3.4, 7.0)
RR: 5.0 (2.3, 11.1)
RR: 4.1 (1.9, 8.8)

15%
10%
5%
0%

CH   MH   LGB   CH   MH   LGB

Relative risks are adjusted for age; 95% CIs are shown in parentheses

Prevalence of Past-Year Crystal Meth Use by Sexual Orientation and Gender

Males

Females

RR: 3.8
(1.4, 10.7)

RR: 3.4
(1.0, 11.7)

RR: 5.6
(3.0, 10.5)

RR: 10.5
(5.0, 21.9)

10%
8%
6%
4%
2%
0%

CH   MH   LGB   CH   MH   LGB

Relative risks are adjusted for age; 95% CIs are shown in parentheses

Prevalence of Past-Year Prescription Drug Misuse by Sexual Orientation and Gender

Males **Females**

Oxycodone: 2.0*, 2.2* (Males); 4.2*, 3.8* (Females)
Ritalin: 2.4*, 1.9 (Males); 4.0*, 3.4* (Females)
Valium: 4.8*, 2.3* (Males); 3.8*, 6.3* (Females)

CH MH LGB

*p < .05

Relative risks are adjusted for age

Prevalence of Past-Year Poly Drug Use by Sexual Orientation and Gender

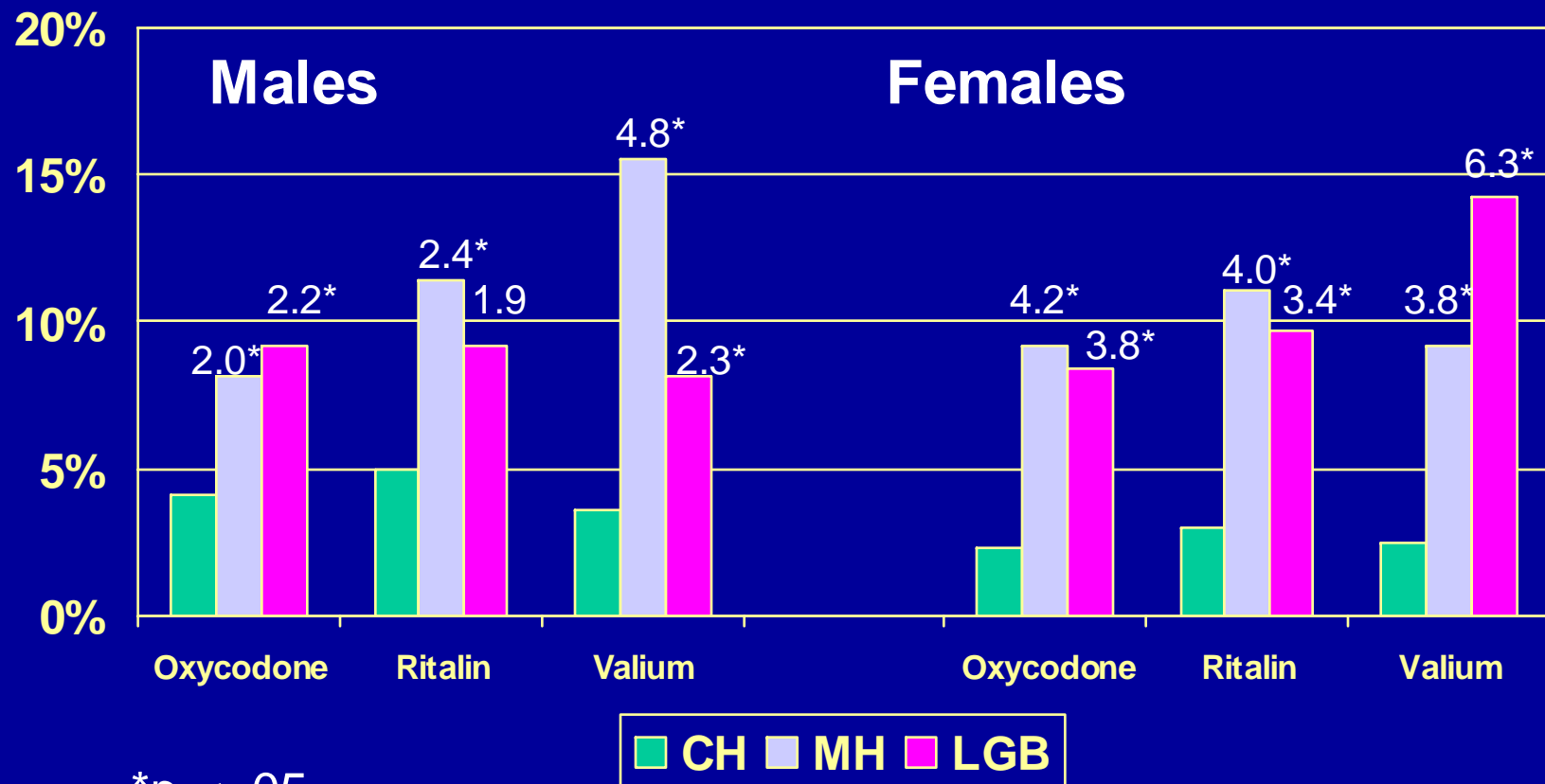Relative risks are adjusted for age; 95% CIs are shown in parentheses

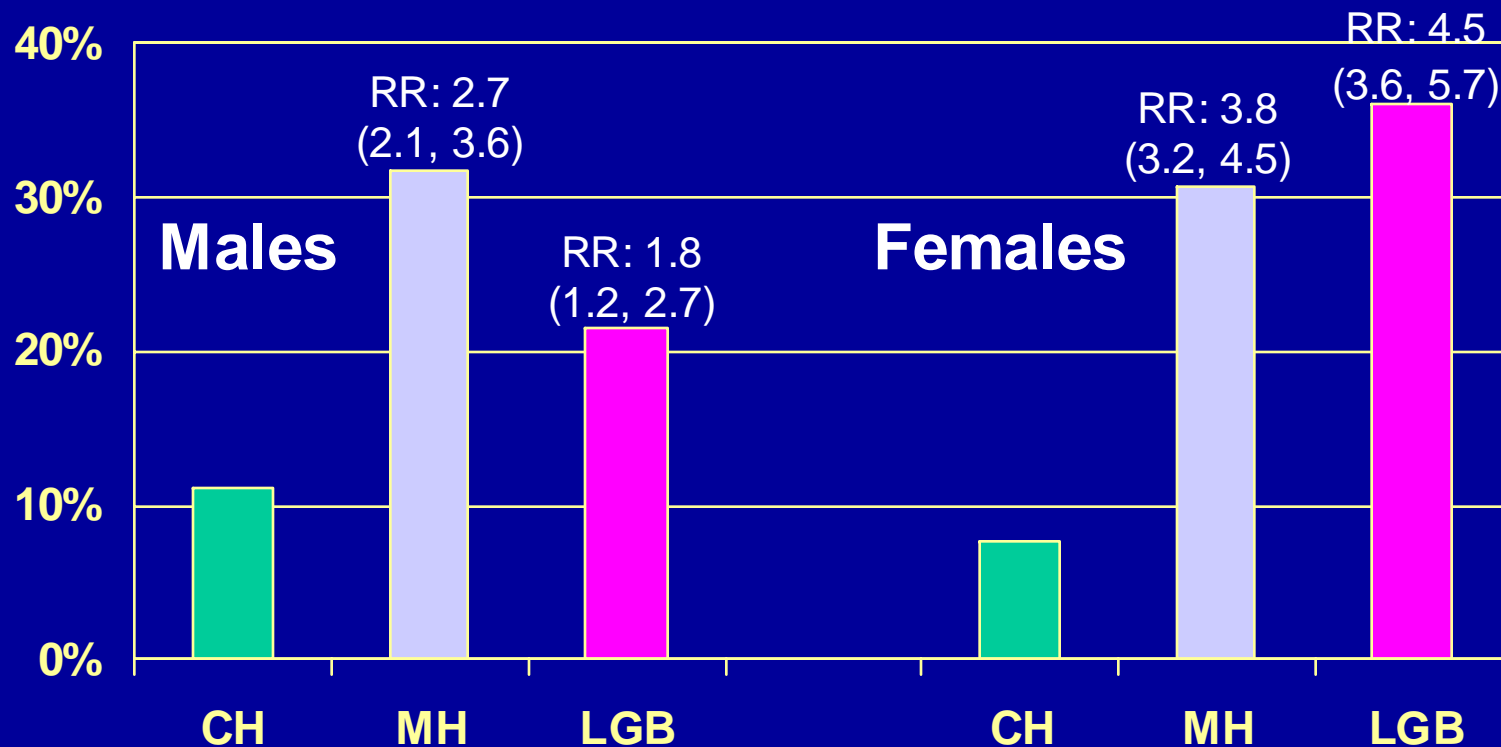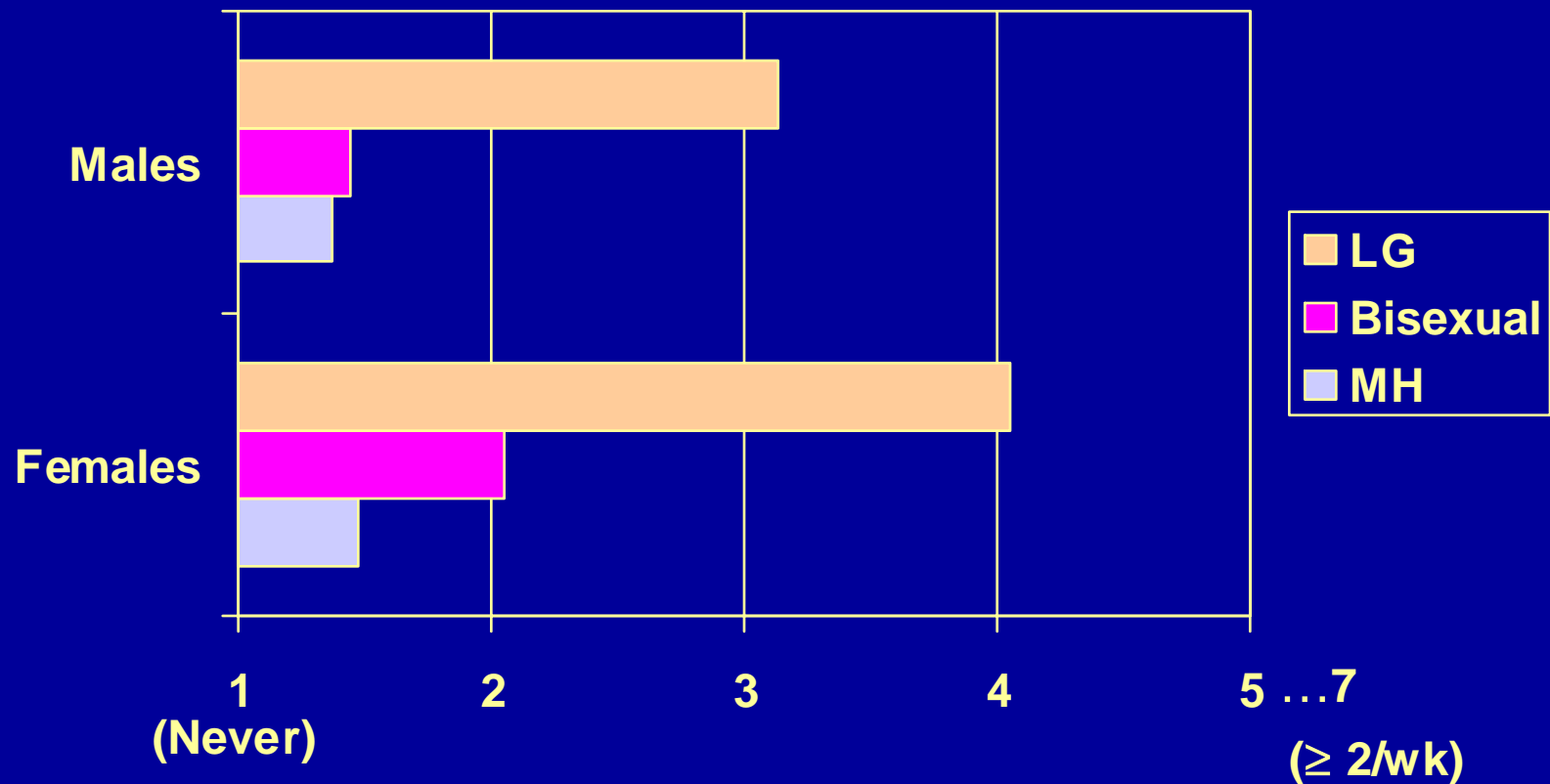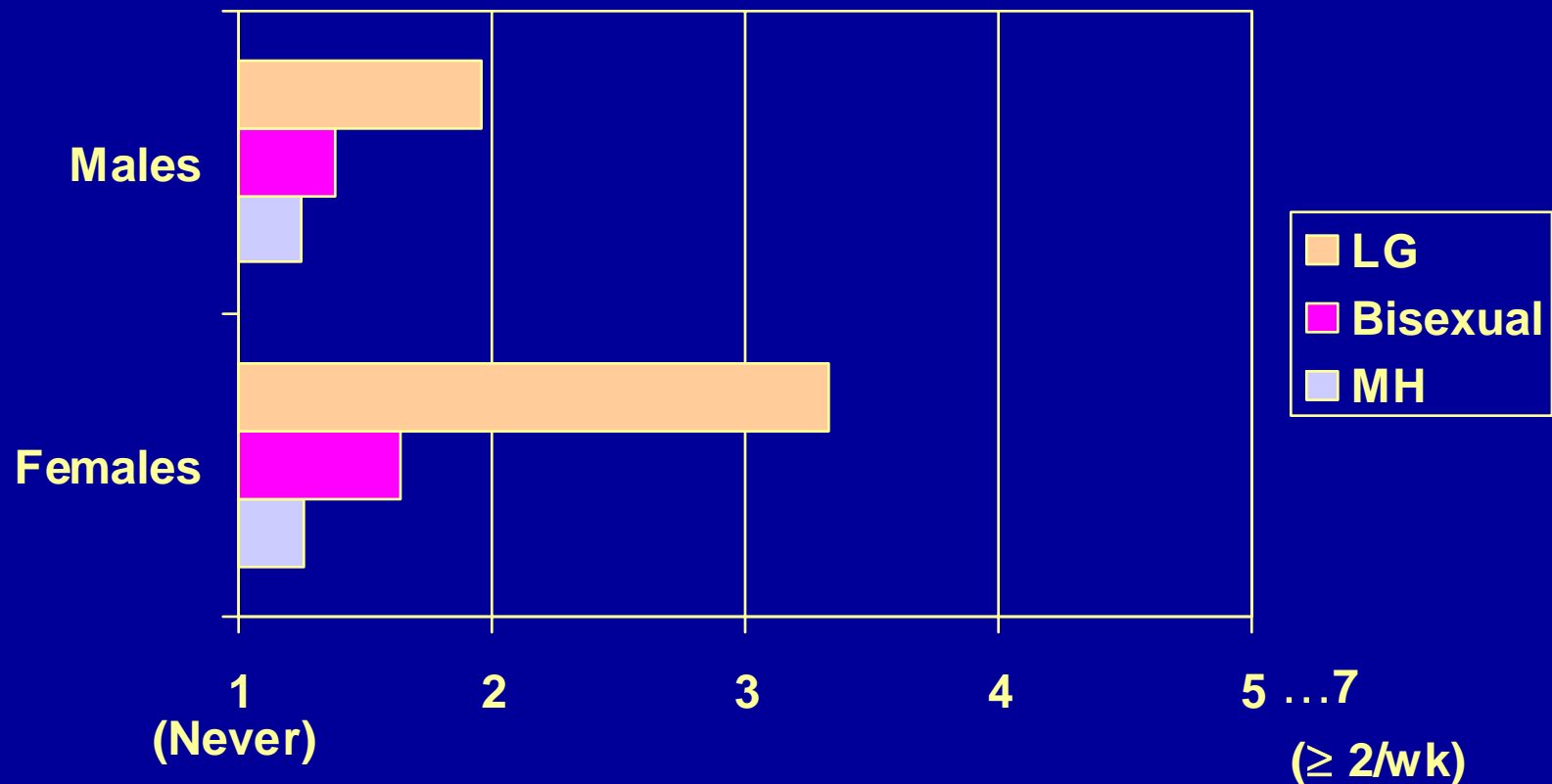# Mean Frequency of Involvement in LGB Community Social Activities by Sexual Orientation* and Gender

Males

Females

LG
Bisexual
MH

1
(Never)

2

3

4

5 …7

(≥ 2/wk)

* Bisexual shown separately from lesbian/gay because of differences in these groups

Mean Frequency of Involvement in LGB Community Educational Activities by Sexual Orientation* and Gender

Legend: LG, Bisexual, MH

X-axis: 1 (Never), 2, 3, 4, 5 …7 (≥ 2/wk)

Categories: Males, Females

* Bisexual shown separately from lesbian/gay because of differences in these groups

Associations of Frequency of Involvement in LGB Activities with Drug Use Among MH and GB Males

Drug	Social RR	Educational RR
Marijuana	1.08	1.06
Cocaine	1.29	0.96
Ecstasy	**1.56***	1.09
Crystal meth	**1.54***	1.41
Poly drug use	**1.17***	0.96

Relative risks are adjusted for age and sexual orientation   *p < .05

Associations of Frequency of Involvement in LGB Activities with Drug Use Among MH and LB Females

	Social	Educational
Drug	RR	RR
Marijuana	**1.11***	0.98
Cocaine	1.24	**0.67***
Ecstasy	**1.55***	0.84
Crystal meth	**1.33***	0.33
Poly drug use	**1.20***	0.95

Relative risks are adjusted for age and sexual orientation   *p < .05

Conclusions

- Prevalence of drug use is higher in MH and LGB males and females

- Sexual orientation disparities accentuated among females

- Prevalence of using crystal meth (and all the illicit drugs) is highest in LB and MH females

Conclusions

- Involvement in LGB social activities is associated with greater drug use

- Involvement in LGB educational activities may be protective against drug use among females; not so much among males

- Drugs are procured and used in social settings; social environment is important

Public Health Implications

- Interventions targeting LGB social settings may be a way to reach some individuals at high risk for drug use

    – More likely to reach lesbian and gay males; less likely to reach mostly heterosexual and bisexual males and females

- What strategies could reach bisexual and mostly heterosexual youth?