

# HIV/AIDS epidemics among men who have sex with men (MSM) in Africa, Asia, Latin America and the Caribbean, and the CIS

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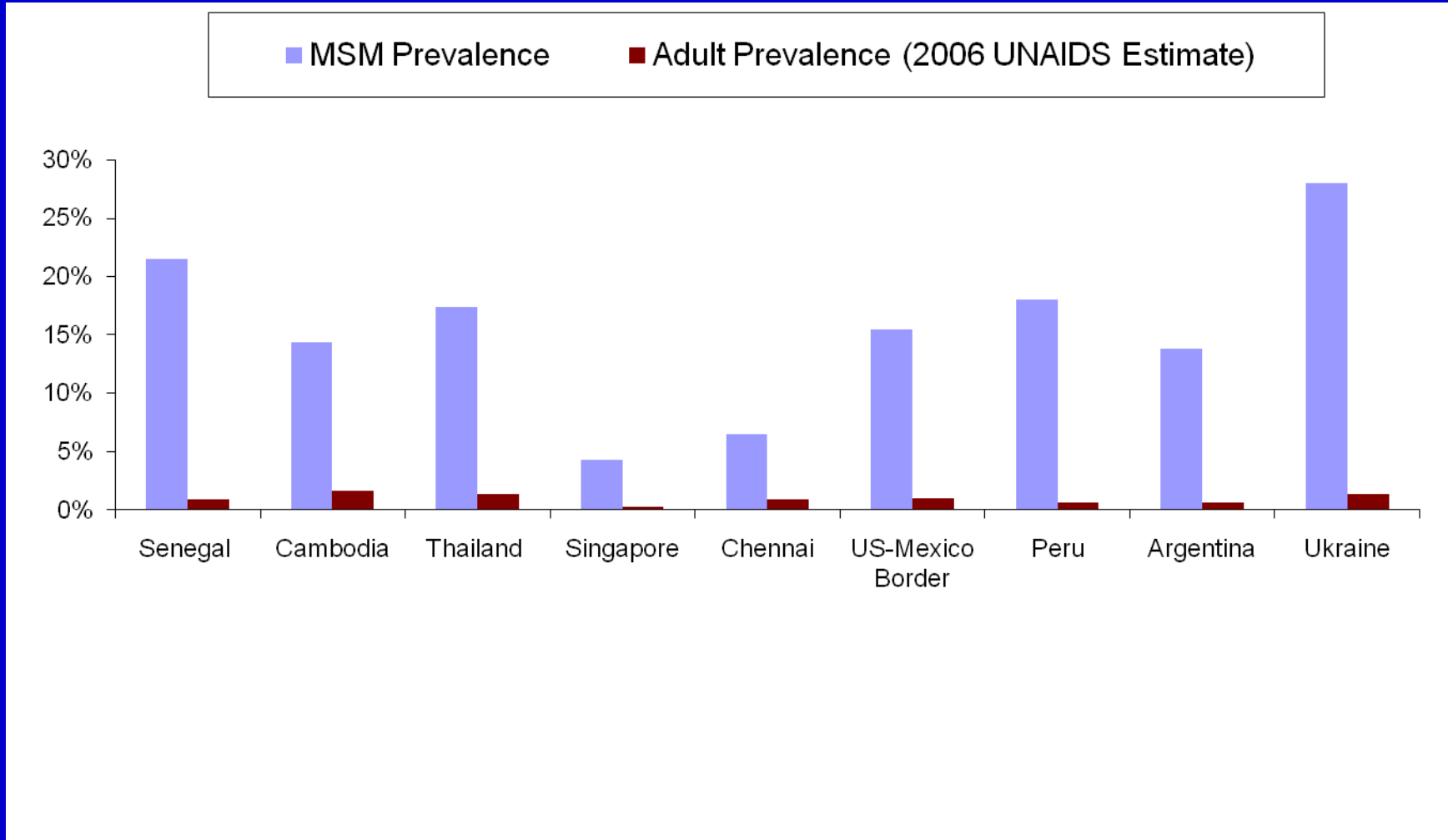
The Center for Public Health and Human Rights  
Johns Hopkins Bloomberg School of Public Health

# Introduction

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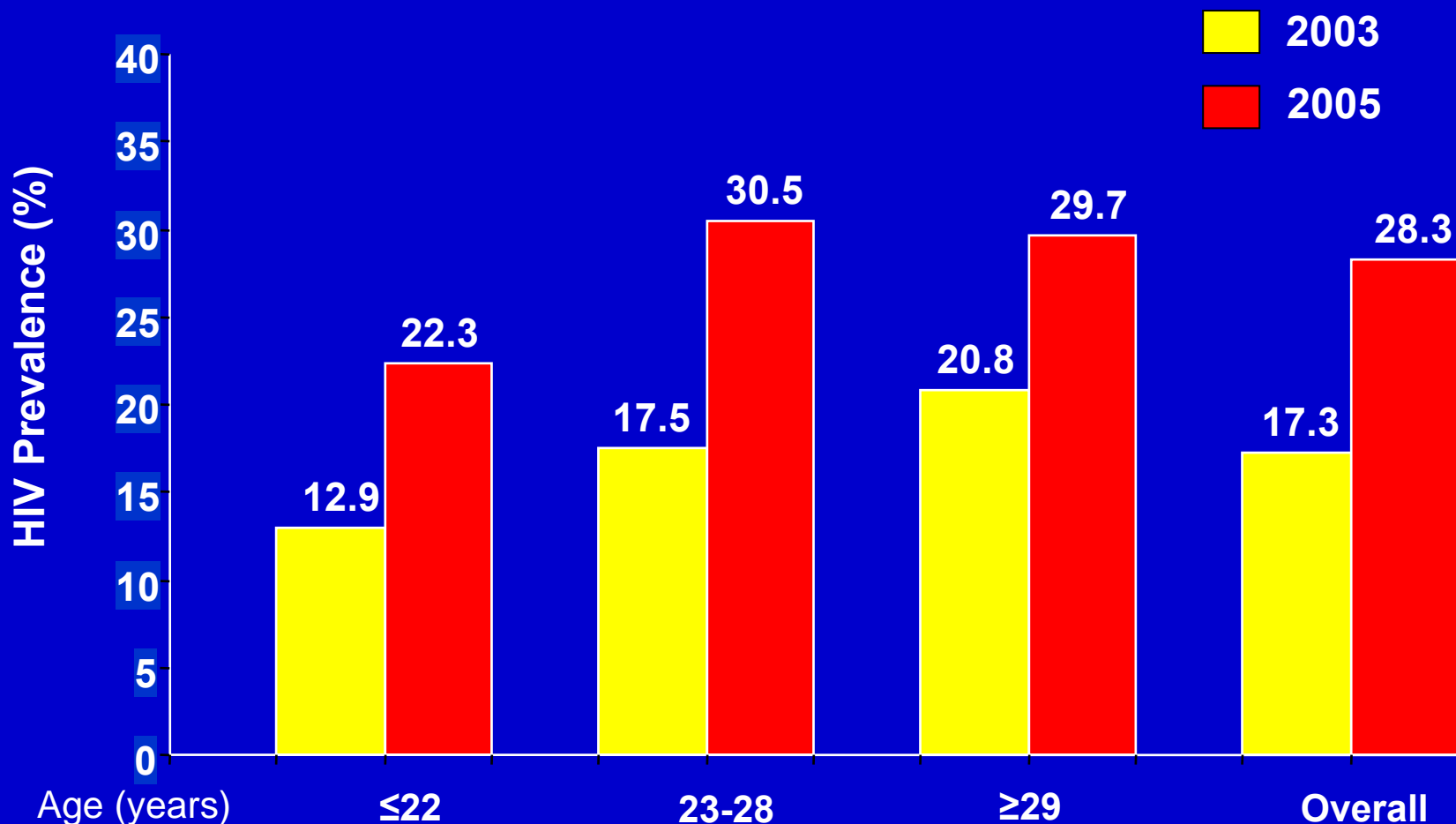
- HIV epidemic spread among MSM is occurring in both high and low income settings in 2008
- MSM HIV epidemics are underway in Latin America, Asia, Eastern Europe/FSU, and Africa
- Many MSM epidemics are occurring in “hidden” contexts of discrimination, stigma, criminalization, rights abrogation and limited HIV surveillance

# HIV prevalence among MSM in Selected settings



Source: Wade et al. 2005; Girault et al. 2004; van Grievsven et al. 2005; Action for AIDS Singapore, 2006, Go et al. 2004; Pando et al. 2006; UNAIDS, 2006; Caceres et al, 2005, Strathdee, et al, 2006. CENSIDA, CA State Office of AIDS; Patterson et al, IAS, 2006; Strathdee et al, pers. comm; Viani et al, 2006

# HIV prevalence among MSM, Bangkok, Thailand



**N = 194/1,121; 113/399**  
**p-values all < 0.05**

# Individual level determinants for HIV among MSM

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Unprotected anal intercourse ( ↑ risk with receptive UAI)

High frequency of male partners (>3 sexual contacts/ week)

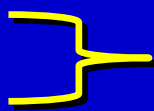
High number of lifetime male partners (>10)

Untreated STI (syphilis, HSV-2)

Injection drug use

Non injection drugs

Methamphetamines



**Mediated through increased sexual exposure**

Possible risk:

Lack of circumcision

# Interventions with known efficacy for MSM

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Education, behavioral interventions, peer outreach

Condom promotion and social marketing

HIV VCT

STI diagnosis and treatment (syphilis)

Structural interventions (closing baths, providing  
MSM-friendly clinic services)

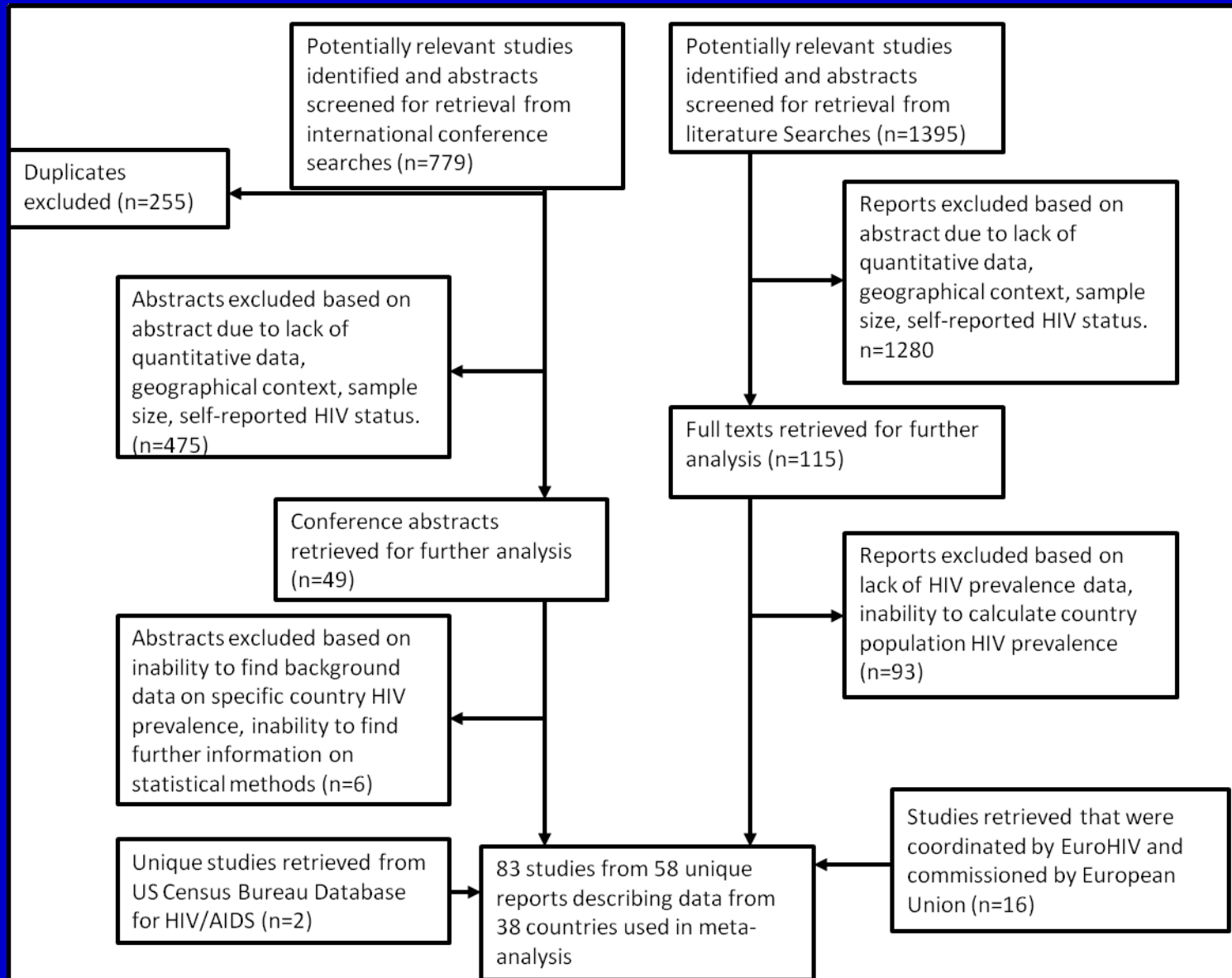
# Elevated Risk for HIV Infection among MSM in Low and Middle Income Countries 2000-2006: A Systematic Review

Stefan Baral, Sifakis F, Cleghorn F, Beyrer C.

*PLoS Medicine*,

Dec. 1, 2007

# Search Protocol



# Results

Total of 83 publications from 38 countries on HIV in MSM

US Bureau of Census and UNAIDS data to estimate general population levels of HIV in adults aged 15-49

Total sample: 63,538 individual men

**Pooled OR for HIV infection in MSM: 19.3**

In very low HIV Prevalence settings (<1/1000 adults with HIV)

**Pooled OR for MSM was 58.4**

In high prevalence settings (> 1/20 infected)

**Pooled OR for MSM was 9.6**

# Asia Prevalence

Country	Sample Size	MSM Prevalence (95% CI)	Population Prevalence	Odds Ratio
Thailand	3236	24.6 (23.1-26.1)	1.55	20.7 (19.1-22.4)
Vietnam	575	2.8 (1.4-4.1)	0.52	5.5 (3.4-9.1)
Cambodia	754	7.8 (5.9-9.7)	1.81	4.6 (3.5-6.0)
China	5734	2.7 (2.2-3.0)	0.09	45.1 (39.6-51.4)
Indonesia	770	9.0 (6.9-11.0)	0.14	72.8 (56.8-93.2)
India	3780	15.2 (14.0-16.3)	0.97	17.6 (16.0-19.3)
Nepal	358	4.8 (2.6-7.0)	0.54	9.2 (5.6-14.9)
East Timor	110	1.0 (0.0-2.6)	Unknown	Unknown
<b>Total</b>	<b>17146</b>	<b>10.6 (9.2-12.0)</b>		<b>18.7 (17.7-19.7)</b>

# Africa

Country	Sample Size	MSM Prevalence (95% CI)	Population Prevalence	Odds Ratios
Senegal	442	21.5 (17.7-25.3)	0.99	27.5 (21.9-34.5)
Kenya	840	12.6 (10.3-14.9)	6.93	1.6 (1.3-2.0)
Sudan	713	9.3 (7.1-11.4)	1.67	6.0 (4.7-7.7)
Egypt	73	0.01 (0.00-4.0)	0.01	108.9 (15.1-783.9)
<b>Total</b>	<b>2068</b>	<b>13.0 (8.9-17.0)</b>		<b>3.8 (3.3-4.3)</b>

# Latin America

Country	Sample Size	MSM Prevalence (95% CI)	Population Prevalence	Odds Ratios
Ecuador	916	15.1 (12.8-17.4)	0.31	56.4 (47.0-67.6)
Peru	18843	12.2 (11.7-12.7)	0.61	22.6 (21.6-23.6)
Bolivia	520	21.2 (17.6-24.7)	0.15	178.8 (144.7-221)
Uruguay	736	18.9 (16.1-21.7)	0.56	41.0 (34.1-49.4)
Argentina	2410	12.1 (10.8-13.4)	0.65	21.0 (18.6-23.7)
Colombia	1274	19.4 (17.2-21.6)	0.69	34.5 (30.1-39.7)
Paraguay	92	13.0 (6.2-19.9)	0.42	35.4 (19.3-64.9)
Brazil	1456	14.4 (12.6-16.2)	0.58	28.7 (24.8-33.3)
Honduras	569	13.0 (10.2-15.8)	1.72	8.6 (6.7-10.9)
Panama	235	10.6 (6.7-14.6)	1.03	11.5 (7.6-17.4)
Guatemala	165	11.5 (6.7-16.4)	1.04	12.4 (7.7-20.0)
El Salvador	293	7.9 (4.8-10.9)	1.04	8.1 (5.3-12.4)
Nicaragua	162	9.3 (4.8-13.7)	0.25	40.8 (24.0-69.5)
Mexico	9422	25.6 (24.8-26.5)	0.32	109.0 (104-114.1)
Puerto Rico	685	6.0 (4.2-7.7)	Unknown	Unknown
Trinidad and Tobago	235	20.4 (15.3-25.6)	4.28	5.7 (4.2-7.9)
<b>Total</b>	<b>38013</b>	<b>16.1 (15.1-17.0)</b>		<b>33.3 (32.3-34.2)</b>

# Systematic Review of HIV among MSM in Low and Middle Income Countries

	Number of Countries	Odds Ratios	95% Confidence Interval
<b>Region</b>			
Americas	15	<b>33.3</b>	32.3-34.2
Asia	7	<b>18.7</b>	17.7-19.7
Eastern Europe	12	<b>1.3</b>	1.06-1.6
Africa	4	<b>3.8</b>	3.3-4.3
<b>Prevalence Level</b>			
Very Low Prevalence Countries	23	<b>58.4</b>	56.3-60.6
Low Prevalence	8	<b>14.1</b>	13.9-14.9
Medium/High Prevalence	7	<b>9.6</b>	9.0-10.2

What do these data tell us?

Why are we seeing such high HIV rates in MSM in 2008?

# Implications

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- MSM understudied in many emerging HIV epidemic contexts: MSM not included in national HIV surveillance in majority of low and middle income countries
- Africa most markedly understudied region
- Urgent need to include MSM risks in national HIV/AIDS surveillance, in STI measures, and *particularly* where culturally difficult
- Evidence based and rights based approaches to HIV both mandate that there be non-discrimination in services, access, **and funding**

# Recent Work

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- Rapid assessment among MSM in Moscow and St. Petersburg – January 2008
- Four country Epi Probe study among MSM in Southern Africa

# HIV infection among MSM in Russia: Univariate

	Total (%) N = 401	HIV+ (%)	p-value
<b>City</b>			
Moscow	201 (50.1)	12 (6.0)	-
St. Petersburg	200 (49.9)	11 (5.5)	-
<b>Age Group</b>			
<b>18 to 22</b>	<b>91 (22.8)</b>	<b>7 (7.7)</b>	-
23 to 25	106 (26.5)	6 (5.7)	-
26 to 28	80 (20.0)	5 (6.3)	-
29 or older	123 (30.8)	5 (4.1)	-
<b>Venue Attendance</b>			
Physical venue, yes vs. no	335 (88.9)	21 (6.3)	0.012
Internet access, yes vs. no	327 (86.7)	20 (6.1)*	0.011

\* NB: several times a day --> HIV%=14.9

# Risks for HIV Infection among Russian MSM

	<b>Total (%) N = 401</b>	<b>HIV+ (%)</b>	<b>AOR (95% C.I.)</b>
<b>City</b>			
Moscow	201 (50.1)	12 (6.0)	-
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26 to 28	80 (20.0)	5 (6.3)	-
29 or older	123 (30.8)	5 (4.1)	-
<b>Prior HIV Test, ever</b>			
No	52 (13.0)	7 (13.5)	7.5 (1.9, 29.9)
Yes	349 (87.0)	16 (4.6)	Ref.

# Multivariate risks for HIV infection among Russian MSM

	Total (%) N = 401	HIV+ (%)	AOR ¶ (95% C.I.)
<b>Prior HIV Test, ever</b>			
No	52 (13.0)	7 (13.5)	7.5 (1.9, 29.9)
Yes	349 (87.0)	16 (4.6)	Ref.
<b>Injected Drugs, ever</b>			
No	380 (95.2)	17 (4.5)	Ref
Yes	13 (3.3)	5 (38.5)	9.8 (2.0, 47.3)

# African MSM Research

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- Research Objectives
  - Demonstrate need for targeted HIV prevention expenditures from regional, national, and international funding agencies
  - Inform prevention strategies
- OSISA/SHARP/JHSPH HIV Prevalence Probe Design
  - 200 Men in each of 4 different sites in Southern Africa (n=800 total)
    - Gabarone, Lilongwe, Windhoek, Cape Town townships
  - Community partners at each site who have received grants to execute study with support
  - Country approval being sought in collaboration with local academic partners
  - Anonymous two-sided, one page survey instrument and HIV rapid kit testing using oral fluid samples
  - Survey instrument briefly addresses baseline characteristics, HIV related knowledge, HIV risk status, and human rights contexts

# HIV Prevalence Study of MSM in Malawi

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- Background
  - First evaluation of HIV among MSM in Malawi
- Methods
  - Community-based study of 200 MSM with LGBT rights partner
- Results
  - HIV Prevalence 21.4 %
    - Background HIV prevalence among men is 11.5%
    - Odds Ratio for HIV infection among MSM is 2.08 (95% CI 1.49-3.02)
- Risk Factors for HIV Infection
  - Ever being arrested ( $p < 0.05$ )
  - Not always wearing condoms ( $p < 0.01$ )
  - Used the internet to find male partner ( $p = 0.07$ )
  - Having received money for anal intercourse ( $p = 0.08$ )

# Unmet prevention needs for MSM in Malawi

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- No water-based lubricants available in country
- HIV prevention and education efforts limited to one NGO—active only in urban areas
- National program has no MSM component
- No “open” venue for MSM/Gay/Bisexual men to meet
- Police harassment of venues and outreach workers
- Cultural norms enforce marriage—hidden MSM risks

# MSM, HIV, and Human Rights

# MSM Risk and Rights Contexts

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Vulnerability to HIV infection is dramatically increased where sex between men is criminalized

- UNAIDS, 2006

Criminalization and homophobia limit MSM access to HIV prevention, information, commodities, treatment and care

- USAID, 2004

Faced with legal or social sanction MSM are excluded, or exclude themselves from sexual health and welfare

- UNAIDS, 2006

# Structural Discrimination

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- 85 UN Member states criminalize sex between consenting adults of the same gender
- More than half of all African States
- 10 States have death penalties for homosexual relations between consenting adults (Pakistan, Saudi Arabia, Iran, Nigeria, Sudan)

# Human Rights Argument for MSM Inclusion

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International Covenant on Civil and Political Rights (ICCPR) signed 1976, to which all African, most Asian, States are signatories

- Guarantees right “without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status”
- In 1994 the Human Rights Committee held that sexual orientation was a status protected under the ICCPR from discrimination, with reference to “sex” including “sexual orientation”



# Conclusions

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- HIV epidemic spread among MSM is occurring in both high and low income settings in 2008
- MSM epidemics appear to be largely “dis-linked” from general population prevalence levels
- Urgent need for MSM programs in prevention, treatment and care, surveillance