

# Undiagnosed HIV and Hepatitis C infection among people who inject drugs

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# Introduction

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- Drug-related infectious diseases such as HIV and hepatitis C are among the most serious health consequences of injecting drug use.
- Many drug users are not aware of their HIV serostatus and this figure is likely to be higher for other infections such as hepatitis C.

# Hepatitis C Virus Infection Epidemiology among People Who Inject Drugs in Europe: A Systematic Review of Data for Scaling Up Treatment and Prevention

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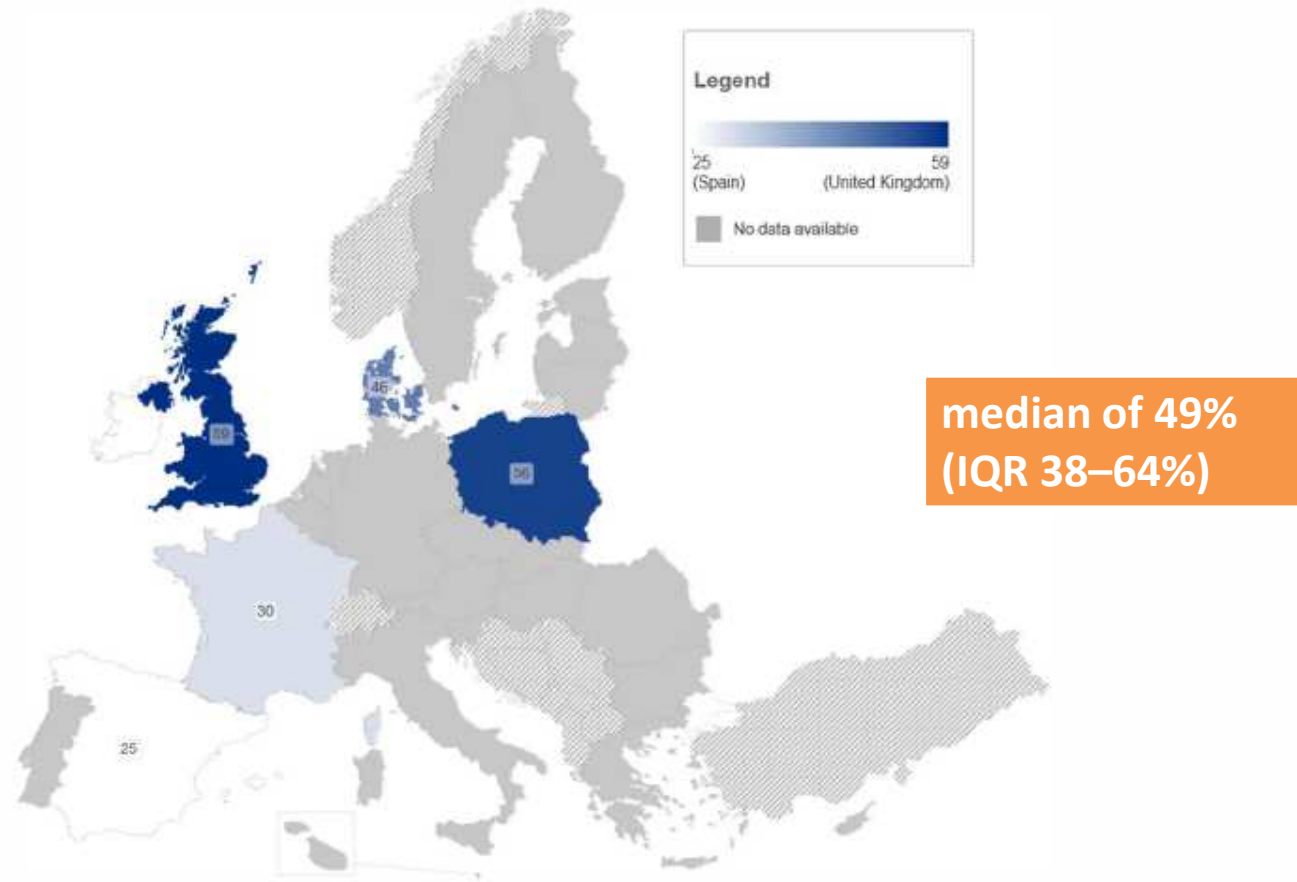
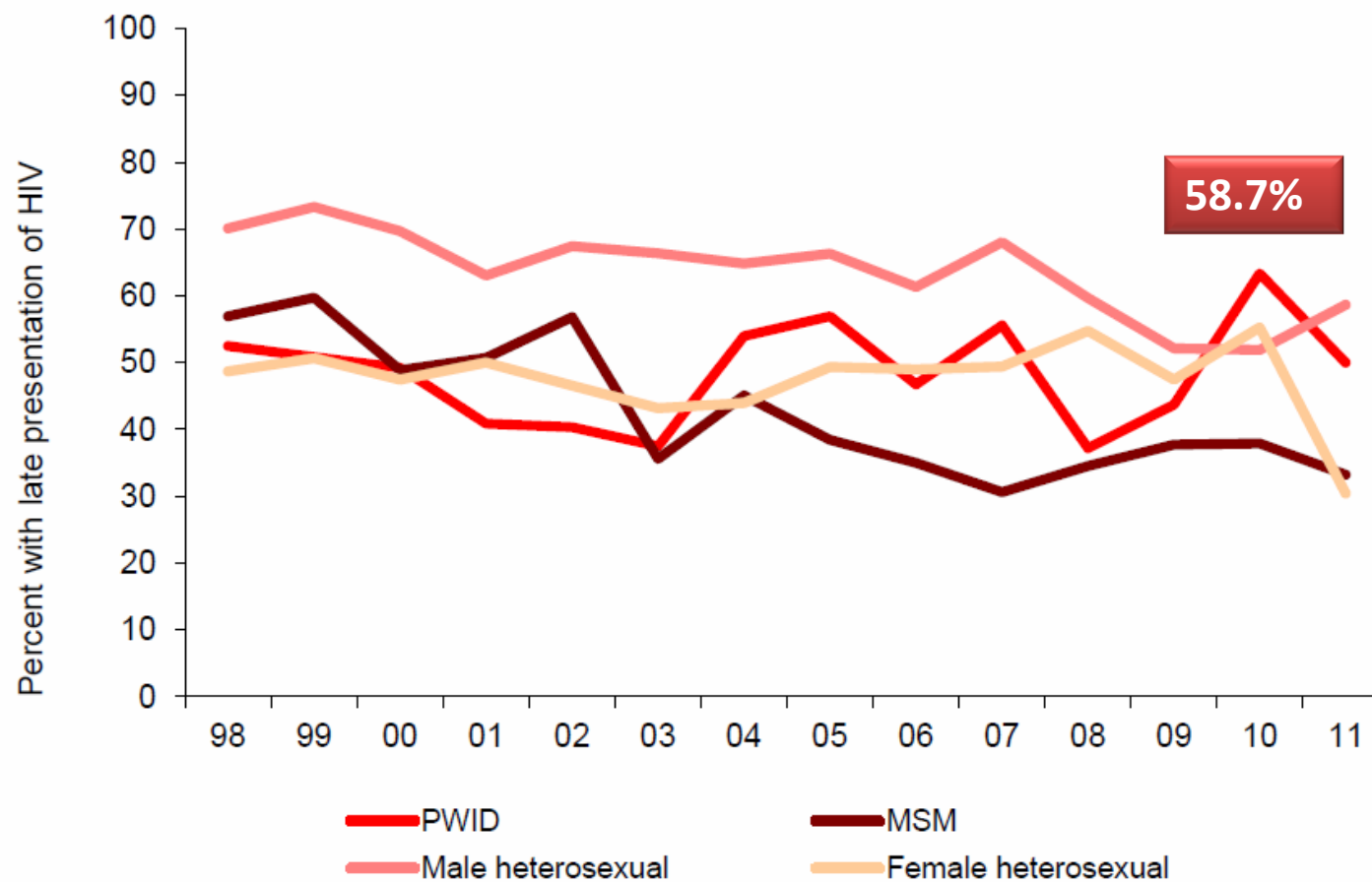


Figure 6. Proportion (%) of HCV positive PWID (antibody or RNA) undiagnosed.

## HIV and AIDS

SIVES  
2012

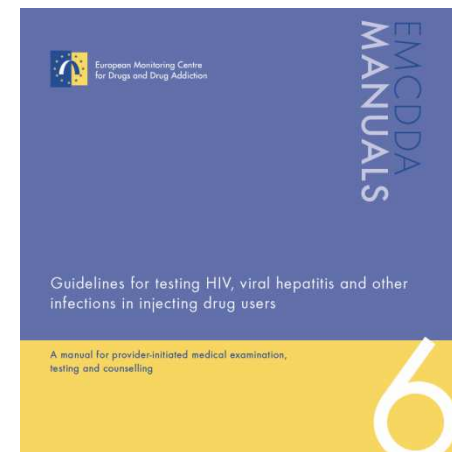
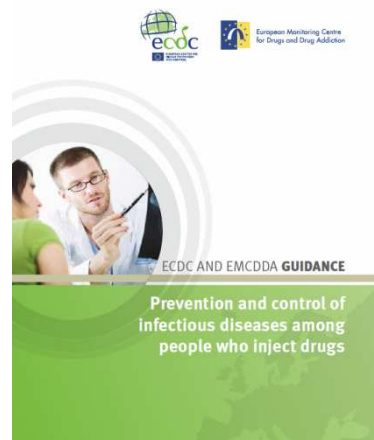
Figure 24. Proportion of late presentation among new HIV diagnoses, by transmission group.  
PISCIS Cohort, 1998-2011



# Introduction

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- Early diagnosis improves treatment prognosis and allows interventions for behavior change.
- Recommendation by ECDC and EMCDDA (2011): Tests should be offered up to once or twice yearly.



# Objectives

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- To describe the proportion of persons who inject drugs (PWID) who are not aware of their HIV and Hepatitis C (HCV) infection
- To assess factors associated with undiagnosed HIV/HCV infections among them.

# Methods (I)

- Bio-behavioural surveys among PWID as part of the Integrated HIV/STI Surveillance System in Catalonia (SIVES)
- Cross-sectional study in 2012-2013
- Recruitment in harm reduction centers
- Inclusion criteria:
  - Injected drugs in the last 6 months
  - Older than 18 years old
  - Informed consent

## Methods (II)

- Anonymous questionnaires
- Oral fluid samples (HIV/HCV prevalence)
- Those that report “unknown” or “negative” status but test positive on the oral fluid test represent the **HIV and HCV undiagnosed groups.**
- Poisson regression models were applied to assess factors associated with undiagnosed HIV/HCV infection.



# Results

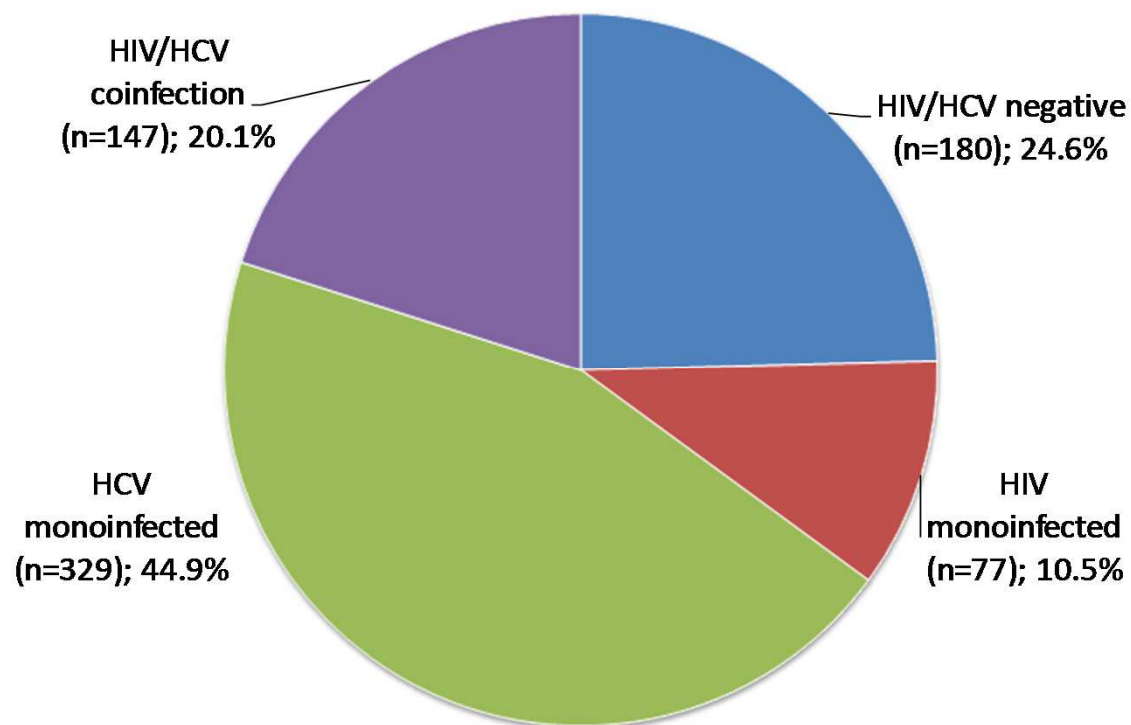
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## Socio-demographic and drug consumption characteristics (n=734)

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	%
Age (mean, SD)	38.0 (8.1)
Male	82.6
Educational level: Primary or lower	60.6
Living on the street (last 6 months)	20.3
In prison (at some time)	68.0
In treatment (at some time)	86.6
Years of injection (mean, SD)	15.8 (9.9)
New injectors (less than 5 years)	19.7
Daily injection (last 6 months)	44.7

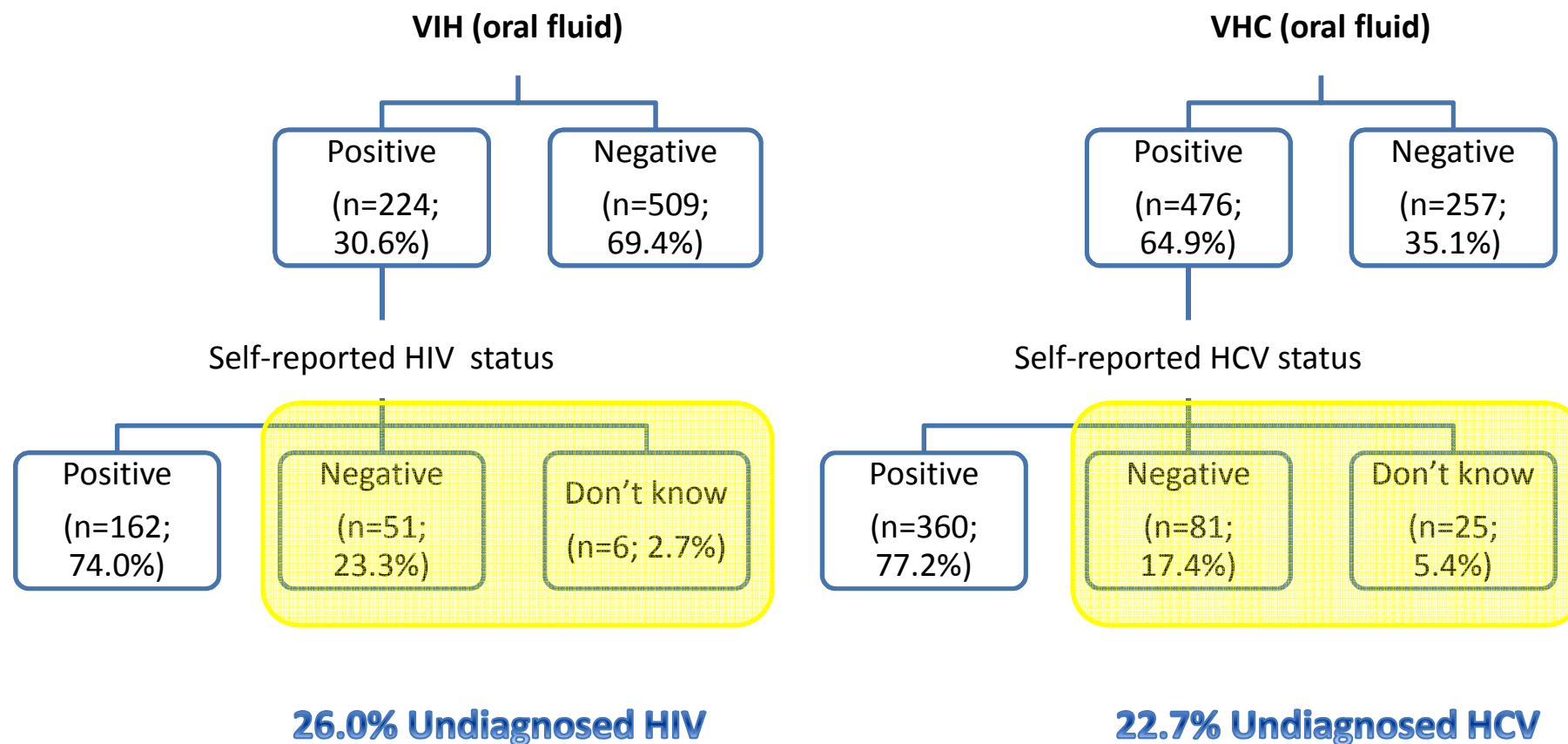
## HIV and HCV infection (oral fluid samples)



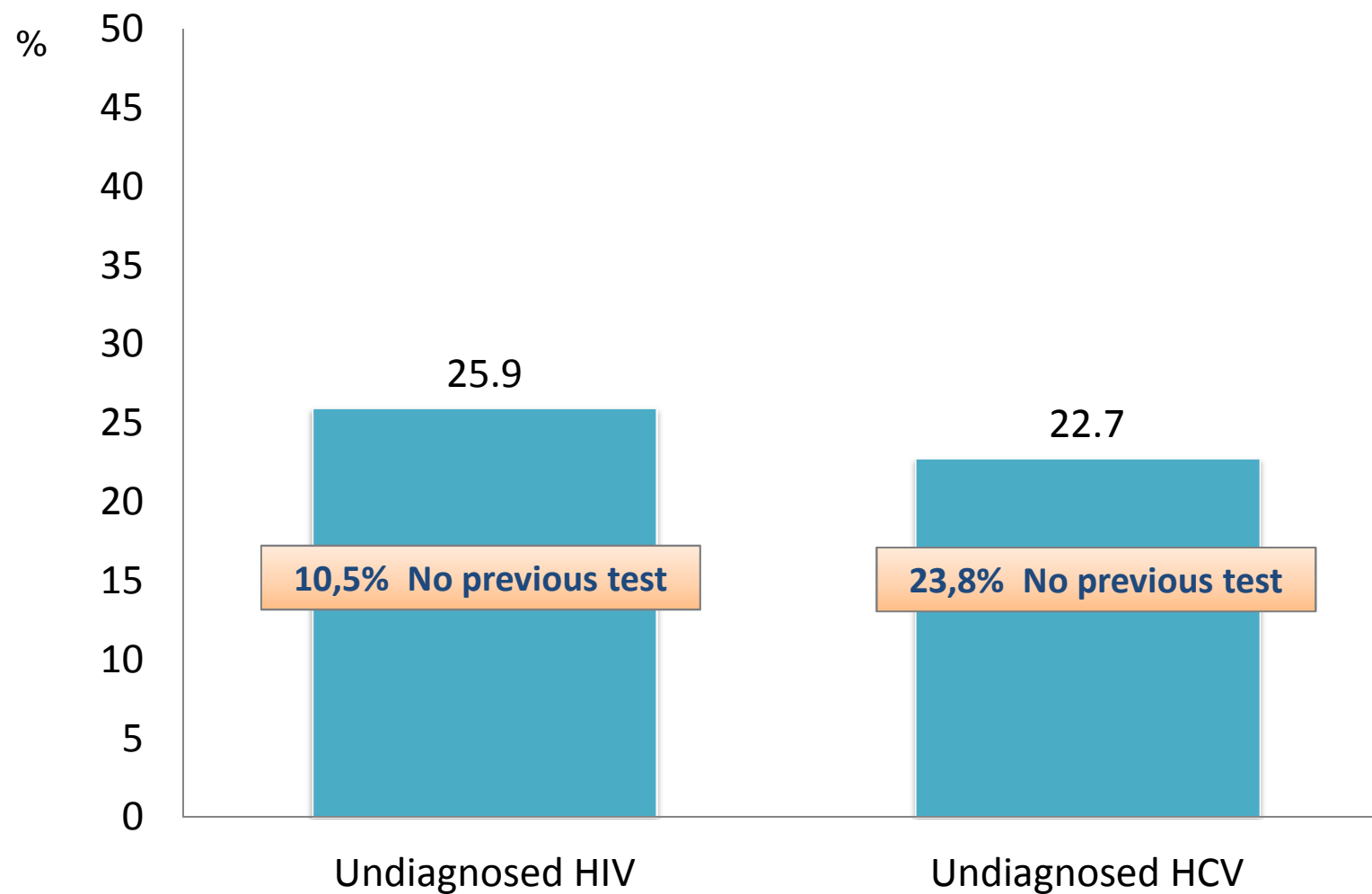
HIV prevalence: 30.6%

HCV prevalence: 64.9%

## Classification of PWID according to knowledge of HIV and HCV status



## Undiagnosed infections and testing



## Socio-demographic variables and undiagnosed HIV/HCV infection

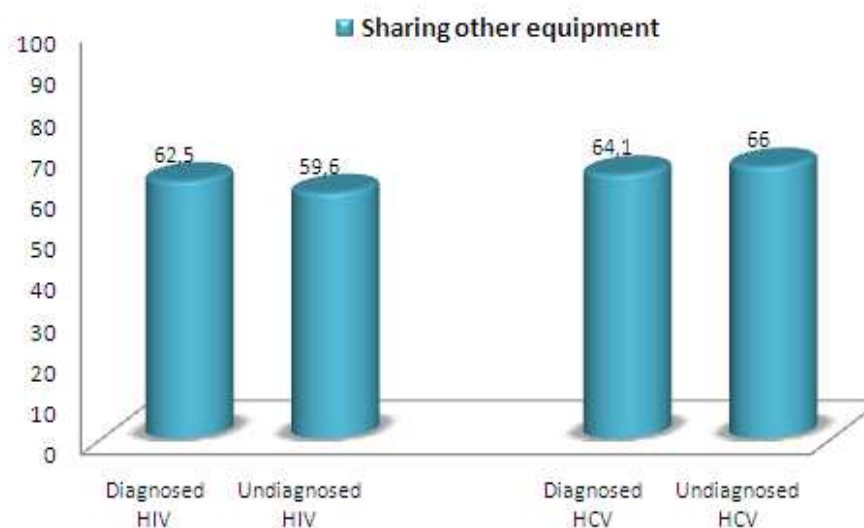
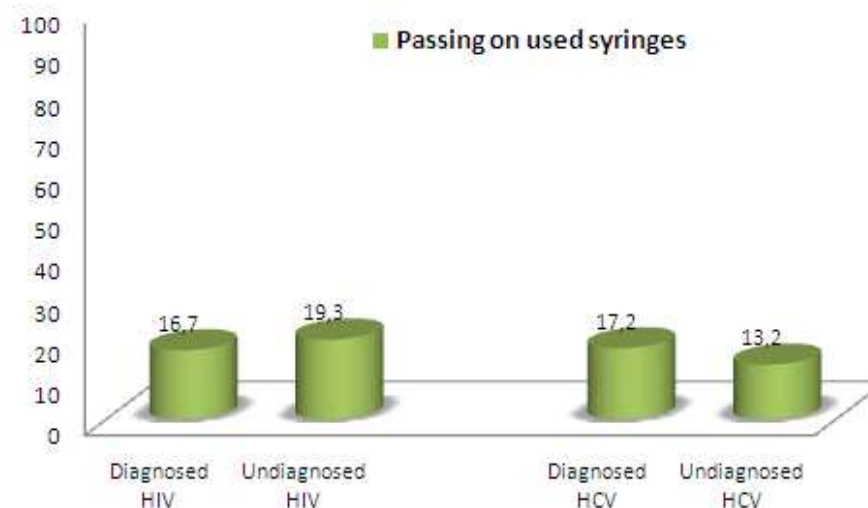
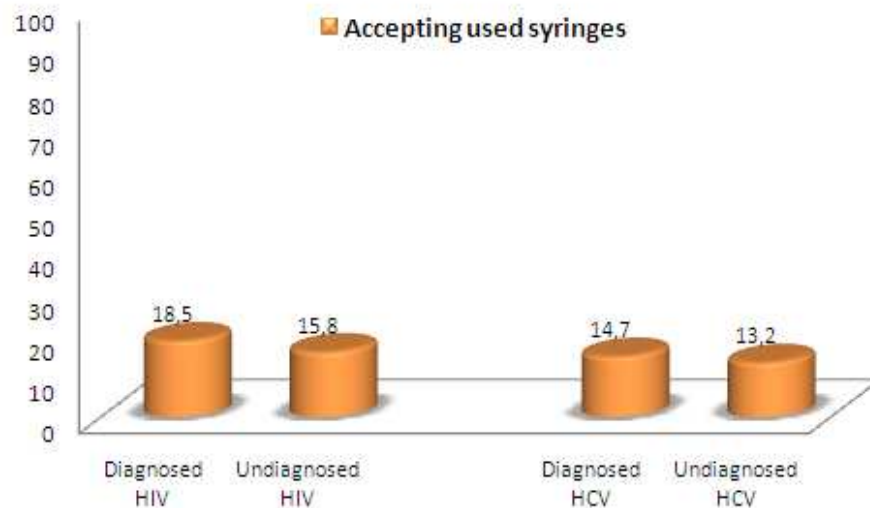
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	HIV infection		
	Diagnosed %	Undiagnosed %	
Age: Less than 30	3.7	22.8	<0.05
Male	81.9	93.0	<0.05
Migrant	21.5	49.1	<0.05
New injectors (<5 years)	9.3	14.0	ns
In prison (at some time)	88.9	66.7	<0.05
In treatment (at some time)	97.5	80.7	<0.05

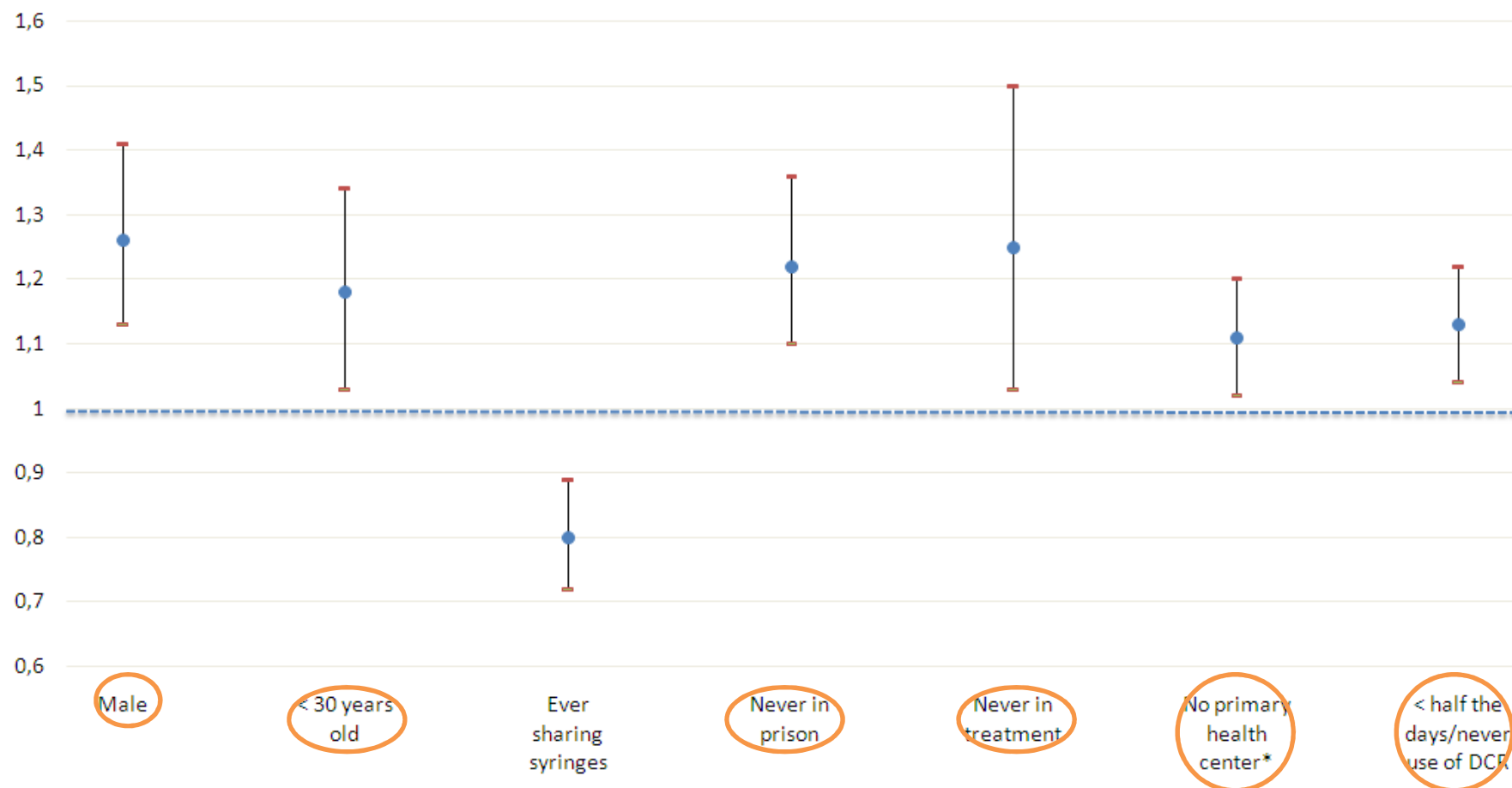
	HCV infection		p
	Diagnosed %	Undiagnosed %	
Age: Less than 30	11.9	28.3	<0.05
Male	84.7	84.8	ns
Migrant	34.6	62.3	<0.05
New injectors (<5 years)	11.4	28.3	<0.05
In prison (at some time)	72.9	63.2	<0.05
In treatment (at some time)	91.7	74.5	<0.05

# Injection risk behaviors and undiagnosed HIV/HCV infection

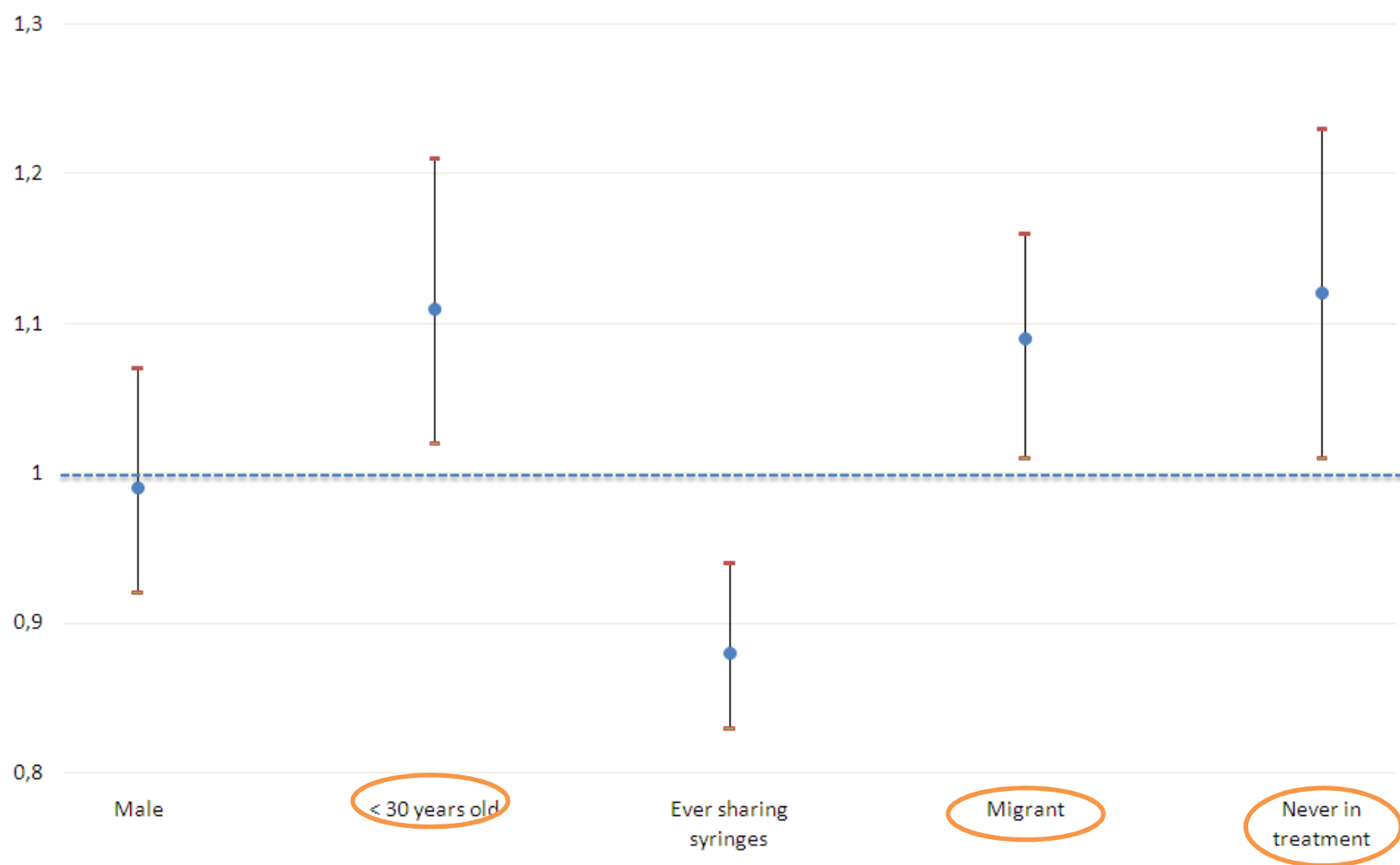
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## Factors associated with undiagnosed HIV infection (multivariate analysis)



## Factors associated with undiagnosed HCV infection (multivariate analysis)





# Limitations

- Findings may not be generalizable to PWID in other settings.
- Information bias: underestimation of self-reported behaviours
- Cross-sectional study: limits to infer causality.

# Conclusions

- A significant proportion of PWID in Catalonia who attended HRC are unaware of their HIV and/or HCV infection.
- Risky injection practices persist among PWID aware of their HIV and/or HCV infection.
- Counseling and testing programs are specially needed for young injectors and migrants.
- Rapid HIV and HCV tests can play an important role in order to increase the rate of early diagnosis, especially in populations who do not seek conventional medical care.

# Acknowledgements

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**The authors thank all interviewers, participants and the centres who have collaborated in this study:**

Àmbit Prevenció; SAPS, Baluard, CAS Lluís Companys; “El Local” Sant Adrià; AEC-Gris Hospitalet; Asaupa’m Badalona; Asaupa’m Santa Coloma; CAS Reus, AIDE Terrassa, Alba Terrassa, Arrels Lleida; CAS Reus; Bus Creu Roja Constantí, IAS Girona, CADO Vic.

**Members of the REDAN Group:** Jordi Casabona, Cinta Folch, Anna Esteve, Alexandra Montoliu, Rafa Muñoz (CEEISCAT); Victoria Gonzalez, Vicenç Ausina (Servei Microbiologia HUGTiP); M. Teresa Brugal, Albert Espelt, Carmen Vecino (Agència de Salut Pública de Barcelona); Xavier Majó, Joan Colom (Subdirecció General de Drogodependències); Mercè Meroño, Anna Altabas (Àmbit Prevenció).

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