

# Little to no overlap of sexual networks of transgender women and MSM in Lima, Peru



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## BACKGROUND

### HIV IN PERU

- Peru does not have a generalized HIV epidemic, but there are micro-epidemics among subpopulations
- Transgender women (TW) have the highest prevalence at approximately 30%, compared to 12-18% in men who have sex with men (MSM) and <1% in the general population
- Injection drug use is low, so HIV is primarily spread through sexual transmission

### TRANSMISSION TO TW

- TW report high prevalence of behavior associated with HIV risk, but it is unclear who is transmitting HIV into the population
- Other risk groups transmit within their network (e.g. MSM, injection drug users) but TW primarily report cisgender male sexual partners who they identify as bi- or heterosexual

### Objective:

To characterize the sexual networks and sexual partners of TW and assess potential overlap with MSM sexual networks

## METHODS

### STUDY DESIGN

- TW and their sexual partners recruited using a modified respondent-driven sampling study (RDS) design:
  - RDS: sampling mechanism for "hidden" populations in which population sampling cannot be conducted, often due to stigma or discrimination
  - Sampling begins with "seeds" (known participants), who recruit eligible contacts within their network
  - Forward recruitment continues by each participant until target sample size reached
- To protect anonymity, data collected using online survey combined with WhatsApp-based recruitment
- Data collected on sexual identity, demographic characteristics, sexual partnerships, risk behavior, and drug and alcohol use.

### DATA ANALYSIS

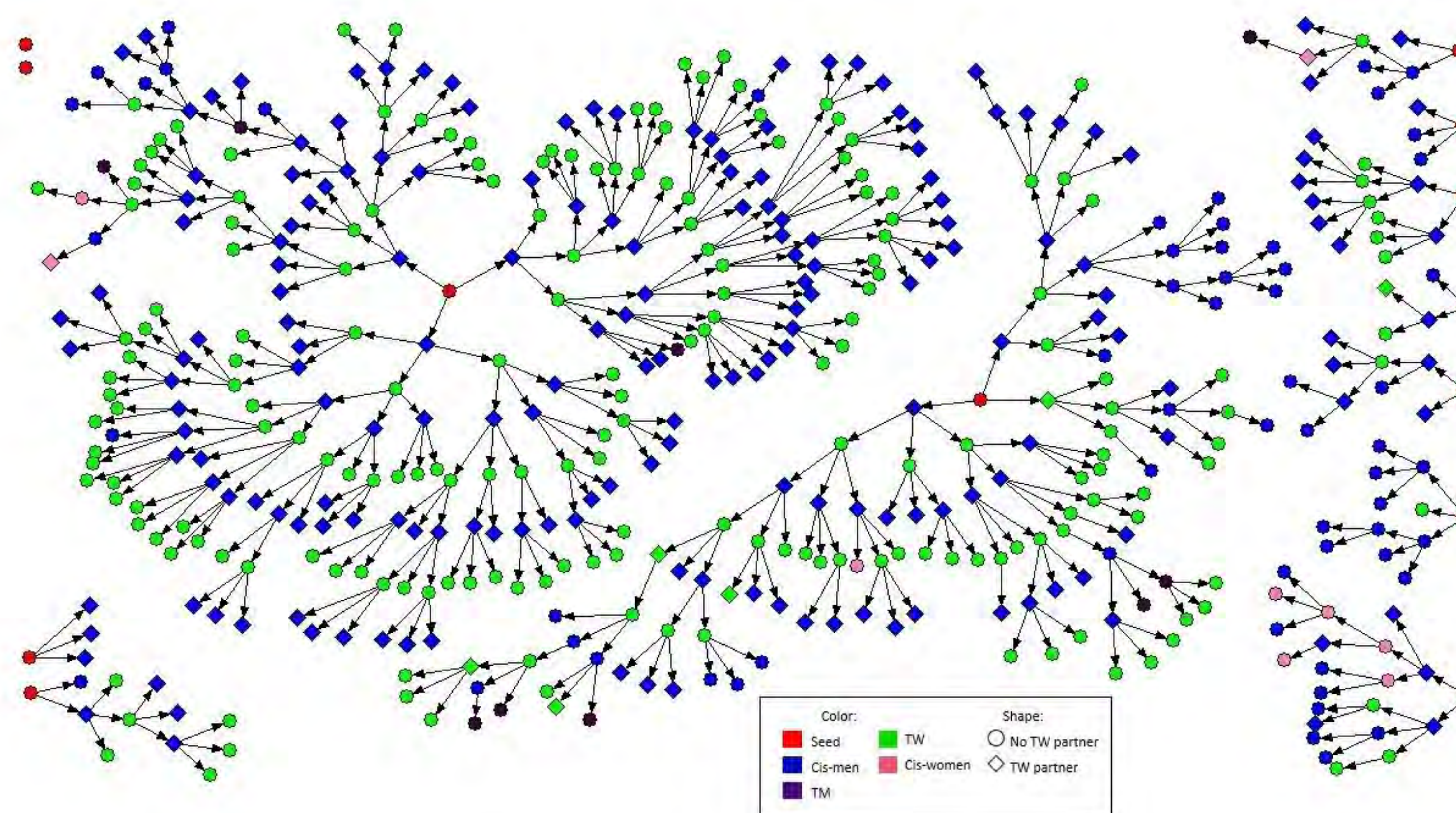
- We examined descriptive statistics for TW, partners of TW, and MSM
- To identify difference between partners of TW who are and are not part of MSM sexual networks, we examined predictors of having a male partner among partners of TW
  - Calculated odds ratios with Fisher's exact test to examine predictors of having a male partner

## RESULTS

### POPULATION CHARACTERISTICS

- Recruitment conducted February – July 2018 in Lima
- 470 eligible respondents completed the survey, including:
  - 203 partners of TW (reported ≥1 TW partner in the past 3 months)
  - 196 TW (TW who did not report a TW partner)
  - 43 MSM (cisgender men with male partners and no TW partners)
- 13 seeds were selected; 8 reached ≥3 waves of recruitment
- Recruitment reached a maximum of 10 waves

## NETWORK DIAGRAM OF RECRUITMENT



Population characteristics of TW, partners of TW, and MSM				
	Partners of TW (n=203)	TW (n=196)	MSM (n=43)	P-value
	n (%)	n (%)	n (%)	
<b>Any post-secondary education</b>	70 (36.1)	34 (18.1)	27 (62.8)	<0.01
<b>Age (mean, SD)</b>	32.1 (9.2)	30.0 (7.9)	25.9 (8.7)	<0.01
<b>Full or part-time employment</b>	115 (61.8)	83 (46.9)	21 (50.0)	0.01
<b>Gender</b>				<0.01
Transgender woman	5 (2.5)	196 (100.0)	0 (0.0)	
Cisgender man	196 (96.6)	0 (0.0)	43 (100.0)	
Cisgender woman	2 (1.0)	0 (0.0)	0 (0.0)	
<b>Attraction</b>				<0.01
Transwomen	169 (83.3)	4 (2.0)	1 (2.3)	
Ciswomen	138 (68.0)	1 (0.5)	10 (23.3)	
Cismen	18 (8.9)	192 (98.0)	41 (95.3)	
<b>Sexual Role</b>				<0.01
Insertive	171 (88.1)	5 (2.6)	15 (34.9)	
Receptive	5 (2.6)	160 (83.8)	12 (27.9)	
Versatile	18 (9.3)	26 (13.6)	16 (37.2)	
<b>Don't know HIV status<sup>1</sup></b>	93 (53.8)	68 (42.0)	8 (21.6)	<0.01
<b>HIV positive (self-report)</b>	6 (3.0)	9 (4.6)	5 (11.6)	0.045
<b>Condomless insertive anal sex (3 mos)<sup>2</sup></b>	120 (59.1)	58 (29.6)	17 (32.6)	<0.01
<b>Condomless receptive anal sex (3 mos)<sup>2</sup></b>	15 (7.4)	126 (64.3)	14 (39.5)	<0.01
<b>Ever 'sold' sex<sup>3</sup></b>	107 (55.7)	172 (90.5)	20 (47.6)	<0.01
<b>Ever 'bought' sex<sup>3</sup></b>	153 (77.7)	108 (57.1)	6 (15.0)	<0.01
<b>Ever injected drugs or medications</b>	7 (3.4)	3 (1.5)	3 (7.0)	0.14
<b>Binge drinking in past 6 months</b>	94 (46.3)	92 (46.9)	17 (39.5)	0.67

<sup>1</sup>Of those that responded about knowledge of HIV status; n=70 participants data missing or preferred not to answer; <sup>2</sup>Of those that reported that sexual activity; <sup>3</sup>Exchanged money, goods, or services for sex

## PARTNER CHARACTERISTICS

- 7% of partners of TW reported a cisgender male partner in the last 3 months
- Condomless anal intercourse was reported by 60% of partners of TW in the past 3 months
- Of those that reported HIV status, 54% of partners of TW reported not knowing their status
- Among partners of TW, those who also had male partners were more likely to know their HIV status and 'sell' sex, less likely to 'buy' sex

### Correlates of having a cisgender male partner among partners of TW

	TW & male partners (n=14)	Only TW partners (n=189)	OR	P-value <sup>1</sup>
	n (%)	n (%)		
<b>Identify as homosexual</b>	4 (28.6)	8 (4.2)	9.1	0.01
<b>Don't know HIV status<sup>2</sup></b>	3 (21.4)	90 (56.6)	0.21	0.02
<b>'Bought' sex<sup>3</sup> (last 3 mos)</b>	1 (7.1)	106 (56.1)	0.06	<0.01
<b>'Sold' sex<sup>3</sup> (last 3 mos)</b>	7 (50.0)	7 (3.7)	17.0	<0.01
<b>Ever sold sex to a man</b>	10 (71.4)	11 (5.8)	40.5	<0.01
<b>Ever bought sex from a man</b>	7 (50.0)	4 (2.1)	46.3	<0.01
<b>Condomless receptive sex (last 3 mos)<sup>4</sup></b>	9 (81.8)	6 (40.0)	6.8	0.05

<sup>1</sup>Fisher exact p-values; <sup>2</sup>Of those that responded about knowledge of HIV status; n=30 participants data missing or preferred not to answer; <sup>3</sup>Exchanged money, goods, or services for sex; <sup>4</sup>Of those that reported receptive sex

**Summary: Partners of TW have little overlap with MSM networks. Partners engage in high risk behavior, and those with cisgender male partners are more likely to know their HIV status.**

## DISCUSSION

### CONCLUSIONS

- Partners of TW are a unique population separate from MSM social and sexual networks
- Few partners of TW reported male partners; these partners are more likely to identify as homosexual, know their HIV status, engage in unprotected receptive anal sex, and 'sell' sex for money, goods, or services

### STRENGTHS AND LIMITATIONS

- Our use of non-population sampling may have resulted in a study population that doesn't adequately represent the general population of partners of TW
- Online 'anonymous' data collection was used to protect confidentiality, limiting ability to conduct longitudinal analyses or HIV testing

### IMPLICATIONS AND NEXT STEPS

- Partners of TW may not be benefiting from the HIV prevention interventions heavily targeted to gay men and TW
- HIV prevention interventions specifically targeting partners of TW for HIV testing, education, and PrEP are needed

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