

# HIV INCIDENCE AMONG MSM IN PORTUGAL AS A MATTER OF RISK MANAGEMENT



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## Introduction

After several years of a drug injection driven HIV epidemic in Western Europe, sex between men regains importance as a transmission mode: In Portugal between 2005 and 2011 there has been a 6% annual increase in the number of newly-diagnosed HIV cases among MSM, while cases due to drug injection and heterosexual intercourse decreased 22% and 4% in the same period.

New infections among MSM may result from risk management strategies that bypass classic primary prevention.

We aimed to estimate the incidence of HIV infection in a cohort of HIV-negative MSM and to identify the predictors of seroconversion.

## Materials and methods

Ongoing dynamic cohort

Setting

Peer-based VCTC in Lisbon, Portugal (CheckpointLX)

Eligibility criteria

- HIV-negative MSM
- Aged 18 or more
- Presenting for HIV testing

Follow-up at intended intervals of 6 months but adjusted according with participants convenience

Ethics

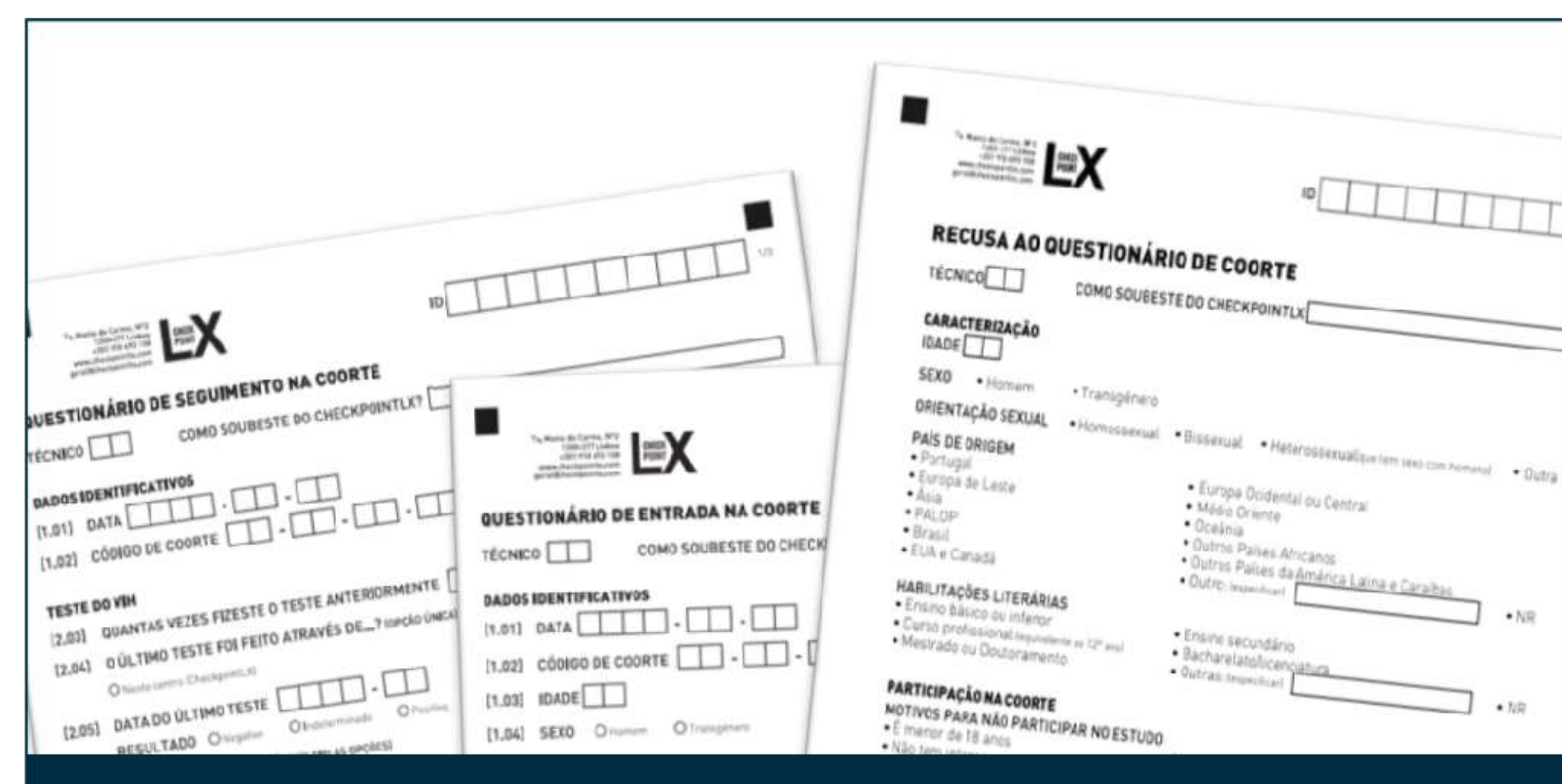
- Written informed consent
- Study protocol approved by the Ethics Committee of São João Hospital and Medical School, University of Porto

Evaluations

- Rapid HIV and Syphilis testing
- Behavioral and sociodemographic questionnaire

Statistics

- Poisson generalized linear model
- Association between baseline characteristics and HIV seroconversions presented as crude and adjusted Incidence rate ratios (IRR) and 95% confidence intervals (95% CI)



## Results

HIV Incidence: 3.35 per 100 MSM-year (95% CI: 2.15-4.55)

	HIV Incidence	IRR (95%CI)	p-value	aIRR (95%CI)	p-value
<b>Age</b>					
< 35 years	3.00	1			
≥ 35 years	4.16	1.39 (0.65-2.96)	0.400		
<b>Country of birth</b>					
Portugal	3.19	1			
Other	3.72	1.16 (0.52-2.63)	0.716		
<b>Education</b>					
Higher education	2.78	1			
Less than higher education	4.10	1.48 (0.72-3.02)	0.285		
<b>Sexual identity</b>					
Homosexual	3.24	1			
Bisexual/Heterosexual/Other	3.93	1.21 (0.42-3.48)	0.719		
<b>History of HIV previous test</b>					
No	0.82	1		1	
Yes	3.78	4.60 (0.63-33.80)	0.134	3.79 (0.51-28.33)	0.194
<b>Concerned with recent exposure to HIV at baseline</b>					
No	2.42	1		1	
Yes	4.52	1.87 (0.90-3.88)	0.093	1.37 (0.62-3.03)	0.441

	HIV Incidence	IRR (95%CI)	p-value	aIRR (95%CI)	p-value
<b>Sexual intercourse in the previous 12 months with:</b>					
<b>Bisexual men</b>					
No	2.40	1			
Yes	4.17	1.74 (0.78-3.88)	0.177		
Does not know	5.09	2.12 (0.78-5.73)	0.139		
<b>Men with different partners</b>					
No	2.71	1			
Yes	3.66	1.35 (0.47-3.88)	0.577		
Does not know	1.72	0.63 (0.07-5.66)	0.683		
<b>Sex workers (even if not payed)</b>					
No	2.79	1		1	
Yes	8.09	2.90 (1.10-7.66)	0.032**	2.88 (1.05-7.92)	0.041*
Does not know	8.19	2.94 (0.88-9.81)	0.080*	1.89 (0.43-8.35)	0.399
<b>HIV infected men</b>					
No	2.20	1		1	
Yes	7.68	3.49 (1.42-8.59)	0.007*	2.84 (1.08-7.47)	0.034*
Does not know	3.48	1.58 (0.67-3.72)	0.294	1.32 (0.51-3.40)	0.565
<b>Women</b>					
No	3.20	1			
Yes	4.66	1.46 (0.56-3.80)	0.444		
<b>Trios/Group sex</b>					
No	3.27	1			
Yes	3.64	1.11 (0.52-2.37)	0.785		

	HIV Incidence	IRR (95%CI)	p-value	aIRR (95%CI)	p-value
<b>Age at first anal intercourse</b>					
More than 15	3.65	1			
15 or less	2.19	0.62 (0.19-2.04)	0.429		
<b>Number of occasional sexual partners in the last year</b>					
≤1	2.37	1			
2 to 9	3.36	1.42 (0.41-4.93)	0.583		
≥10	2.86	1.21 (0.31-4.67)	0.784		
<b>Role on anal sex</b>					
Insertive only	3.68	1			
Receptive/Both	3.29	0.89 (0.40-2.01)	0.787		
<b>Having sex for drugs in the 12 previous months at baseline</b>					
No	3.27	1			
Yes	5.26	1.61 (0.22-11.84)	0.642		
<b>Condom use in the previous 12 months with steady partner</b>					
Always/Often	4.03	1			
Occasionally/Rarely/Never	3.00	0.75 (0.30-1.83)	0.522		
<b>Condom use in the LSE with occasional partner</b>					
Yes	3.52	1			
No	3.74	1.06 (0.40-2.81)	0.901		
<b>Condom use in the previous 12 months with occasional partner</b>					
Always/Often	3.61	1			
Occasionally/Rarely/Never	3.48	0.97 (0.45-2.08)	0.929		

	HIV Incidence	IRR (95%CI)	p-value	aIRR (95%CI)	p-value
<b>Use of alcohol before or during AI</b>					
Rarely/Never	3.49	1			
Always/Often /Occasionally	3.03	0.868 (0.40-1.90)	0.723		
<b>Use of recreational drugs before or during sex</b>					
Rarely/Never	2.52	1		1	
Always/Often /Occasionally	7.72	3.06 (1.41-6.64)	0.005**	2.74 (1.22-6.13)	0.014**
<b>Lifetime history of Syphilis</b>					
No	3.02	1		1	
Yes	7.09	2.35 (0.90-6.14)	0.081*	1.80 (0.64-5.02)	0.263
<b>Lifetime history of Hepatitis C</b>					
No	3.28	1			
Yes	35.21	10.72 (1.46-78.89)	0.020**		
Does not know	2.87	0.88 (0.21-3.68)	0.857		
<b>Post-exposure Prophylaxis (PEP)</b>					
Does not know about PEP	3.38	1			
Knows but never used	3.01	0.89 (0.42-1.90)	0.764		
Knows and used	4.49	1.33 (0.18-10.04)	0.784		

\*significant at p<0.10 \*\*significant at p<0.05

## Conclusions

This is the first incidence study in Portugal in men who have sex with men. Independent predictors of HIV seroconversion among this cohort were sexual intercourse with sex workers or with HIV-positive men and the use of recreational drugs before or during sex in previous 12 months to baseline.

Risk management involves complex strategies that appear to go beyond primary prevention being testing one of the strategies adopted.

MSM adopting individual risk management behaviors may require targeted preventive actions that go beyond classic health promotion and education strategies.

*"New and innovative services developed in Portugal reflecting the Communication's emphasis on key vulnerable populations, including MSM In light of the Communication's emphasis on key vulnerable populations and following similar initiatives in various European countries, in 2010, GAT opened the first peer-to-peer VCT centre in Portugal (CheckpointLX), specifically targeting the MSM population in Lisbon. To implement this innovative approach in Portugal, advocacy was necessary to adopt changes in the national law in order to allow for community-based HIV testing. Due to the success of the MSM initiative, similar VCT centres are now being programmed, directed specifically at people who inject drugs, sex workers and migrants, according to the latest testing guidelines"*

from ECDC, WHO Europe and EMCDDA.



## Acknowledgments

