



## Unsafe use, knowledge and HCV infection

Results from a sero-behavioural  
survey of current injectors  
in Germany (the DRUCK-Study)

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# Background

- The main transmission route of bloodborne infections among people who inject drugs is the use of contaminated needles, syringes and other injecting paraphernalia
- HIV
  - Mainly transmitted through the common use of needles and syringes
- HCV
  - Can also be transmitted through common use of other injecting paraphernalia, such as filters and cookers, and also through sharing of water containers



# Objectives

- To identify specific factors associated with the use and passing on of used injection equipment among current injectors
- To recommend measures for the prevention of unsafe use behaviour



# Methods

## Design

- Multicentre cross-sectional, sero-behavioural survey 2011-15
- 8 cities in Germany
- People who injected drugs during the last 12 months
- Respondent driven sampling





## Methods

### Questionnaire-assisted interviews

- Trained interviewers
- Sociodemographics, substances used, unsafe use, sexual practices, incarceration experience, knowledge, health status, testing history



### Capillary blood (Dried Blood Spots)

- Serological and molecular testing for HIV, hepatitis B and C





## Results

- 2.077 injectors recruited
  - 1.720 (83%) injected in the last 30 days
  - 1.270 included in the analysis (pilot cities excluded)

Women: 24,8%

Median age: 38 years

First generation migrants: 20,5%

Mainly sleeping rough/in shelters in the last year: 17,5%

HIV prevalence: 5,4%

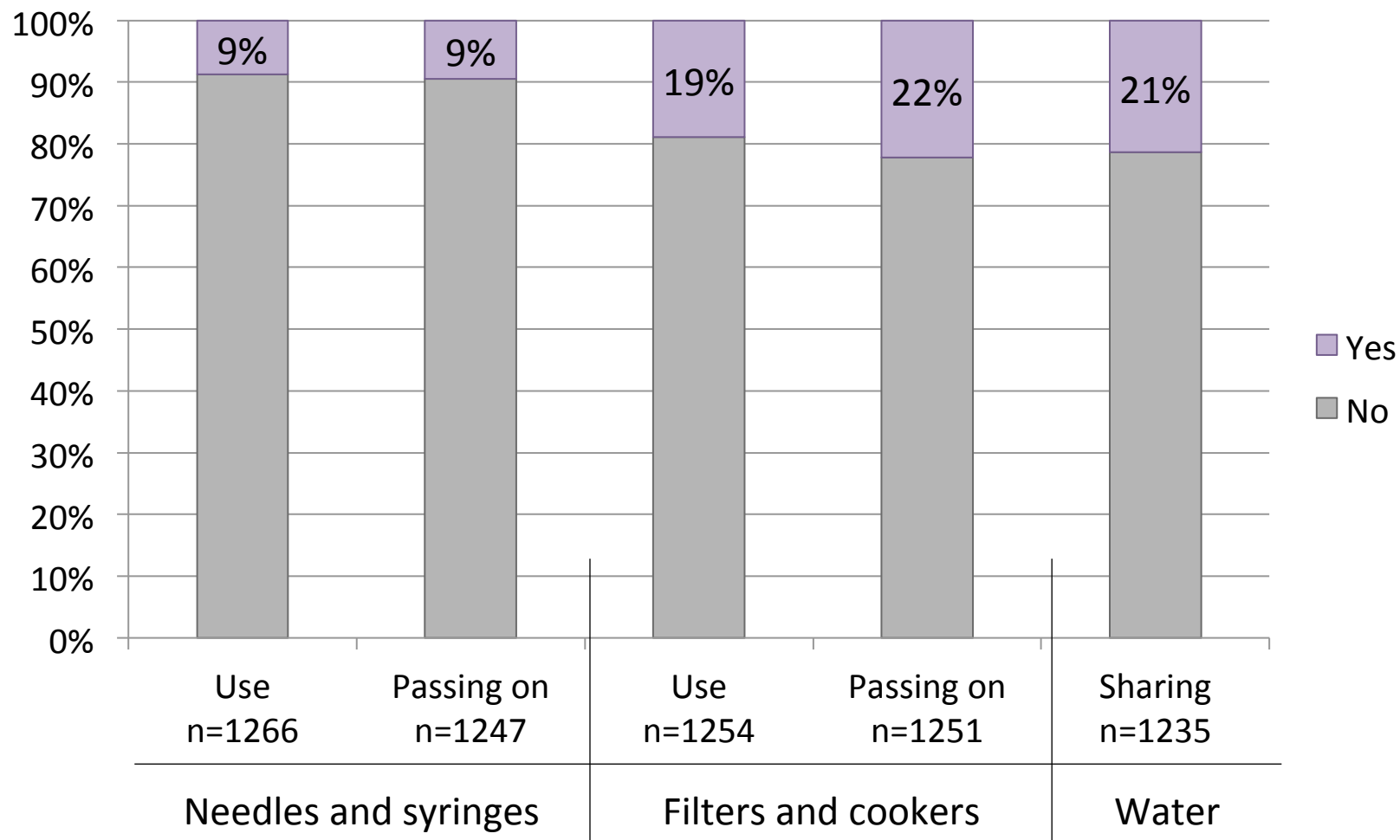
HCV prevalence: 70,4%

Currently infected: 47,6%

Previously infected: 22,8%



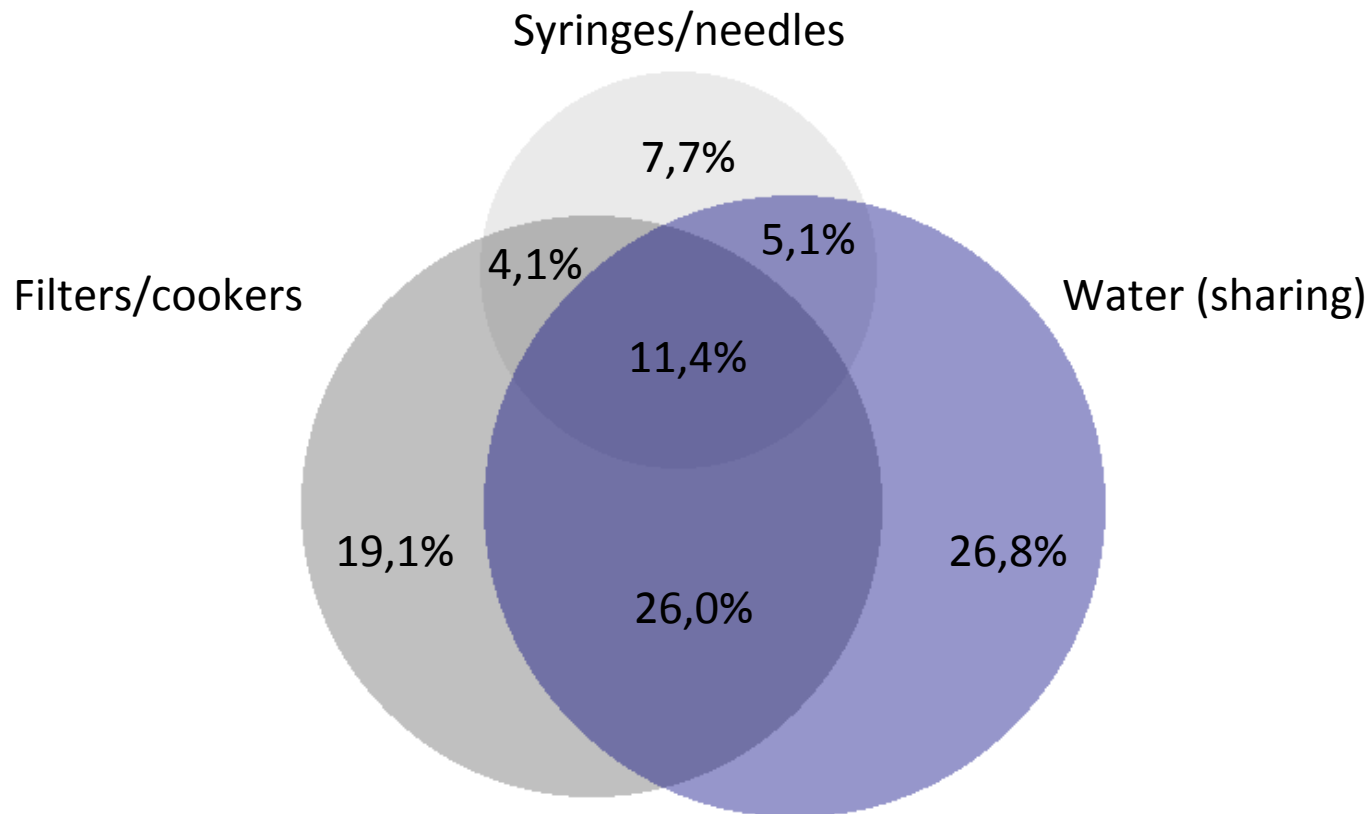
## Unsafe use in the last 30 days





## Unsafe use

- 565 reported to have *used* used equipment



→ 71,9% did not use used syringes/needles, only other paraphernalia





## Which factors may play a role in...

- ...using used needles/syringes?
- ...passing on used needles/syringes?
- ...using used filters/cookers?
- ...passing on used filters/cookers?
- ...using water from a shared container?

→ five models using multivariable logistic regression

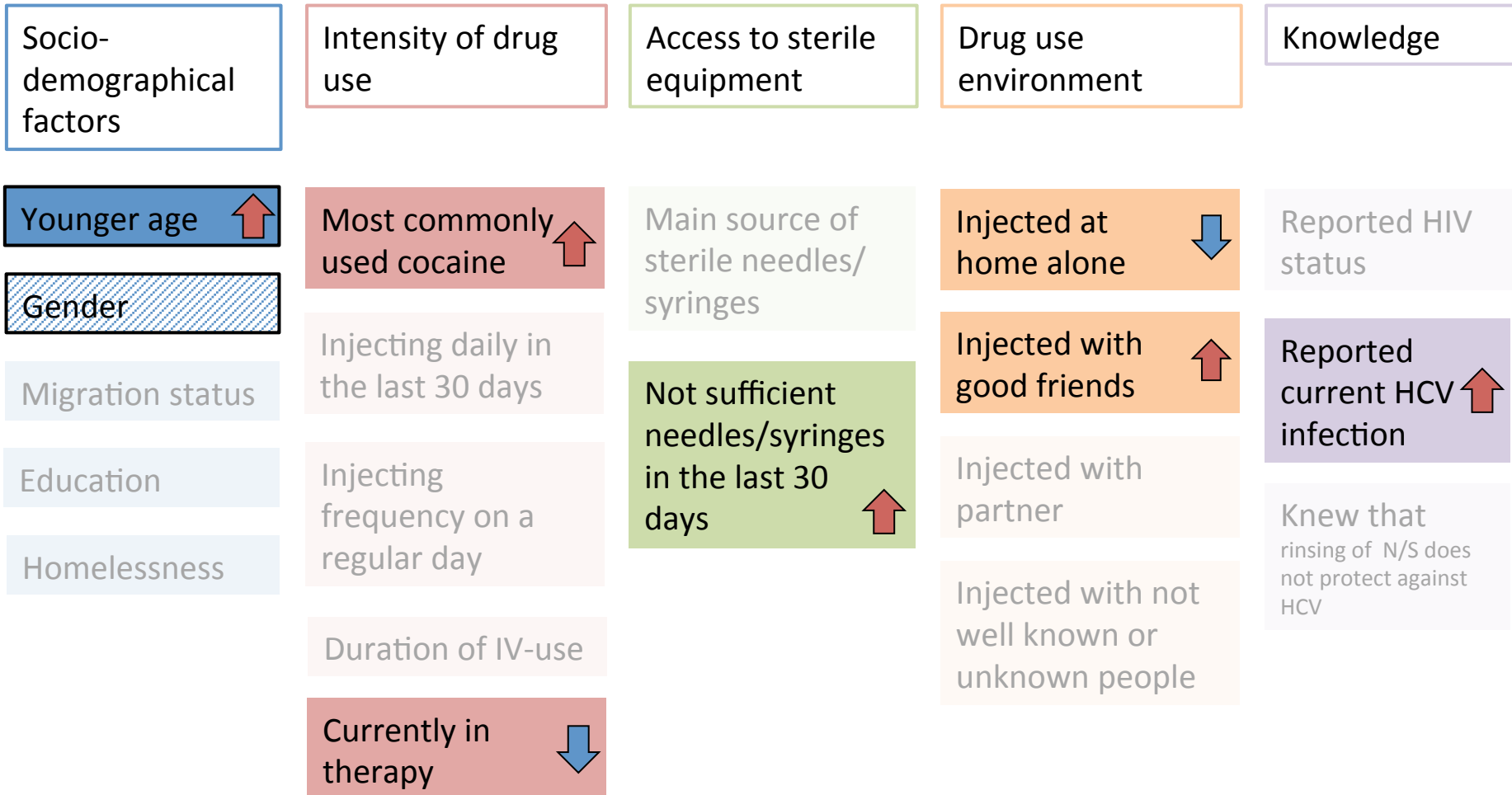


## Which factors may play a role?

Socio-demographical factors	Intensity of drug use	Access to sterile equipment	Drug use environment	Knowledge
Age	Most commonly used substances	Main source of sterile needles/syringes	Injected at home alone	Reported HIV status
Gender	Injecting daily in the last 30 days	Not sufficient needles/syringes in the last 30 days	Injected with good friends	Reported HCV status
Migration status	Injecting frequency on a normal day		Injected with partner	Knowledge about transmission (five facts)
Education	Duration of IV-use		Injected with not well known or unknown people	
Homelessness	Currently in therapy			

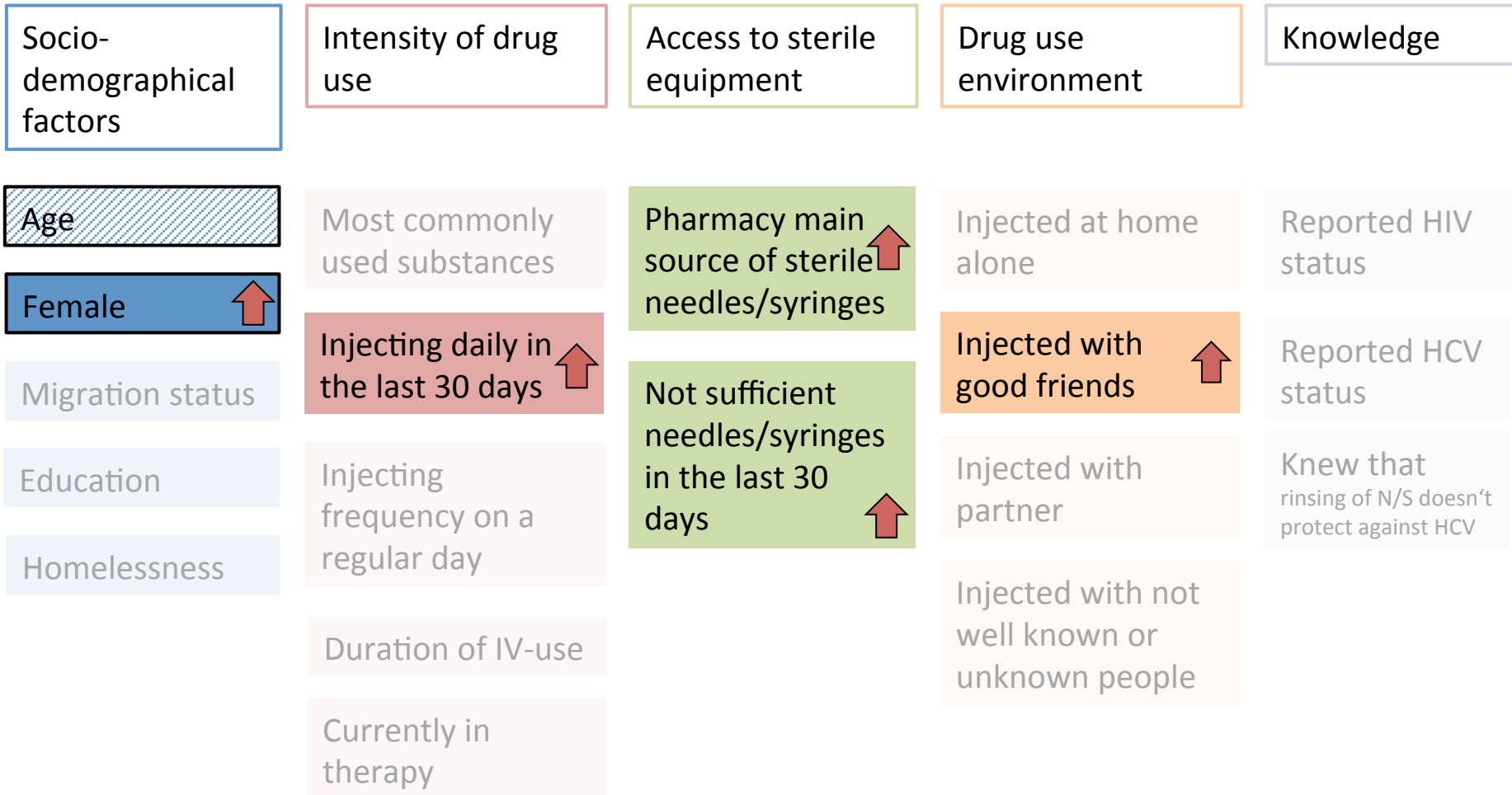


# Using used needles/syringes



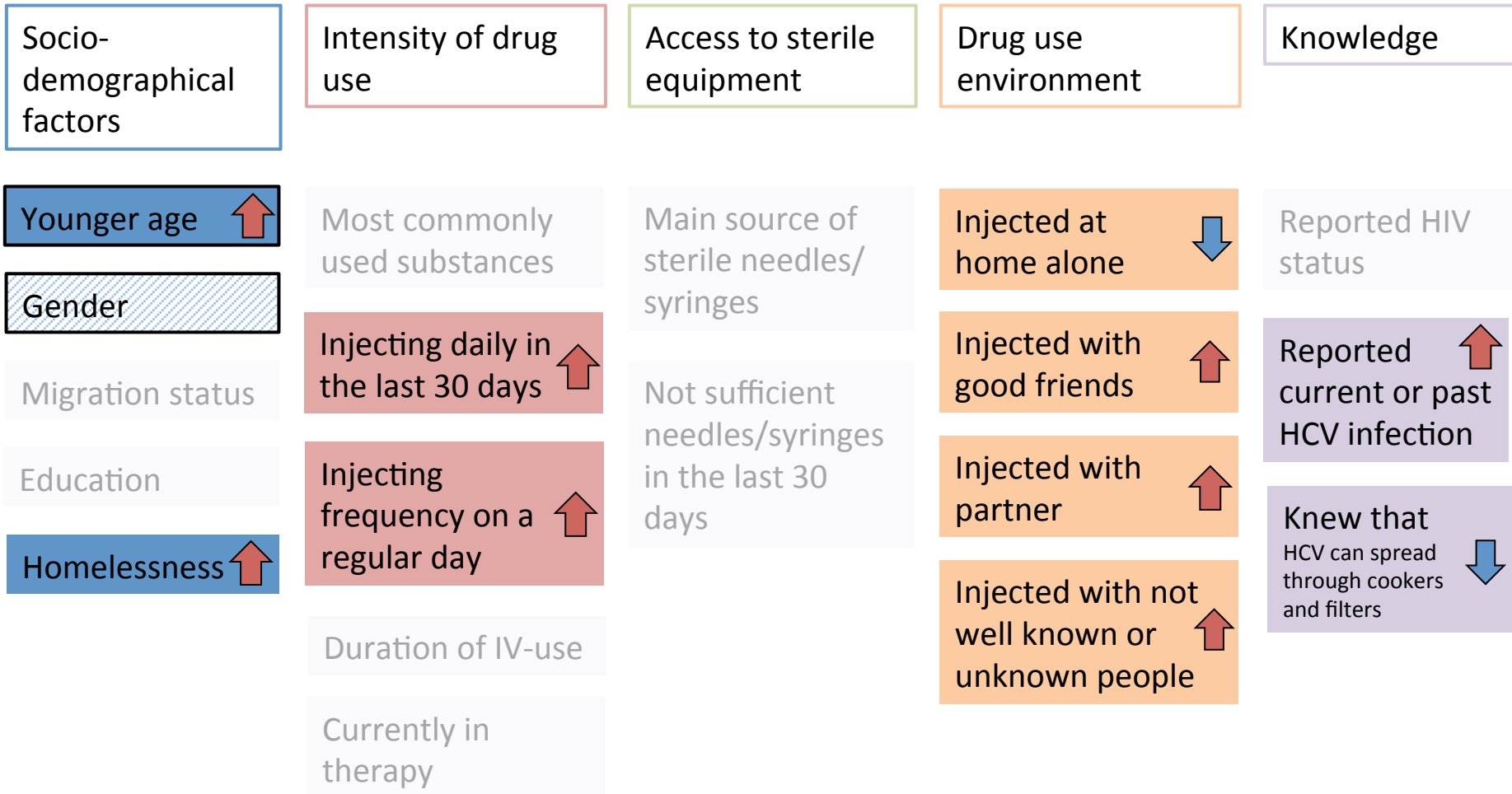


# Passing on used needles/syringes





# Using used filters/cookers





# Passing on used filters/cookers





# Using water from shared container





## Conclusions

- **Current unsafe use behaviour** (mainly sharing of filters, cookers and water) was reported **by up to a fifth** of persons who injected drugs in the last 30 days
- Those who reported being **HCV positive were more likely to use used needles/syringes** and **filters/cookers**
- Not many differences found between **use** and **passing on** of equipment
- Differences in factors associated with sharing of **needles/syringes** and **filters/cookers/water**





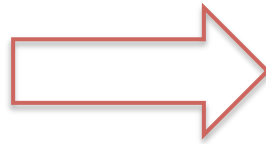
## Conclusions

- The likelihood to share **needles/syringes** was associated with factors related to **demand** and **access** to these
- The likelihood to share **filters/cookers** and **water** was associated with factors related to **drug using environment** and **the level of knowledge on transmission of HCV**
- **Younger age** was associated with a higher likelihood of all sharing behaviours
- Other **sociodemographic factors** (such as migration status and level of education) seemed not to play a role

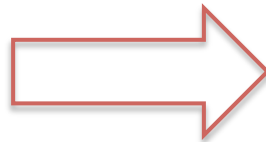


## Recommendations

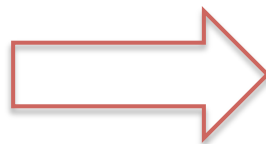
**Demand-oriented provision** of sterile equipment, including filters, cookers and water



Improved **access** to safe consumption facilities and NSP



Improved **knowledge** on transmission among injectors  
→ educational measures



Prevention of unsafe use and transmission of blood borne viruses among people who inject drugs



Thank you for your  
attention!

Questions?



# Use and passing on of used **needles/syringes** (1)

\* p < 0.05    \*\* p < 0.01    \*\*\*p < 0.001

		Use of used N/S		Passing on of used N/S	
		OR	95% CI	OR	95% CI
<b>SOCIODEMOGRAPHICS</b>					
Age	<25 years	2.3	0.9-5.8	1.8	0.8-3.8
	25-39 years	<b>1.7*</b>	1.0-2.8	1.5	1.0-2.4
	40+ years	Ref.		Ref.	
Female		1.1	0.7-1.8	<b>1.8**</b>	1.2-2.8
<b>CONSUMPTION PATTERNS</b>					
Most frequently injected substance	Heroin	Ref.			
	Cocaine	<b>1.9*</b>	1.1-3.2		
	Heroin and cocaine	2.4	0.9-6.5		
	Other	1.2	0.7-2.2		
Injected daily				<b>3.0***</b>	2.0-4.6
Currently in addiction treatment/OST		<b>0.6*</b>	0.4-0.9		
<b>ACCESS TO STERILE N/S</b>					
Main source to obtain sterile N/S	Low threshold drug service			Ref.	
	Pharmacy			<b>1.6*</b>	1.0-2.7
	Other			0.9	0.4-1.9
Not sufficiently provided with sterile N/S		<b>1.8*</b>	1.1-2.9	<b>1.6*</b>	1.1-2.5



## Use and passing on of used **needles/syringes** (2)

		Use of used N/S		Passing on of used N/S	
		OR	95% CI	OR	95% CI
<b>CONSUMPTION PARTNERS</b>					
Mostly consumed...	...alone at home	<b>0.4**</b>	0.3-0.7		
	...with friends	<b>1.6*</b>	1.0-2.5	<b>1.8**</b>	1.2-2.7
<b>SELF-REPORTED HCV-STATUS</b>					
Self-reported HCV Status	Negative		Ref.		
	Currently infected	<b>2.2**</b>	1.2-4.0		
	Cleared infection	2.0	0.9-4.6		



## Use and passing on of **used filters/cookers** and sharing of **water** (1)

		Use of used F/C		Passing on of used F/C		Sharing water	
		AOR	95% CI	AOR	95% CI	AOR	95% CI
<b>SOCIODEMOGRAPHICS</b>							
Age	<25 years	<b>2.9**</b>	1.5-5.7	1.6	0.9-2.9	<b>2.2*</b>	1.1-4.3
	25-39 years	<b>1.5*</b>	1.0-2.2	<b>1.6**</b>	1.1-2.1	1.4	1.0-2.0
	40+ years	Ref.		Ref.		Ref.	
Female		1.4	1.0-2.1	0.9	0.6-1.3	0.9	0.6-1.3
Mainly living on the street		<b>1.8**</b>	1.2-2.8			<b>1.6*</b>	1.1-2.4
<b>CONSUMPTION PATTERNS</b>							
Injected daily <sup>1</sup>		<b>1.8**</b>	1.2-2.5	<b>1.9***</b>	1.4-2.6	<b>1.5*</b>	1.1-2.1
Frequency of injection on a normal consumption day <sup>1</sup>	Once	Ref.		Ref.		Ref.	
	2-4 times	1.5	0.9-2.4	<b>2.7***</b>	1.7-4.3	<b>1.6*</b>	1.0-2.6
	>4 times	<b>2.3**</b>	1.4-4.1	<b>2.9***</b>	1.7-4.9	<b>3.1***</b>	1.8-5.2

\* p < 0.05    \*\* p < 0.01    \*\*\* p < 0.001



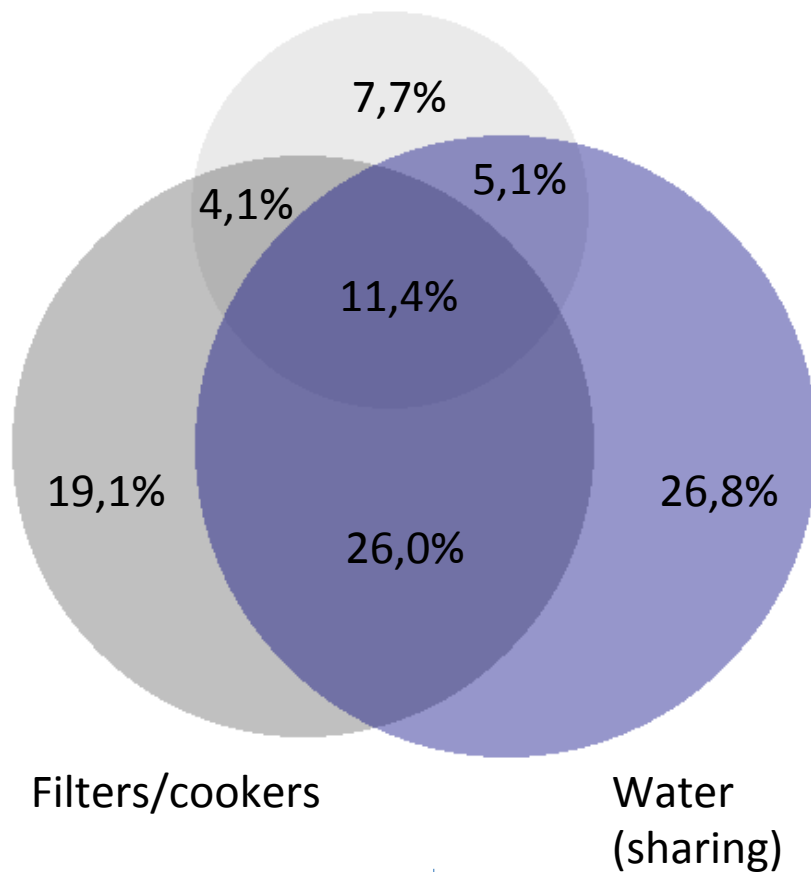
## Use and passing on of used filters/cookers and sharing of water (2)

		Use of used F/C		Passing on of used F/C		Sharing water	
		AOR	95% CI	AOR	95% CI	AOR	95% CI
<b>CONSUMPTION PARTNERS</b>							
Mostly consumed...	...alone at home	<b>0.6**</b>	0.4-0.8				
	...with friends	<b>2.5***</b>	1.7-3.6	<b>1.5*</b>	1.1-2.0	<b>3.2***</b>	2.3-4.5
	...with steady partner	<b>2.1***</b>	1.3-3.3	<b>1.8**</b>	1.2-2.7	<b>3.7***</b>	2.4-5.6
	...with persons I don't know (well)	<b>1.9*</b>	1.1-3.3	<b>2.6***</b>	1.7-4.1		
<b>KNOWLEDGE and SELF-REPORTED HCV-STATUS</b>							
Self-reported HCV Status	Negative	Ref.				Ref.	
	Currently infected	<b>2.0***</b>	1.3-3.2			<b>1.8**</b>	1.2-2.7
	Cleared infection	<b>1.9*</b>	1.1-3.6			1.4	0.8-2.6
Knew that HCV can be transmitted by sharing f/c	No	Ref.		Ref.			
	Yes	<b>0.5*</b>	0.3-0.9	<b>0.4***</b>	0.3-0.7		
Knew that HCV can be transmitted by sharing water	No					Ref.	
	Yes					<b>0.5***</b>	0.3-0.7

\* p < 0.05    \*\* p < 0.01    \*\*\* p < 0.001



### Using Syringes/needles



### Passing on Syringes/needles

