

The  project:
**Undiagnosed HIV infection among MSM
in six Southern and Eastern European
cities.**

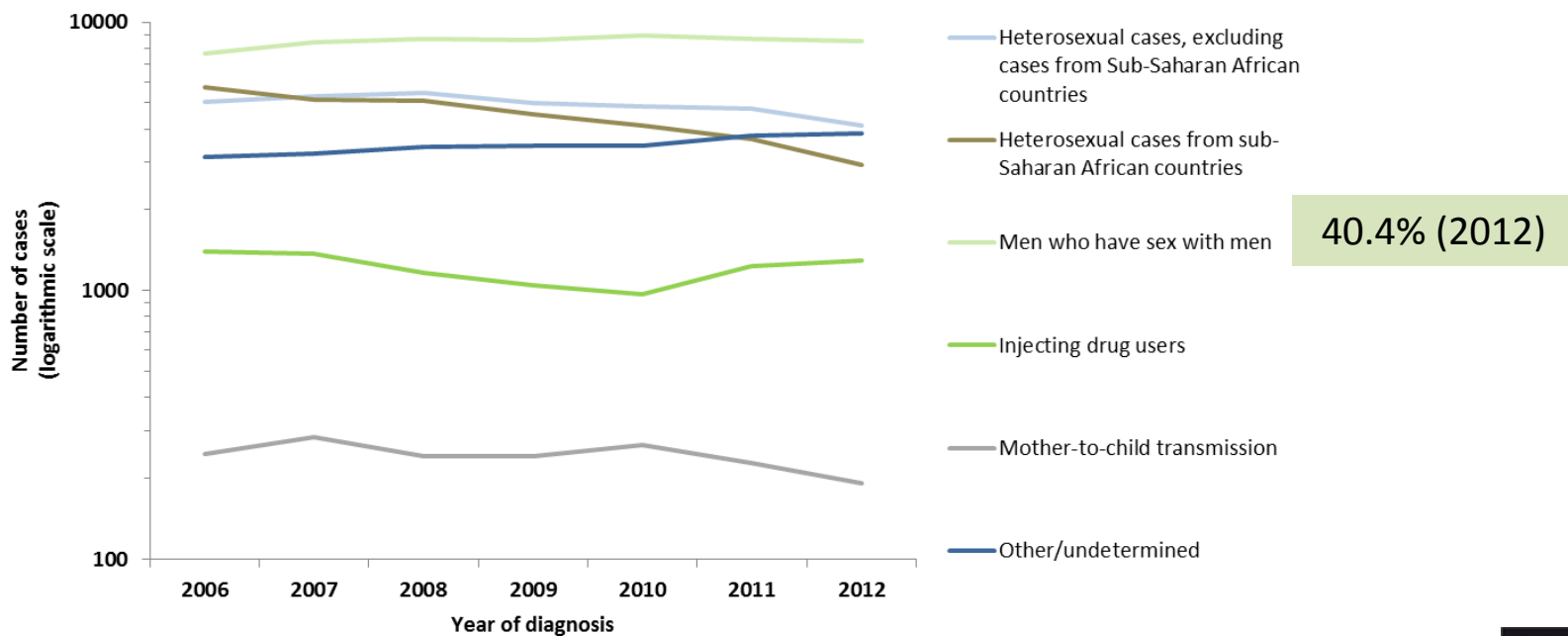
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INTRODUCTION

☐ Men who have sex with men (MSM) remain the group most at risk of acquiring HIV infection in the European Union (EU) and European Economic Area.

HIV infection reported by mode of transmission. EU and EEA, 2001-2012*



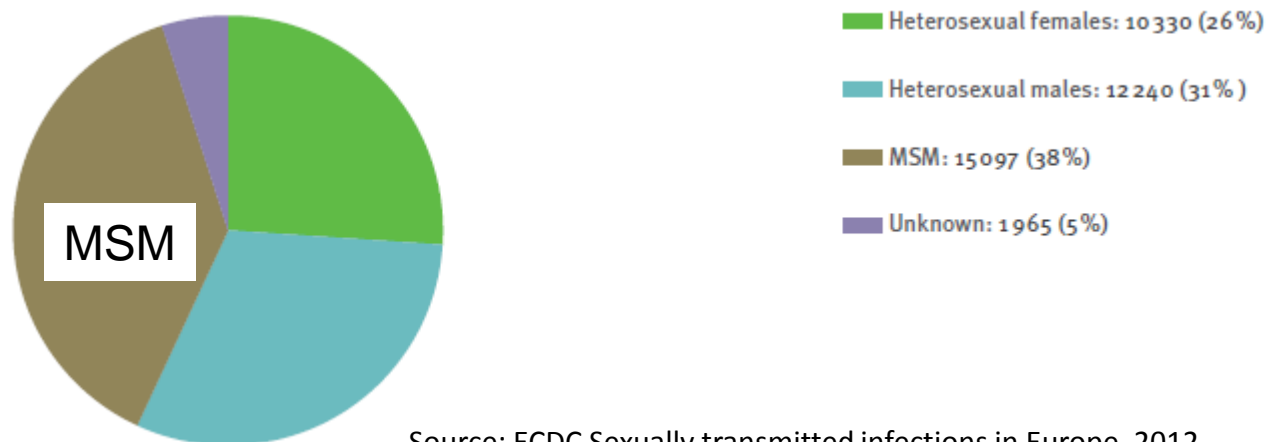
Source: ECDC/WHO. HIV/AIDS Surveillance in Europe, 2012

INTRODUCTION

Number and percentage of syphilis by category of transmission. EU and EEA, 2012



Number and percentage of gonorrhoea by category of transmission. EU and EEA, 2012



Source: ECDC Sexually transmitted infections in Europe, 2012

INTRODUCTION

- ❑ Some studies have shown that, despite the efforts to promote HIV testing in Europe, the proportion of undiagnosed HIV infection among MSM remains high.
- ❑ Little is known about determinants of undiagnosed HIV infection in MSM within Europe.

OBJECTIVES

- 1) To assess the proportion and the distribution of undiagnosed HIV infection in MSM in Southern and Eastern European countries,
- 2) To describe the differences in epidemiology and behaviour between undiagnosed, diagnosed HIV-positive and HIV-negative MSM, and
- 3) To identify factors associated with undiagnosed HIV infection in the study population.

METHODS

❑ *Design:* A multi-centre biological and behavioural cross-sectional study in Barcelona, Verona, Bratislava, Bucharest, Ljubljana and Prague

Southern Europe

Eastern Europe

❑ *Sampling:* Time-Location-Sampling to recruit 2,400 men attending different venues (400 per city).

❑ *Enrolment period:* November 2008-October 2009

❑ *Instruments:* A self-administered questionnaire and oral fluid samples.

❑ *Inclusion criteria:* Men aged ≥ 18 years who 1) had had any kind of sex with another man in the last 12 months, 2) had agreed to provide an oral fluid sample and 3) had signed an informed consent form.

METHODS

□ *Dependent variable:*

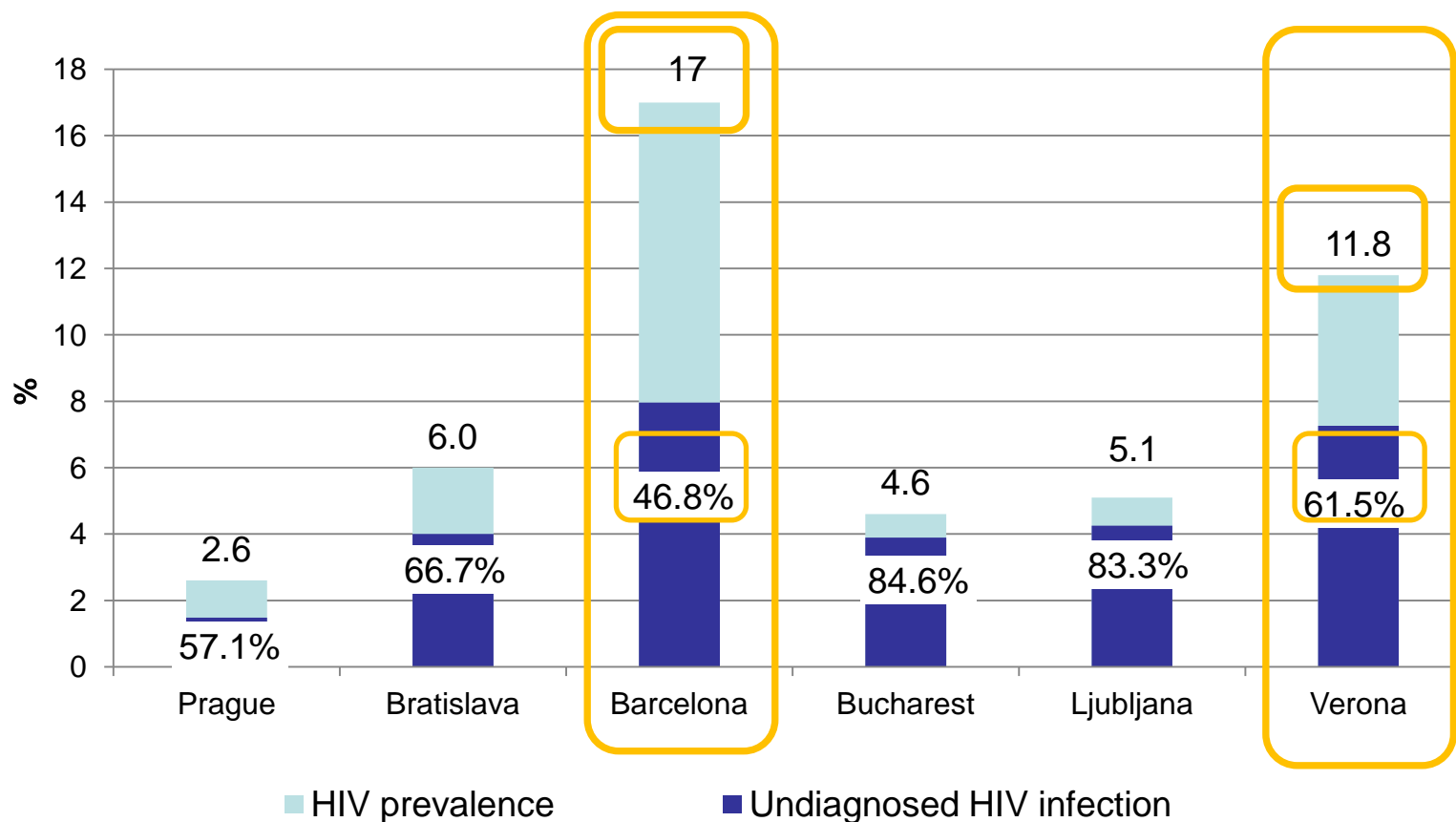
‘Diagnosed HIV+’, ‘undiagnosed HIV+’ and ‘HIV-negative’

	Diagnosed HIV+	Undiagnosed HIV+	HIV-negative
Oral fluid test result	Positive	Positive	Negative
Information reported in the questionnaire	Last test was positive	Last test was negative Not received the result Never been tested	Last test was negative Not received the result Never been tested

□ *Analysis:* A multi-level analysis to identify factors associated with undiagnosed HIV (comparison of undiagnosed HIV-positive vs HIV-negative MSM).

RESULTS

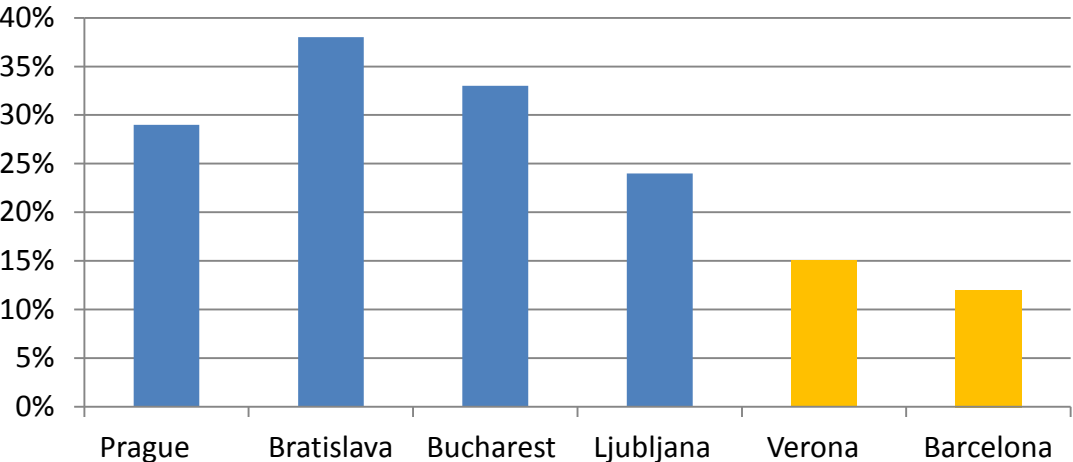
HIV Prevalence and proportion of undiagnosed infection in MSM by city. *Sialon, 2008 ^{a,b}*



a. $p < 0.001$ (prevalences); b. $p < 0.05$ (undiagnosed proportions)

RESULTS. Differences by city

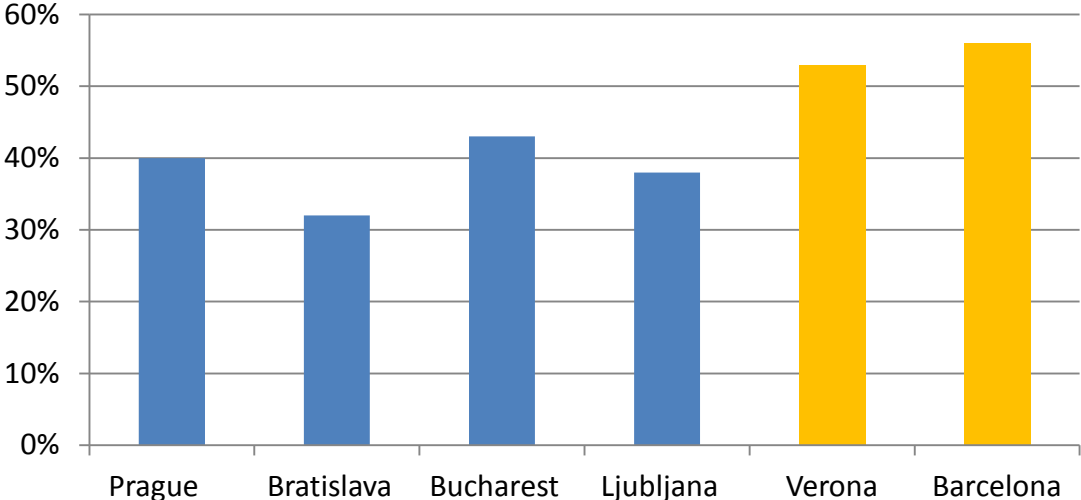
MSM never tested in Southern and Eastern Europe



p<0,001

Access to HIV testing of MSM
by city. Sialon, 2008

MSM tested last year in Southern and Eastern Europe*



p<0,001 ; *and who knew the results

RESULTS. Differences by HIV status

Epidemiological characteristics of MSM by HIV status. Sialon 2008

	Diagnosed HIV+ (N=61)	Undiagnosed HIV+ (n=93)	HIV-negative (N=2,104)	<i>p-value</i>
Access to HIV prevention programs	88.5%	87.1%	68%*	<0.001
Ever tested	100%*	86%*	73.4%*	<0.001
HIV tested last year	-	60.2%	43.0%	0.001

*Differences statistically significant . Where there are 2 asterisks in the same row, the differences are between asterisked values

RESULTS. Differences by HIV status

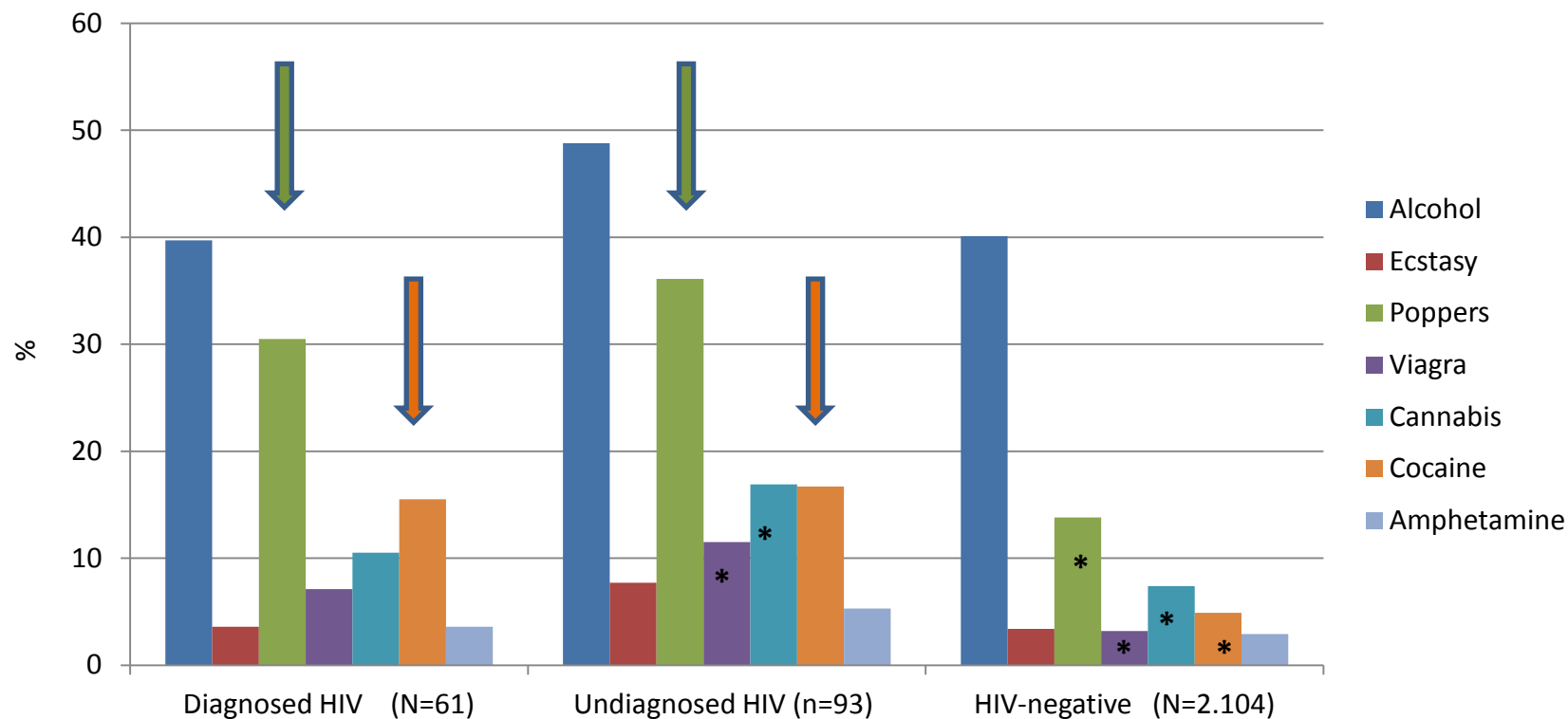
Behavioural characteristics of MSM by HIV status. Sialon, 2008

	Diagnosed HIV+ (N=61)	Undiagnosed HIV+ (n=93)	HIV-negative (N=2,104)	<i>p-value</i>
N. steady partners, last 6 months [Mean,SD]	2.8 [3.64]	2.4 [2.11]	2.6 [6.26]	ns
N. casual partners, last 6 months [Mean, SD]	19.3 [26.9]*	13.9 [20.7]	9.2 [17.2]*	<0.001
UAI with steady partner, last 6 months^c	48.8%*	71.7%	66.3%	<0.05
UAI with casual partner, last 6 months^d	42.3%	38.2%	39.4%	ns
UAI, last time	37.7%	44.4%	59.1%*	<0.001
Last sex in a sex focused venue	36.1%	32.3%	17.9%*	<0.001
Use of Internet for sexual encounters, last 6 months^d	39.3%	54.8%	42.9%	0.06

^c among those with a steady partner in last 6 months; ^d among those with a casual partner in last 6 months

RESULTS. Differences by HIV status

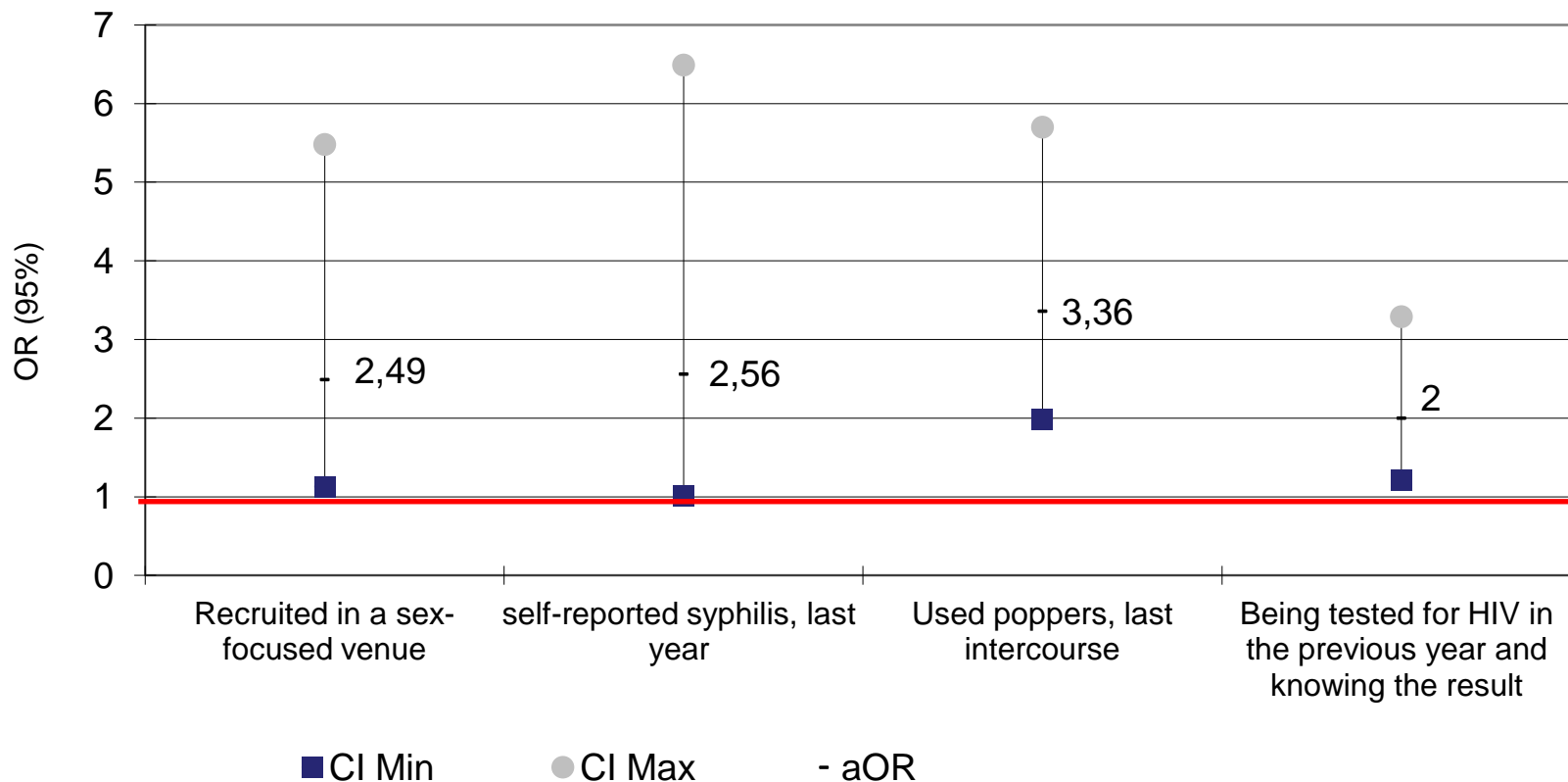
Use of alcohol and other drugs during last sex among MSM by HIV status



* p<0.001

RESULTS. Determinants of undiagnosed infection

Multivariate analysis predicting undiagnosed HIV infection. Sialon, 2008*^o
(undiagnosed HIV+ vs HIV-negative MSM)



*Multilevel model adjusted by age.

LIMITATIONS

- Representativeness
- Causality
- Underreporting of sexual and social behaviours.

CONCLUSIONS

- ❑ Many HIV infections remain undiagnosed and there is evidence of the persistence of frequent risk behaviours and STI despite knowledge of HIV+ status status in **Southern and Eastern Europe**.
- ❑ **Eastern European** cities had higher proportions of men who have never been tested and lower proportions of men tested in the previous 12 months than **Southern cities**.
- ❑ Attending sex-focused venues, reporting syphilis in the previous 12 months, using poppers at last sexual intercourse and having had an HIV test in the previous year were factors associated with undiagnosed HIV infection.

RECOMMENDATIONS

- ❖ There is a need for multidimensional strategies to HIV/STI prevention.
- ❖ More comprehensive data are required to understand the complex relationship between individual and contextual variables.
- ❖ Access to HIV testing should be considered a priority in prevention programs targeting MSM, especially in Eastern Europe.
- ❖ The barriers to HIV testing need to be further investigated in Europe.

Undiagnosed HIV infection in a population of MSM from six European cities: results from the Sialon project

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SIALON NETWORK

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