

# **Sexual positioning among men who have had sex with men and bridging to heterosexual networks in the United States, 2011-2015**

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**IUSTI 2018 World & European Congress**

# Background (1/2)

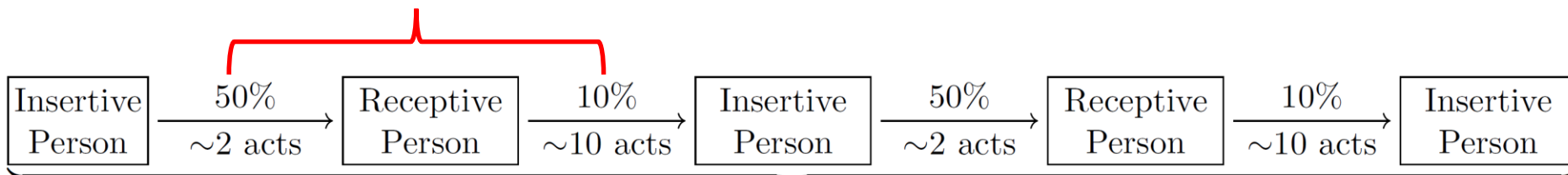
## What is sexual positioning?

- Sexual positioning = *Behavior*
  - History of specific behavioral positions (e.g., receptive anal sex, insertive anal sex, both, neither)
  - Beyond just asking about history of anal/oral/vaginal sex
- Sexual role = *Identity*
  - Identify as a top, bottom, versatile, or none of these
- Can be defined based on anal, oral, or vaginal sex history, separately, or jointly.
- Depends on temporal scale (e.g., behavior in the past year or lifetime)

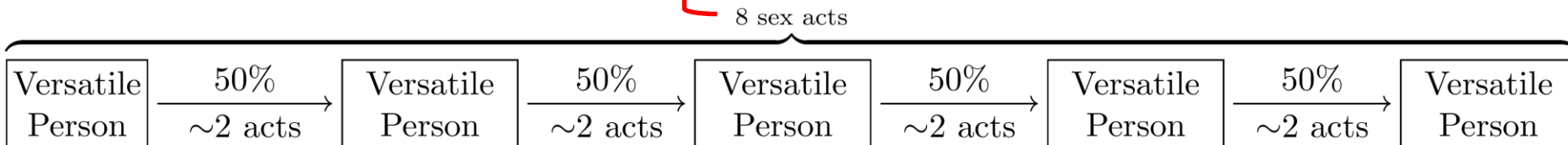
# Background (2/2)

Individual and population level effects of sexual positioning (a simplification)

Individual level effect



Population level effect



# Objective

- 1) Describe frequency of sexual positioning categories
- 2) Describe associations of sexual positioning with demographics and number of partners in past year
- 3) Describe network overlap among sexual positioning categories

# Conclusions

- 1) Anal versatility among MSM is not ubiquitous
  - Among MSM who have had sex with another man in the past year, only 46% of reported anal versatility in the past year)
- 2) Sexual positioning frequency is similar across many dimensions:  
(age, race, poverty, incarceration, or metropolitan status)
  - Though frequency does differ across other dimensions:  
(education and male and female annual partner number)
- 3) Same sex and opposite sex networks overlap among men who have had sex with other men in the past year:
  - 38% reported partners of both sexes in the past year

# Methods (1/2)

- National Survey of Family Growth (NSFG)
  - Nationally representative, multi-stage probability sample of men and women in the US Household population ages 15-44 years.
- NSFG oversamples non-Hispanic blacks, Hispanics, and adolescents.
- The survey consisted of an interviewer-administered and an audio computer-assisted self-interview (ACASI) portion.
- We combined data from the 2011-2013 and 2013-2015 cycles
  - 2011-2013 cycle: 4,815 male respondents (249 MSM)
  - 2013-2015 cycle: 4,506 male respondents (276 MSM)
- Analysis is limited to men who reported sex with another man in the past year

# Methods (2/2)

## Analytic methods

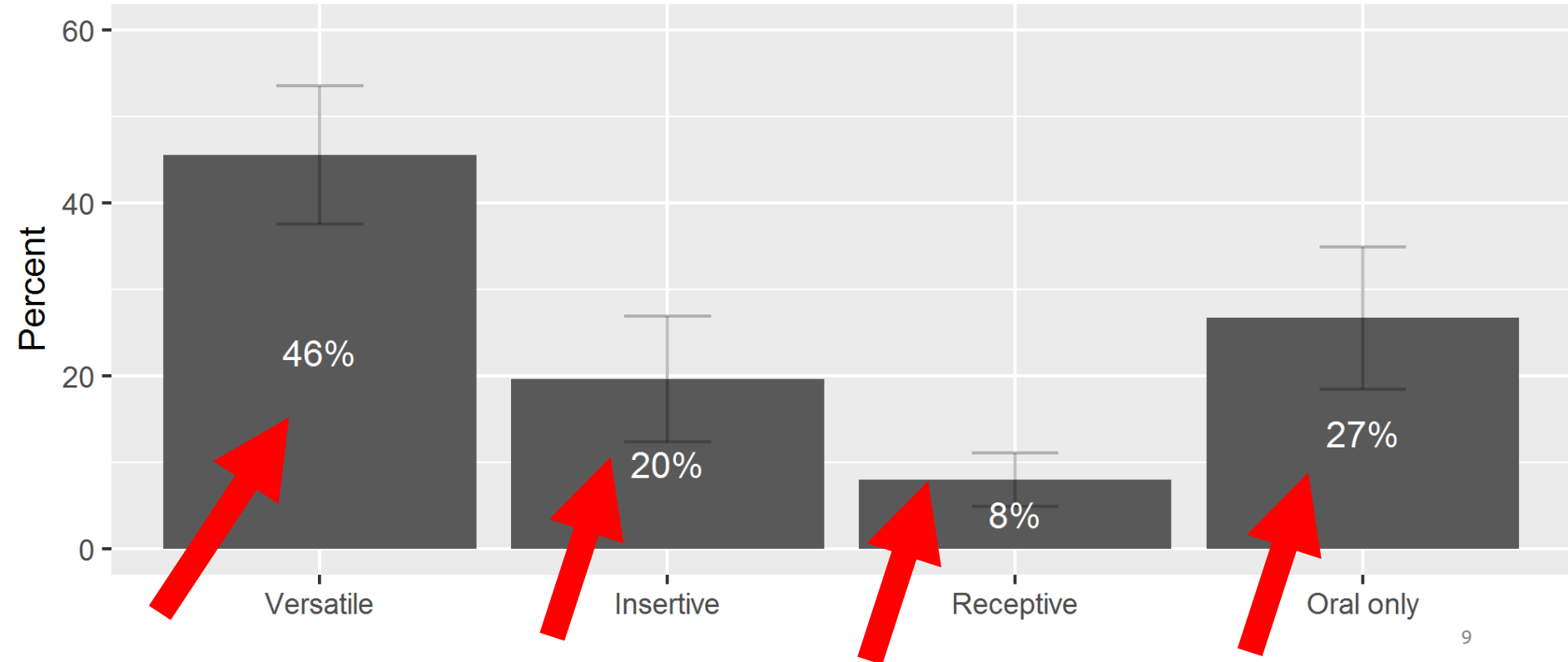
- We define four mutually exclusive MSM types based on anal sex positioning history:
  - 1) Insertive—history of insertive sex but not receptive sex
  - 2) Receptive—history of receptive sex but not insertive sex
  - 3) Versatile—history of both receptive and insertive anal sex
  - 4) Oral-only—history of only oral sex (no history of anal sex with other men)
- This is estimated for sexually active MSM based on their annual behavioral history
- Complex survey design is taken into account using the **R** *survey* package
- We report significant differences where 95% confidence intervals do not overlap

# Results



## Result (1/3)

### Marginal distribution of sexual positioning types



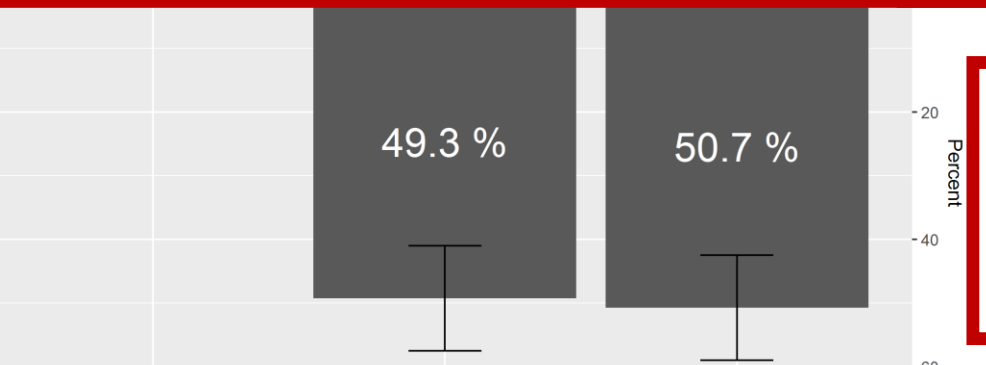
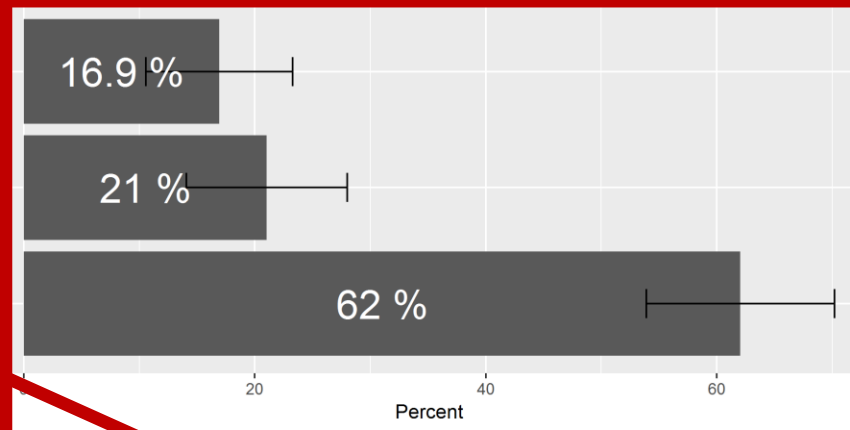
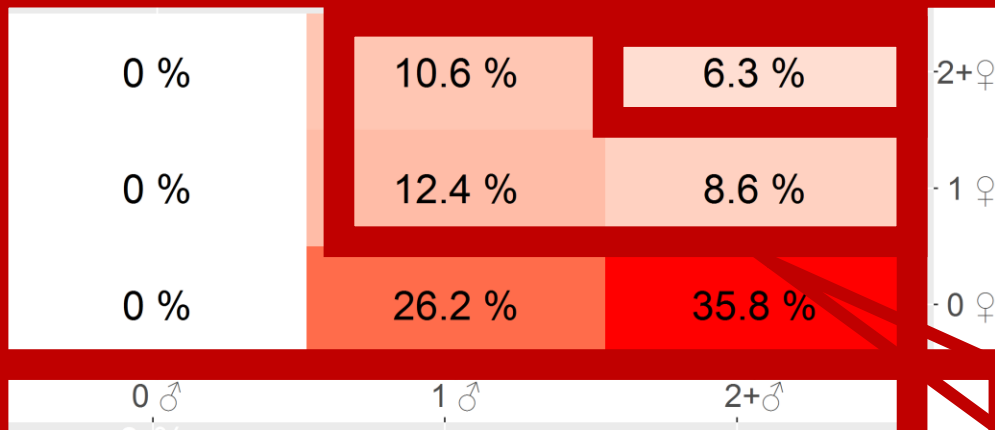
# Result (2/3)

## Associations (briefly)

- We found no associations lifetime sexual positioning and
  - Age
  - Race
  - Metropolitan status
  - Incarceration history
  - Poverty index
- We found significant associations between sexual positioning and
  - Education:
    - College educated MSM more frequently reported versatility than those with less than high school education
  - Male partners in past year:
    - Versatility more frequent with more annual male partners
    - Oral-sex only more frequent with fewer annual male partners
  - Female partners in past year:
    - Versatility more frequent with fewer annual female partners
    - Oral-sex only more frequent with more annual female partners

# Result (3/3)

Network overlap in past year



38% of active MSM also had sex with at least 1 woman in the past year

# Result (3/3)

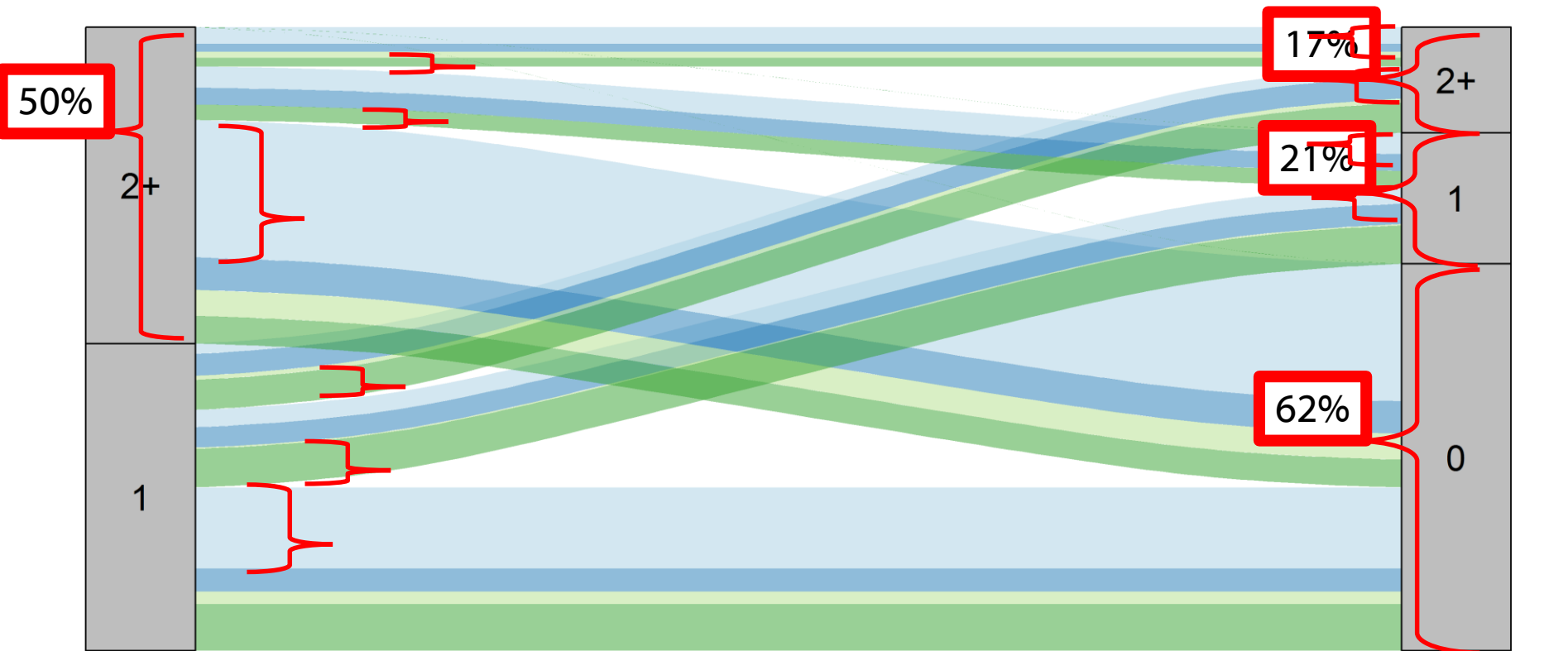
Network overlap in past year (limited to active MSM)

Anal sex positioning with other men

- Versatile
- Insertive
- Receptive
- Oral sex only

Male partners

Female partners



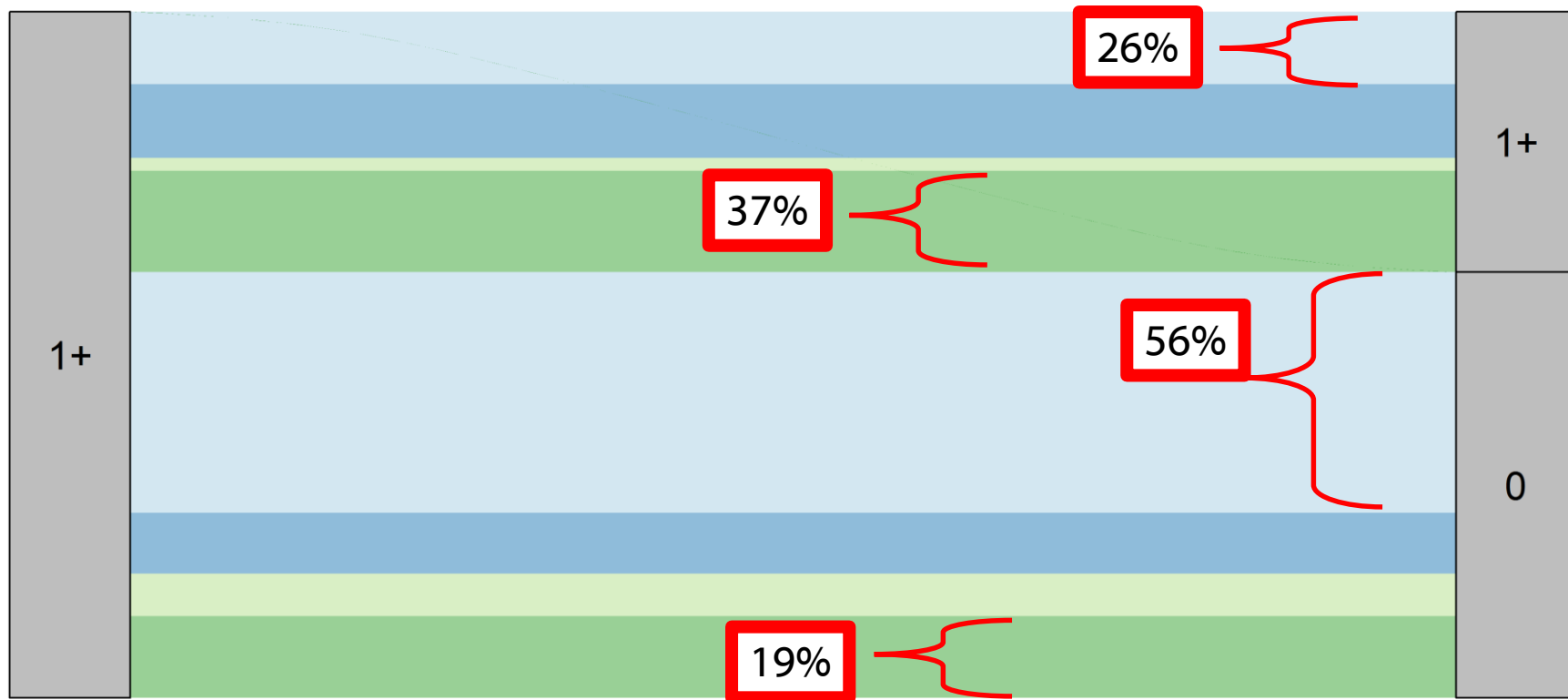
# Result (3/3)

Network overlap in past year (limited to active MSM)

Anal sex positioning with other men    Versatile    Insertive    Receptive    Oral sex only

Male partners

Female partners



# Conclusions

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# Future Directions

- While versatility was associated with fewer female partners and oral-sex only was associated with more female partners, there was still ample anal sex overlap in the form of men who have both male and female partners annually.
- Due to the observed overlap between MSM and heterosexual networks, this begs the question, how distinct are MSM and heterosexual networks in terms of transmission of HIV, syphilis, and gonorrhea?
- Future theoretical work is needed to define critical thresholds of bisexual bridging for specific pathogens, taking into account sexual positioning behavior.



## Questions / thoughts?

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



# Appendix

# Result (1/3)

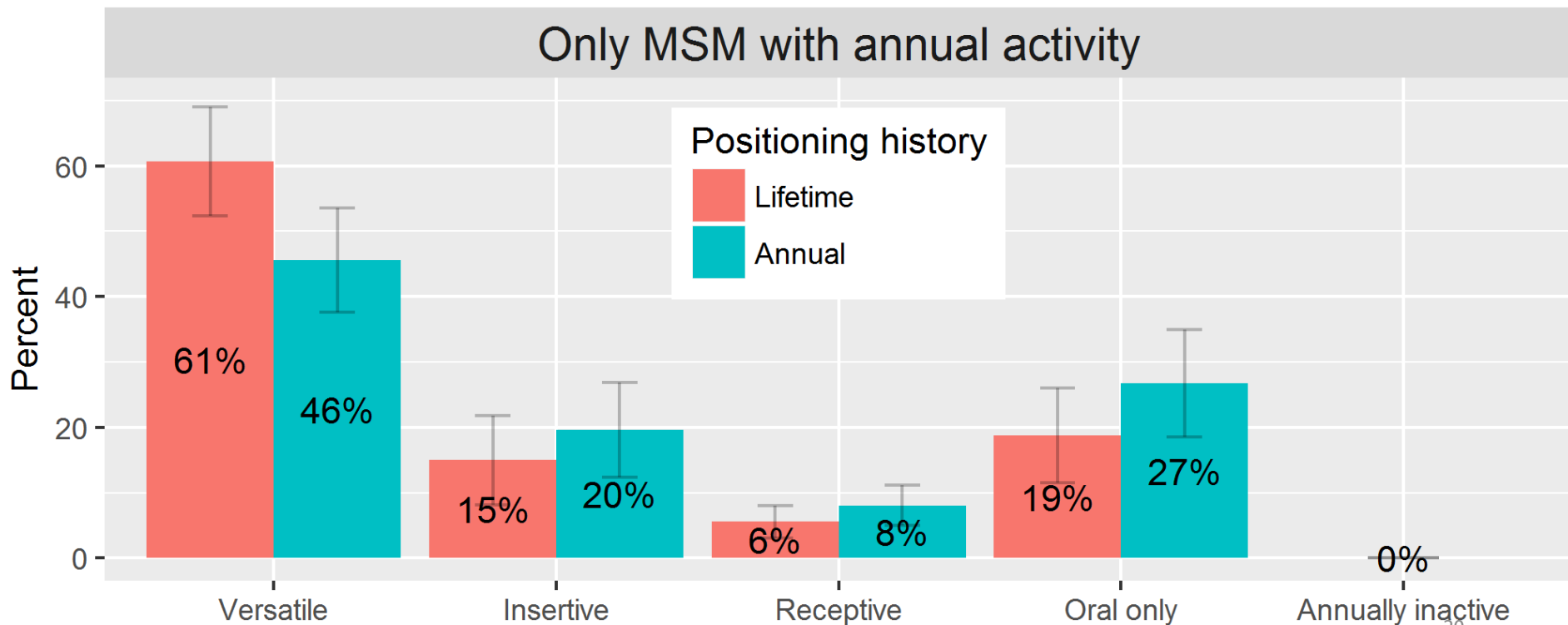
- The frequency of versatility (and all other sexual positioning categories) depends on the temporal scope used.

VERSATILITY (95% CI)	Based on lifetime history	Based on annual history
Among all MSM	37% (31-42%)	23% (19-27%)
Among annually active MSM	61% (52-69%)	46% (38-54%)

- Versatility is not ubiquitous, regardless of the temporal scope used.

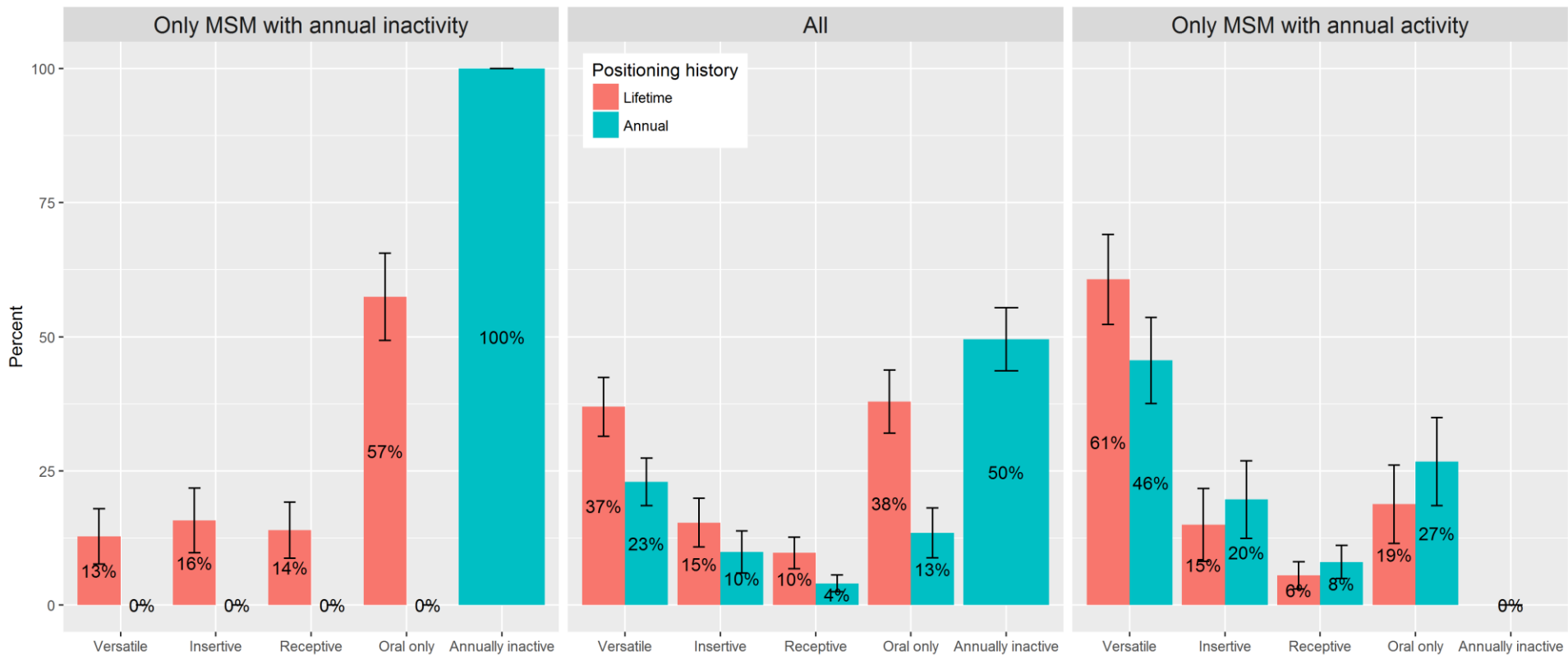
# Result (1/3)

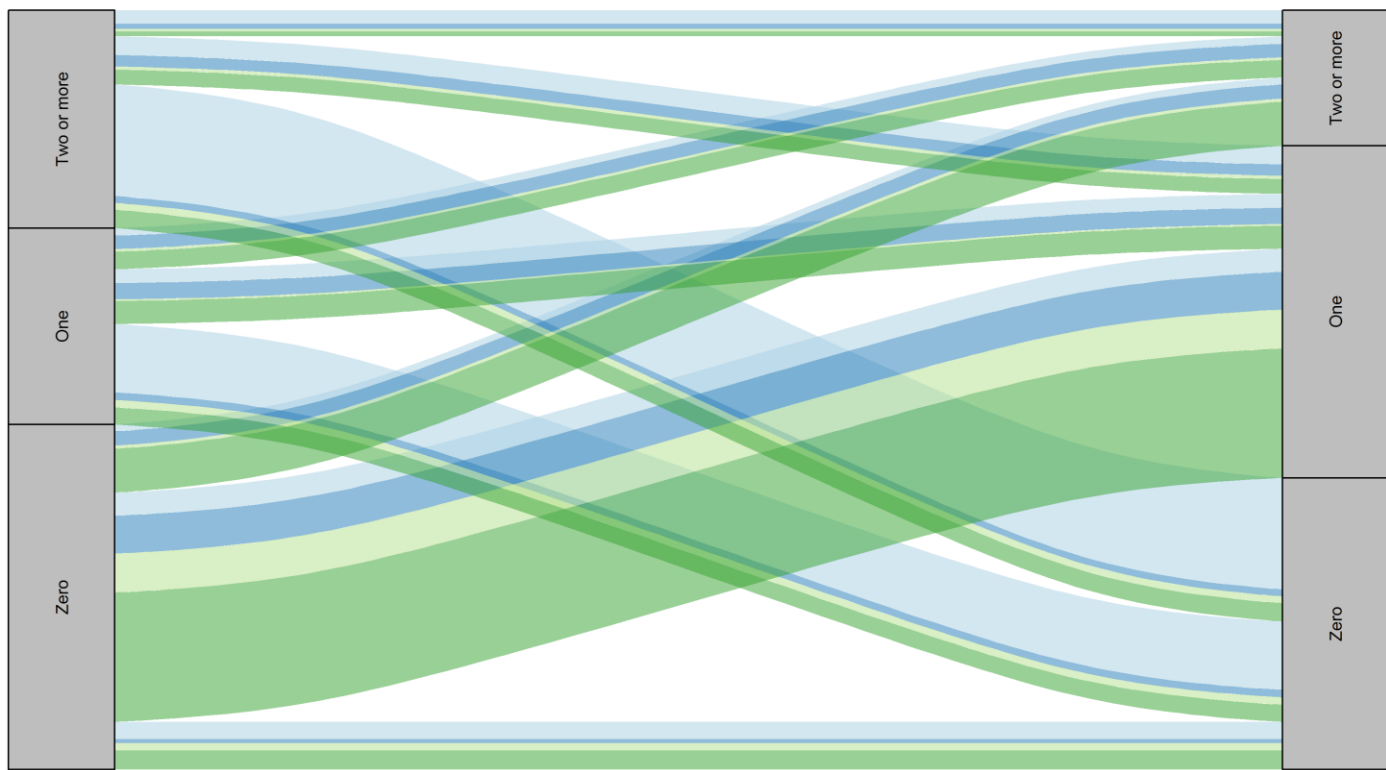
## Marginal distribution of sexual positioning types



# Result (1/3)

## Marginal distribution of sexual positioning types





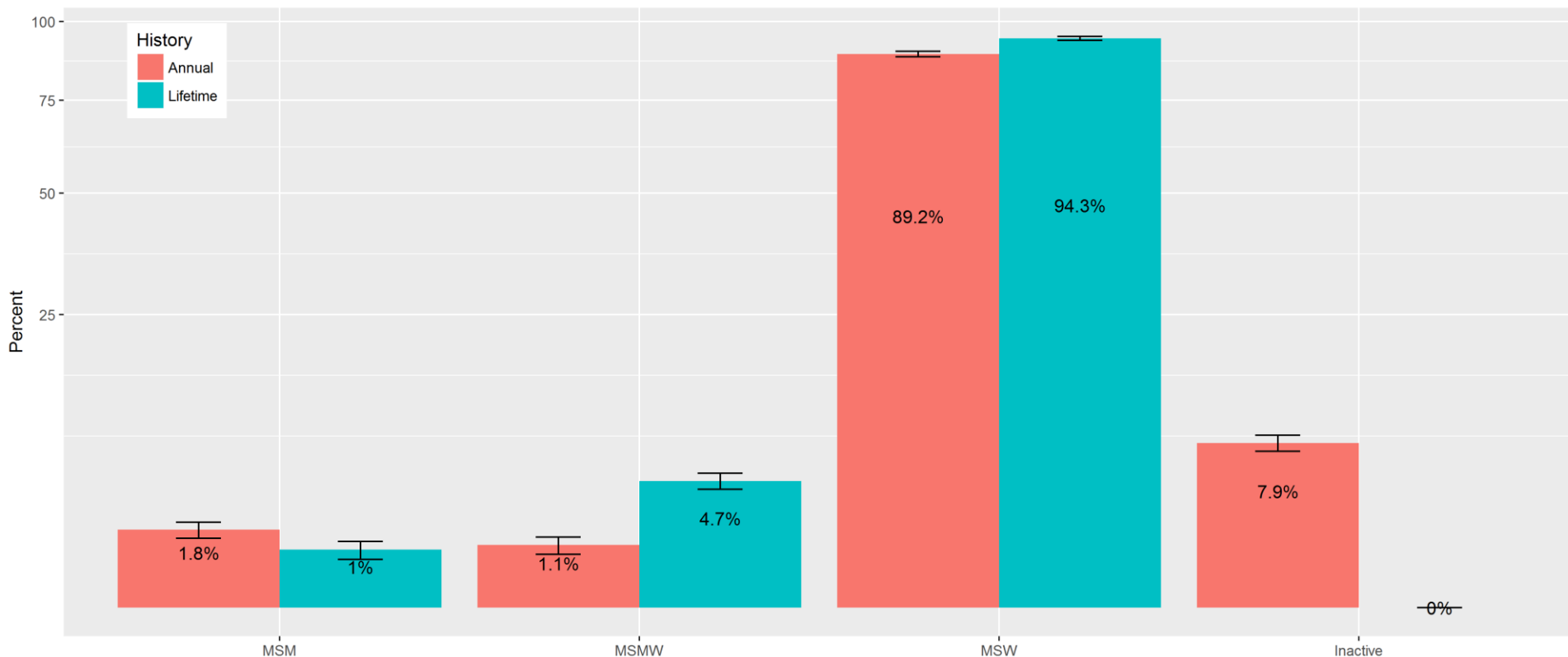
Male sex partners last year

Female sex partners last year

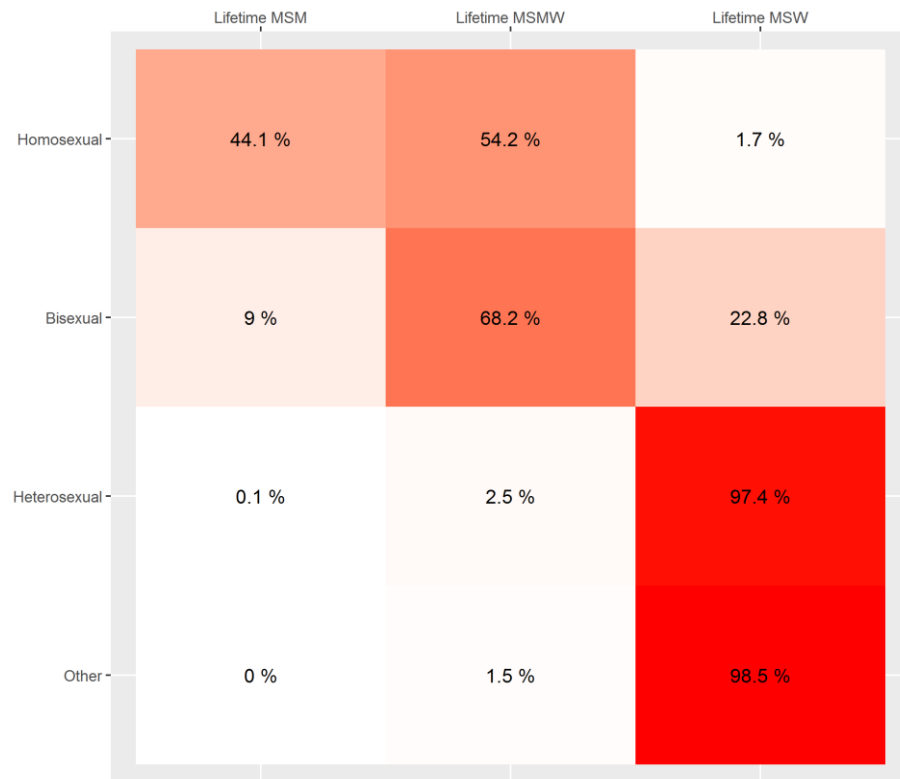
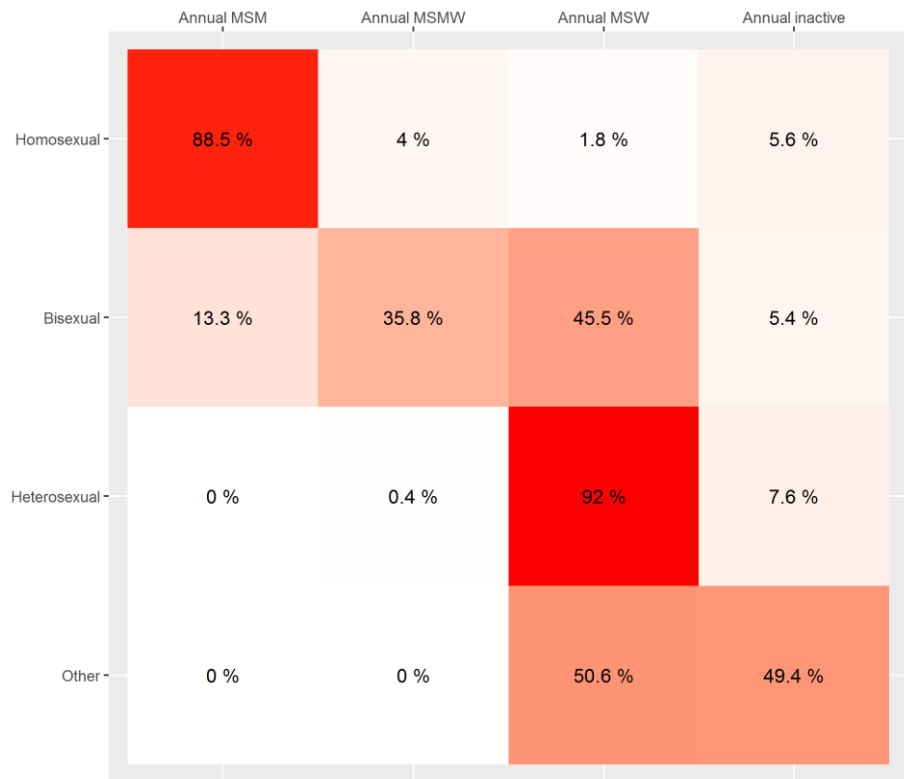
Anal positioning with men Versatile Insertive Receptive Oral sex only

# Male types

Among men with lifetime history of sex with either gender

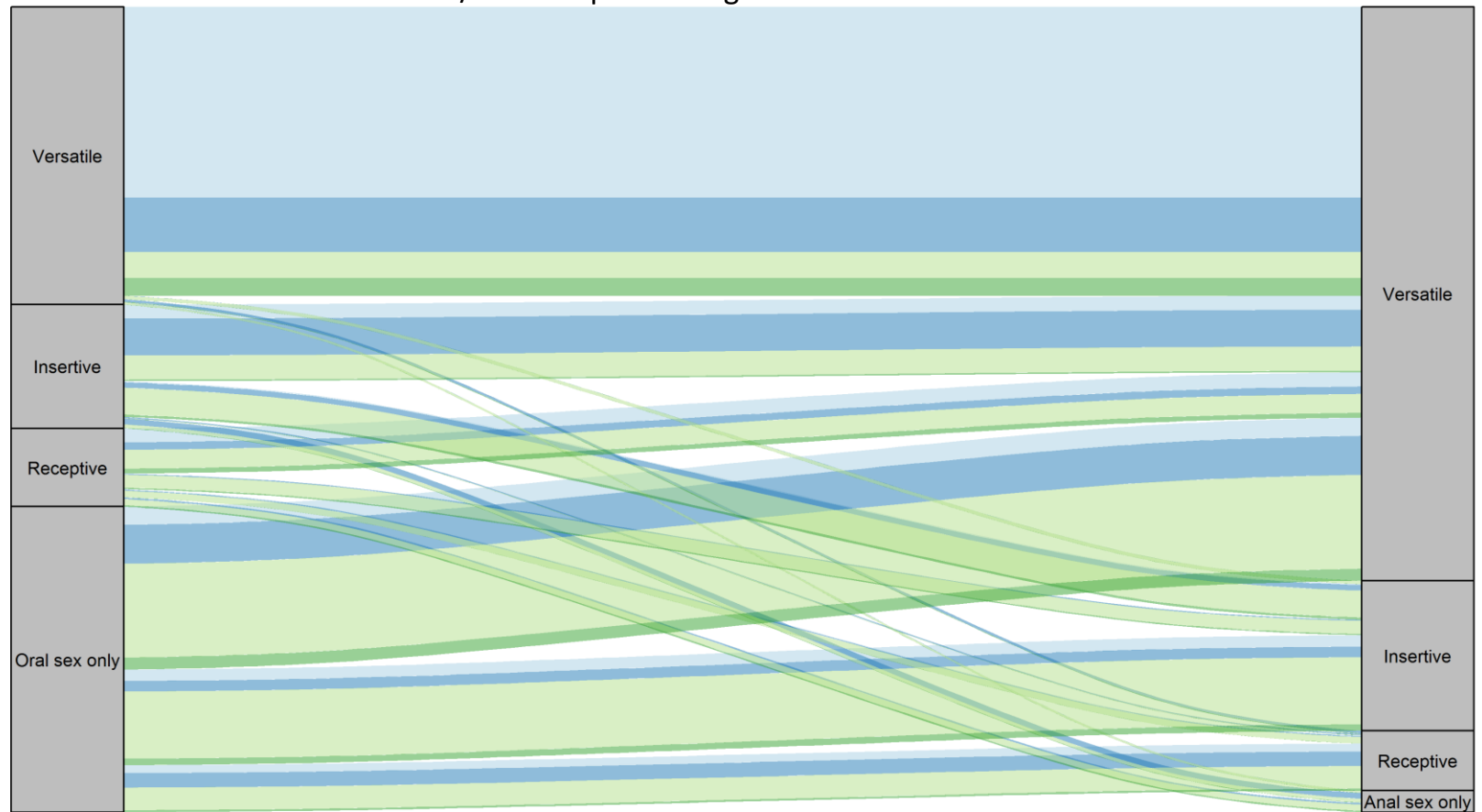


# Concordance between self identity and sex of sex partners (annual and lifetime)





# Anal sex / oral sex positioning with other men



Anal sex positioning

Oral sex positioning

Sex of sex partners Annual MSM Annual MSMW Annual MSW Annual Asexual