



## HIV risk in recent anal intercourse events among men who have sex with men and transgender women in Bali, Indonesia

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### Disclosures

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## Background

### HIV in Indonesia

- There are over 600,000 people with HIV in Indonesia
- New HIV infections in Indonesia are increasing (22% since 2010)
  - In 2016, there were an estimated 48,000 new infections
- Nationally, only 13% of PLHIV are accessing HIV treatment
- HIV infection is primarily concentrated among key populations
  - In 2016, HIV prevalence was estimated to be 26% in MSM and 25% in waria (transgender women)

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3

## Background

### HIV in Bali province

- Bali province has the third highest HIV incidence in Indonesia
- In 2015, HIV prevalence was **36%** in Bali among MSM
- IBBS is conducted every 2 years in key populations
  - Minimal questions about sexual behaviour
  - Only 3-6 districts surveyed each time, and locations alternate
  - Only about 200-250 MSM surveyed at each location
- There are almost no detailed behavioural risk data on MSM and waria in Bali or Indonesia more generally

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4

## Method

### Procedures

- The Survei Kesehatan Seksual Indonesia (SeKSI) Study was conducted in March and April 2018 in Bali province.
- Recruitment was conducted by 32 trained outreach workers from:
  - Yayasan Kerti Praja (NGO HIV/STI clinic)
  - Yayasan Gaya Dewata (gay community organisation)
  - Bali Medika Clinic (private GP clinic)
  - Yayasan Bali Peduli (NGO HIV/STI clinic)
- Respondents were recruited through online and face-to-face outreach, and 'snowball' sampling (peer referral).
- The survey instrument was online (SurveyGizmo) in Bahasa Indonesia and English language.
- Respondents could complete the survey on their own devices or the outreach workers' devices.

5

## Method

### Participants and sample

- Inclusion criteria:
  - Self-identify as gay, bisexual, waria/transgender or male/waria who has had sex with a male/waria in the previous 12 months
  - At least 18 years of age
  - Living Bali province or planning to stay for at least 6 months
  - Able to complete survey in Bahasa Indonesia or English
- Sample:
  - 1,076 surveys were opened/commenced
  - 248 surveys were duplicates or repeated surveys
  - 119 were excluded (10 female; 93 had no data at all; 8 born outside of Indonesia; 8 with no country of birth information)
  - **Resulting in a sample size of 709 respondents**

6

## Method

### Measures and analysis

- Survey contents
  - Demographics
  - HIV testing, PrEP, ART
  - Sexual behaviours
    - Last 6 months (minimal questions)
    - Last occasion of sex with a romantic partner and with a casual partner
  - Drug use
  - Engagement with HIV prevention and technologies
- Analysis
  - Descriptive statistics analysed with chi-square tests or t-tests
  - Anal intercourse events analysed with generalised estimating equations (GEE) to control for within- and between-subject variability (i.e. each respondent could report on up to two events)

7

## Results

### Demographic information

|                              |               |
|------------------------------|---------------|
| Age – median (range)         | 27 (18 to 63) |
| Gender                       |               |
| Male                         | 90.1%         |
| Transwoman / waria / female  | 7.3%          |
| Other                        | 2.5%          |
| Location of birth            |               |
| Bali                         | 33.7%         |
| Java                         | 40.9%         |
| Other place in Indonesia     | 25.4%         |
| Employed or studying         | 90.6%         |
| University education         | 26.4%         |
| Recruited by outreach worker | 91.7%         |

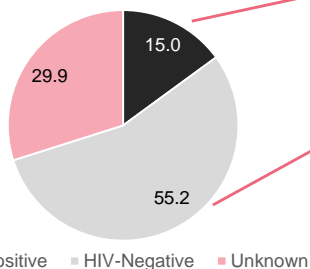
8

## Results

### HIV testing and serostatus

- **85.8%** had ever been tested for HIV, and of those, **83.2%** had been tested in the previous 12 months.

- HIV status:



- ART status among HIV-positive people: **93.4%**

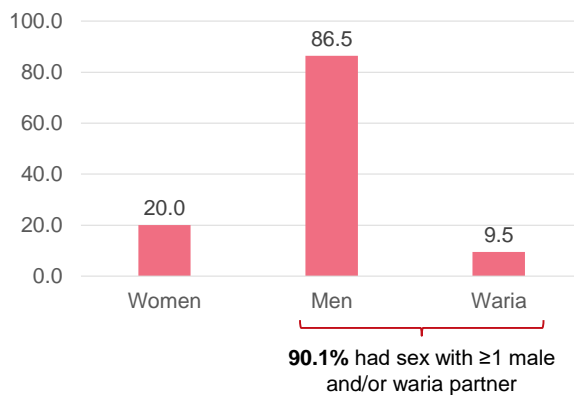
- PrEP use among HIV-negative people: **2.6%** (n=10)

9

## Results

### Sexual partners

- Sex with women, men, and waria in previous 6 months:



10

## Results

### Sexual partners

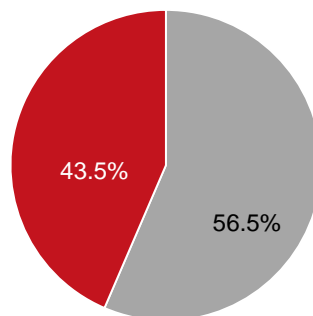
- Respondents reported on their last occasion of sex with a romantic partner and/or casual partner:
  - **703** events were reported on
  - 397 events were with a romantic partner (56%)
  - 306 events were with a casual partner (44%)
  - 191 respondents reported on both

11

## Results

### Anal intercourse events

- Over half of the events were protected by consistent condom use for the entirety of the encounter



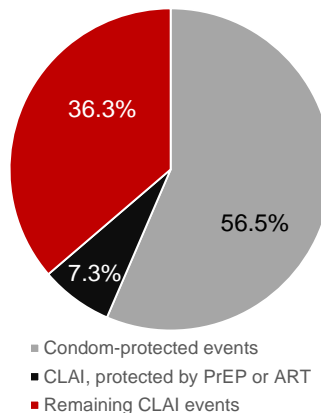
■ Condom-protected events ■ CLAI events

12

## Results

### Anal intercourse events

- 7.3% of events involved CLAI but were protected by either PrEP or ART
  - 2.6% by PrEP in either partner
  - 4.7% by ART in either partner
- Thus, 36.3% of events involved 'unprotected' CLAI

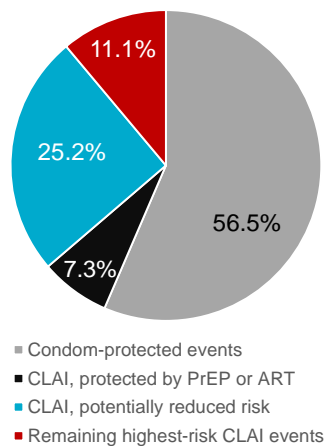


13

## Results

### Anal intercourse events

- One-quarter of events involved CLAI with risk potentially reduced due to behavioural risk reduction strategies
  - 14.1% by serosorting
  - 5.7% by strategic positioning
  - 12.2% by withdrawal
- 11.1% of events were highest-risk for HIV transmission



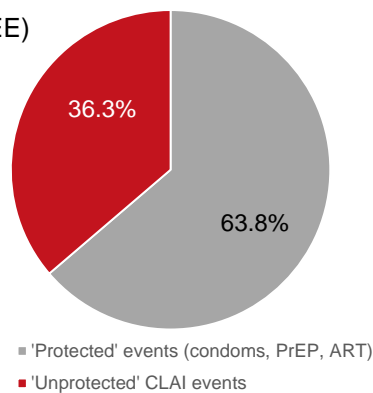
14

## Results

### Associations with 'unprotected' CLAI

- Generalised estimating equations (GEE) used to determine associations with 'unprotected' CLAI
- Two variables remained significant in multivariate GEE model

|                  | aOR (95%CI)      | p-value |
|------------------|------------------|---------|
| Romantic partner | 1.62 (1.26-2.08) | <0.001  |
| Born in Bali     | 1.76 (1.21-2.54) | 0.003   |

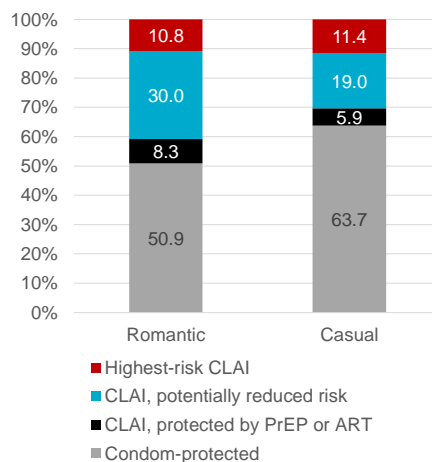


15

## Results & Discussion

### Exploring partner type

- Condom use higher in casual encounters
- Higher reliance on risk reduction in relationships
- Similar level of 'highest-risk' CLAI overall



16



## Results & Discussion

### Exploring partner type

- In gay men, it is common to find lower condom use in relationships
- Australian research has shown that very few HIV infections are ascribed to romantic partners
- This is partially because behavioural risk reduction strategies tend to be more effective when used with highly familiar partners

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17

## Results & Discussion

### Exploring partner type

- **But is this the case in Bali (and Indonesia)?**
  - No promotion of non-condom risk reduction strategies in Bali
  - Low levels of HIV knowledge generally
  - Low levels of HIV testing generally (although not in this sample)
  - HIV stigma is a powerful disincentive to test and disclose
  - Homophobia/transphobia mean there is little support for MSM/waria relationships
  - Highly transient population (especially non-Bali-born) affects stability of long-term relationships

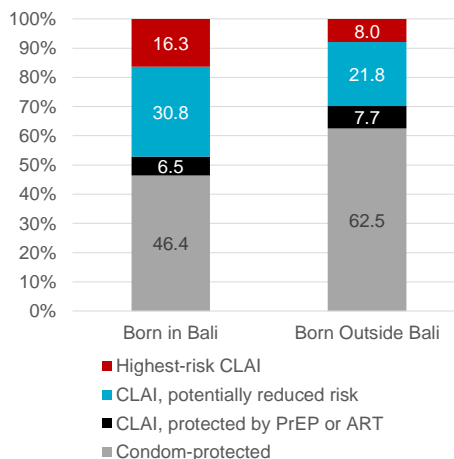
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18

## Results & Discussion

### Exploring place of birth

- Two-thirds of events in those born outside Bali were 'protected', compared to only about half in the Bali-born
- Bali-born respondents had a higher proportion of 'highest-risk' events



19

## Results & Discussion

### Exploring place of birth

- How were those born in Bali different to those born elsewhere in Indonesia?
  - More waria respondents (13% vs 5%)
  - Living outside of Denpasar and Badung
  - More likely to be married
  - Lower income
  - More likely to live with family
  - Less connection to HIV services/testing
  - More likely to have sex with women and waria
  - Less likely to use gay mobile apps and gay bars; more likely to meet male sex partners in public places
  - More likely to believe Bali is a difficult place to be MSM/waria

20

## Results & Discussion

### Exploring place of birth

- Two distinct subgroups of MSM/waria living in Bali?
  - Born in Bali versus those moving from other parts of Indonesia
  - More work needed to test this hypothesis
  - How much do these subgroups interact?
- Differential impacts of homophobia/transphobia?
  - Engagement with community
  - Connection to health services
  - Knowledge of HIV prevention

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21

## Limitations

- Most respondents recruited by HIV outreach workers; the sample may not be representative of all MSM/waria in Bali
  - Likely to be more connected to services and community
  - Unlikely to have recruited those who are very 'hidden'
- Possibility of social desirability bias
  - Made it clear that outreach workers could not see the responses

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22

## Implications and Conclusion

- Largest behavioural survey of MSM/waria in Bali (or Indonesia)
  - However, more research is needed, using different methods, to determine how representative this sample is of MSM/waria
- Nearly half of recent anal intercourse events were without condoms, and 11% not protected by any strategy at all
- Community-level HIV prevention education needs to be significantly scaled-up
  - Non-condom-based risk reduction
  - Relationships
  - PrEP, ART, and 'treatment as prevention'
- Different methods and messages likely needed for subgroups of MSM/waria living in Bali

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23

## Acknowledgements

- Survey respondents
- HIV outreach workers
- Community organisations and clinics
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24