

# How willing are gay men to “cut off” the epidemic? Circumcision among MSM in the Andean region

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# Background

- HIV epidemic in the Andean region is concentrated in men who have sex with men (MSM)
- Cases continue to increase despite the broadly known preventive strategies
- Male circumcision studies have proven to be efficacious in reducing HIV acquisition in heterosexual men by 60%.
- Differences in vaginal vs. anal mucosa, and types of sexual roles might compromise the effectiveness of this intervention in MSM.
- Formative research is of need to assess the feasibility of the implementation of such a study in the MSM population

# Objectives

- To assess circumcision rates in MSM
- To evaluate the willingness to participate in a circumcision trial for HIV prevention among MSM
- To identify concerns, barriers and facilitators for the implementation of a circumcision trial in MSM

# Design

## Study design

- Cross sectional study

## Inclusion criteria:

- Anal sex within the last 12 months
- Unknown or HIV (-) status and not having an HIV test during the previous 12 months
- High risk behavior

## Procedures

- Clinical history
- Physical examination,
- Behavioral assessment (Computer Assisted Self Interview, CASI)
- Testing for HIV-1/2 and syphilis

# HIV Sentinel surveillance among high risk MSM in five Andean cities



2618 MSM at high risk for HIV infection enrolled.

Peru: Lima (676), Arequipa (417) and Ica (414)  
Ecuador: Guayaquil (541)

570 from Sullana & Piura were excluded for this analysis due to issues in circumcision status assessment

Circumcised (75)

Uncircumcised (1932)

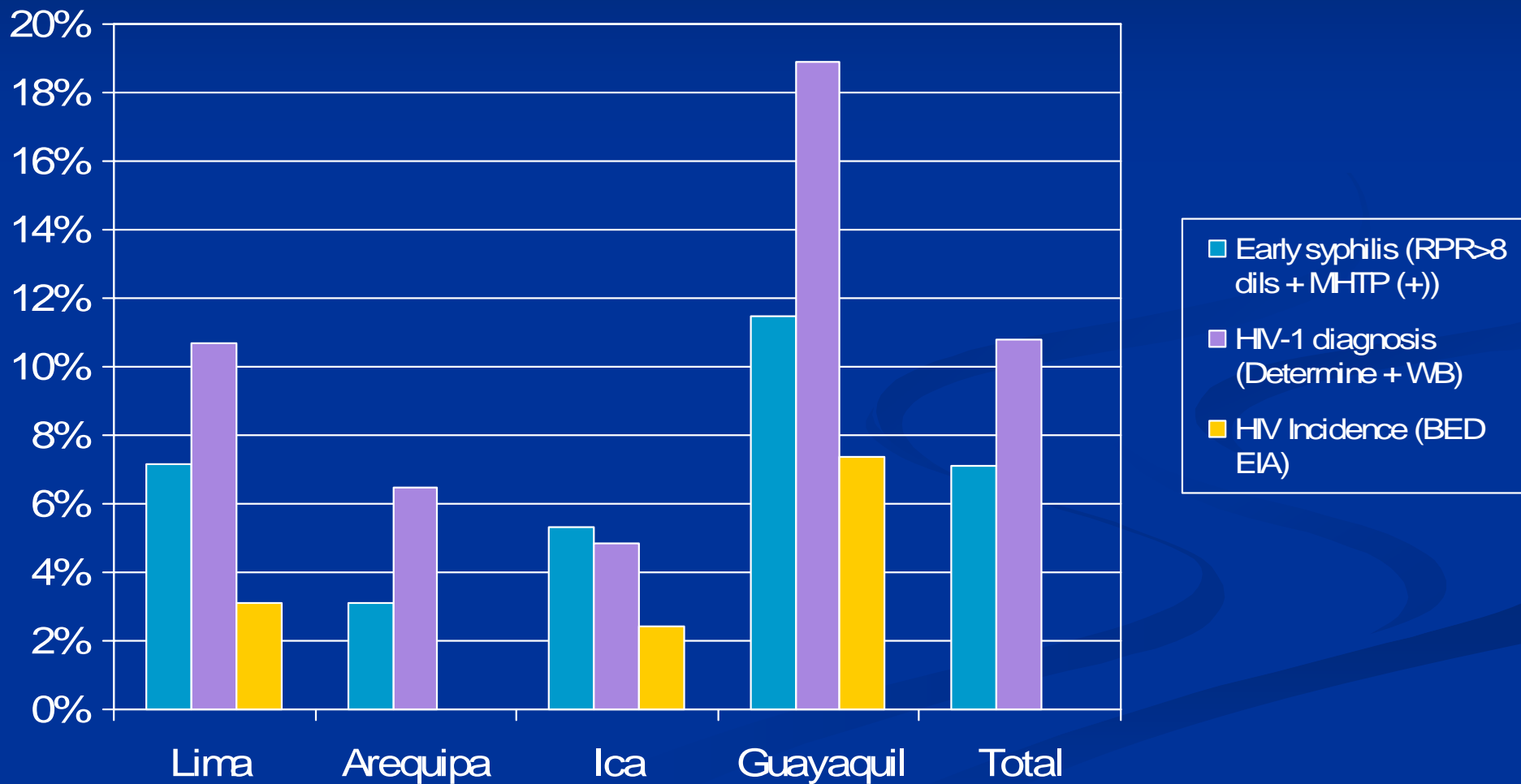
41 participants refused to be examined

Willingness to participate in a circumcision trial questionnaire

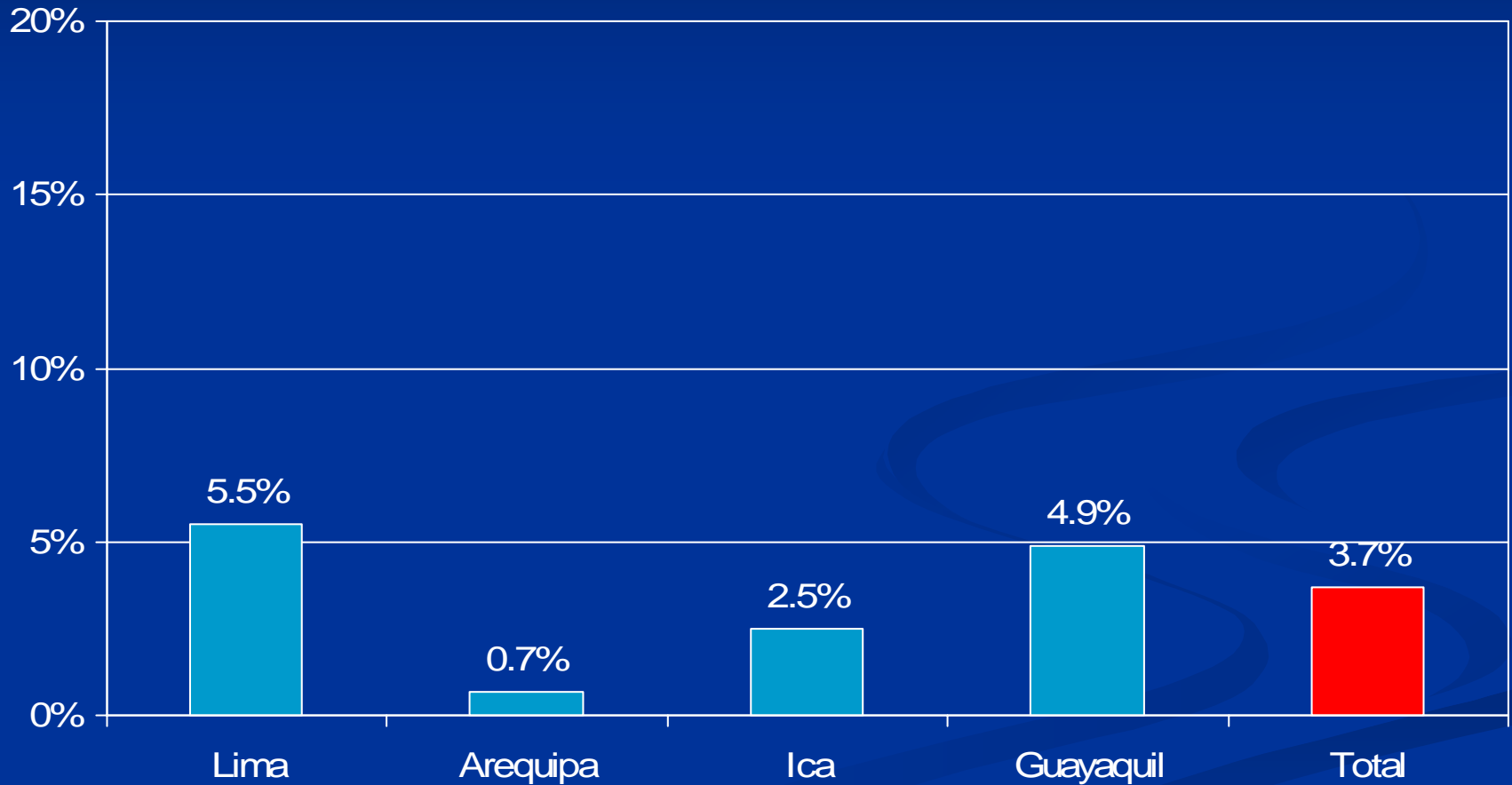
# Demographic and behavioral characteristics

	Lima	Arequipa	Ica	Guayaquil	Total
N	676	417	414	541	2048
Age (mean, (SD))	26.39 (7.2)	26.30 (8.3)	25.93 (7.2)	26.61 (7.8)	26.34 (7.6)
Education					
Less than high school	12 (1.9)	2 (0.5)	12 (3.0)	44 (8.5)	70 (3.6)
High school	351 (55.0)	265(67.4)	239 (59.6)	321(61.7)	1176 (60.3)
More than high school	275 (43.1)	126 (32.1)	150 (37.4)	155 (29.8)	706 (36.2)
Monthly Income (\$)					
No income	144 (22.8)	138 (33.1)	105 (25.4)	137 (26.6)	524 (26.8)
>100	139 (22.0)	82 (20.6)	115 (28.3)	46 (8.9)	382 (19.6)
100-199	205 (32.5)	138 (34.6)	140 (34.4)	137 (26.6)	620 (31.8)
200-299	84 (13.3)	25 (6.3)	29 (7.1)	102 (19.8)	240 (12.3)
300+	59 (9.4)	16 (4.0)	18 (4.4)	93 (18.1)	186 (9.5)
Sexual Role in the last 5 years					
Exclusively Insertive	195 (30.1)	231 (57.8)	197 (48.9)	167 (32.9)	790 (40.3)
Mainly Insertive	75 (11.6)	33 (8.3)	15 (3.7)	35 (6.9)	158 (8.1)
Half time insertive	142 (21.9)	47 (11.8)	47 (11.7)	149 (29.2)	385 (19.6)
Mainly receptive	116 (17.9)	26 (6.5)	36 (8.9)	49 (7.8)	218 (11.1)
Exclusively receptive	120 (18.5)	63 (15.8)	108 (26.8)	120 (23.5)	411 (21.0)

# Early syphilis, HIV rates, and HIV estimated incidence



# Circumcision rates by city

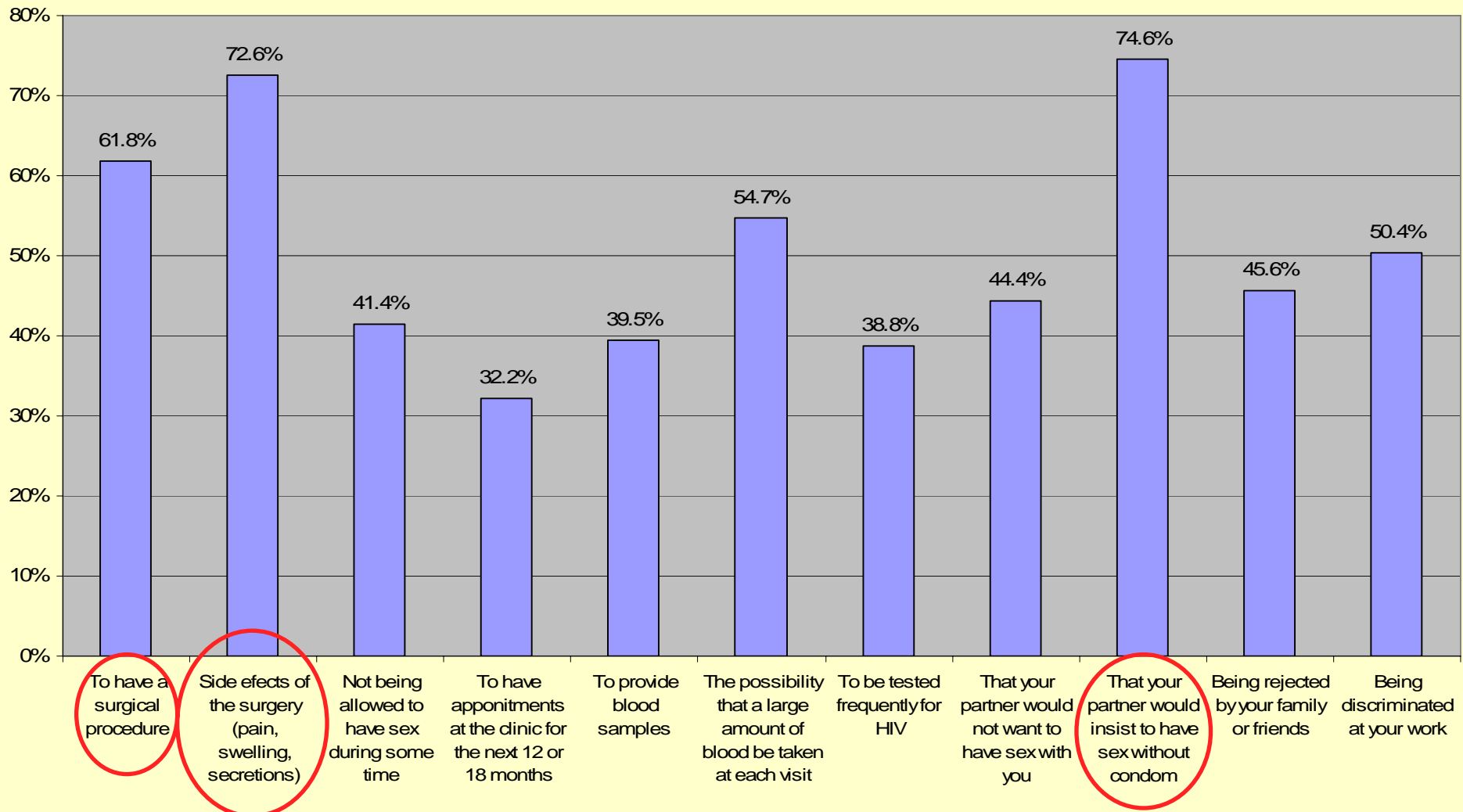


# Willingness to participate in a CT among those not circumcised

	OR	(95% CI)	AOR	(95% CI)
Age (per 10 years)	1.08	0.98-1.19	0.95	0.83-1.08
Education				
Less than High school	1	-	1	-
High school	1.07	0.64-1.76	2.26	1.27-4.02
More than high school	1.10	0.66-1.85	2.46	1.36-4.46
Monthly income (\$)				
No income	1	-	1	-
>100	0.80	0.61-1.05	0.93	0.68-1.27
100-199	0.93	0.73-1.18	0.92	0.70-1.22
200-299	1.45	1.05-2.02	1.01	0.69-1.46
300+	1.49	1.04-2.14	0.83	0.55-1.25
Sexual Role in the last 5 years				
Insertive*	0.99	0.81-1.92	1.11	0.89-1.40
Receptive	1	-	1	-
City				
Lima	1	-	1	-
Arequipa	0.40	0.31-0.51	0.37	0.28-0.48
Ica	0.14	0.11-0.20	0.15	0.11-0.20
Guayaquil	2.06	1.57-2.70	2.25	1.68-3.01

\*Insertive: Those reporting being insertive at least 50% of the time in the last 5 years (exclusively, mainly and half of the time)

# Major concerns of participation in a circumcision trial among those willing



# Discussion

- MSM at high risk in the Andean region have high rates of HIV and STI
- Circumcision rates in MSM are low across all study cities
- No association between circumcision and HIV infection when all the sample is included. A trend to a significant protective effect is seen when only “insertive” are analyzed.
- Higher education and living in large cities are independently associated to be willing to participate in a circumcision trial for HIV prevention in MSM
- Major concerns of undergoing circumcision are related to surgical procedure and misperception of protection

# Limitations

- Design limitations:
  - Convenience based samples
  - Self-selection bias
  - Recall bias
- Low rates of circumcision in the sample decreased the power to find associations between circumcision and HIV infection
- The results cannot be generalized

# Conclusions

- A circumcision study to assess its efficacy in the prevention of HIV is feasible in the MSM population of Lima and Guayaquil

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