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Factors associated with a ten-fold increase in people who inject drugs initiating HCV direct acting antiviral therapies in Australia in 2016

Conflicts of Interest

Lisa Maher: nothing to declare

Coauthors:

Jenny Iversen, Beth Catlett, Philip Cunningham: nothing to declare

Gregory Dore: Advisory board member and received honorarium from Roche, Merck, Janssen, Gilead, Bristol-Myers Squibb, Abbvie. Received research grant funding from Roche, Merck, Janssen, Gilead, Bristol-Myers Squibb, Vertex, Boeringher Ingelheim, Abbvie and travel sponsorship from Roche, Merck, Janssen, Gilead, and Bristol-Myers Squibb.

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Background

Hepatitis C virus (HCV) Ab sero-prevalence high at >50% among people who inject drugs (PWID) in most developed countries, including Australia

Despite a universal health care system, hepatitis C treatment uptake among Australians who inject drugs has been low historically, at 1-2%

DAA therapies listed on the Pharmaceutical Benefits Scheme (PBS) in March 2016

→ subsidized access for all Australian adults (aged ≥18 years)

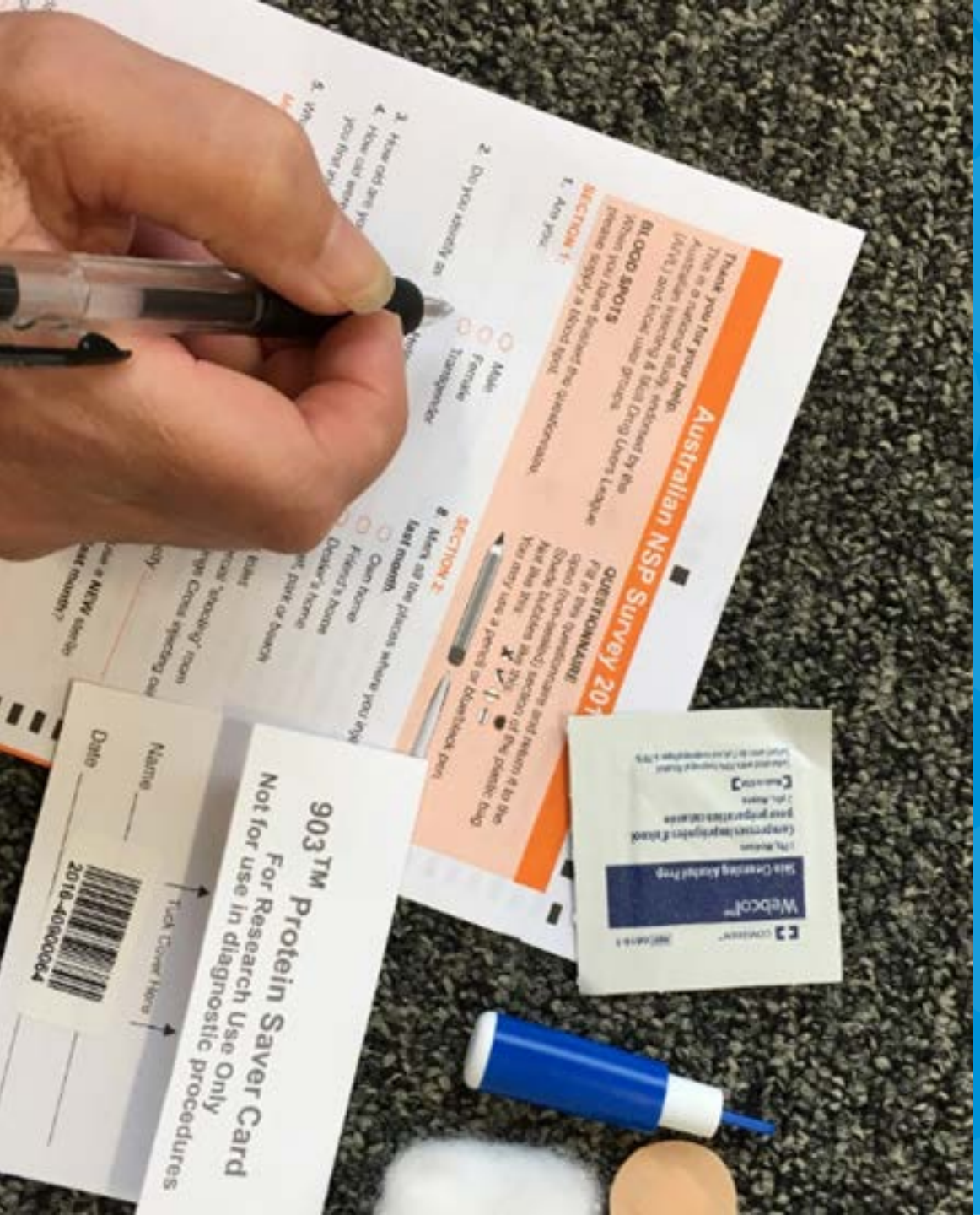
→ no restrictions by disease stage, ongoing substance use or provider type

→ range of DAAs available

→ dispensing fee payable per prescription ($38.80/$6.30).

Aims

1) Investigate recent (last 12 months) uptake of hepatitis C treatment among a large national sample of PWID in Australia in October 2016 (7 months after DAA PBS listing)
2) Examine factors associated with recent uptake of HCV treatment
3) Estimate prevalence of active infection and compare to baseline estimates collected in October 2015 (5 months prior to PBS DAA listing).



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Methods

Australian NSP Survey (ANSPS):

Biobehavioural sentinel surveillance system

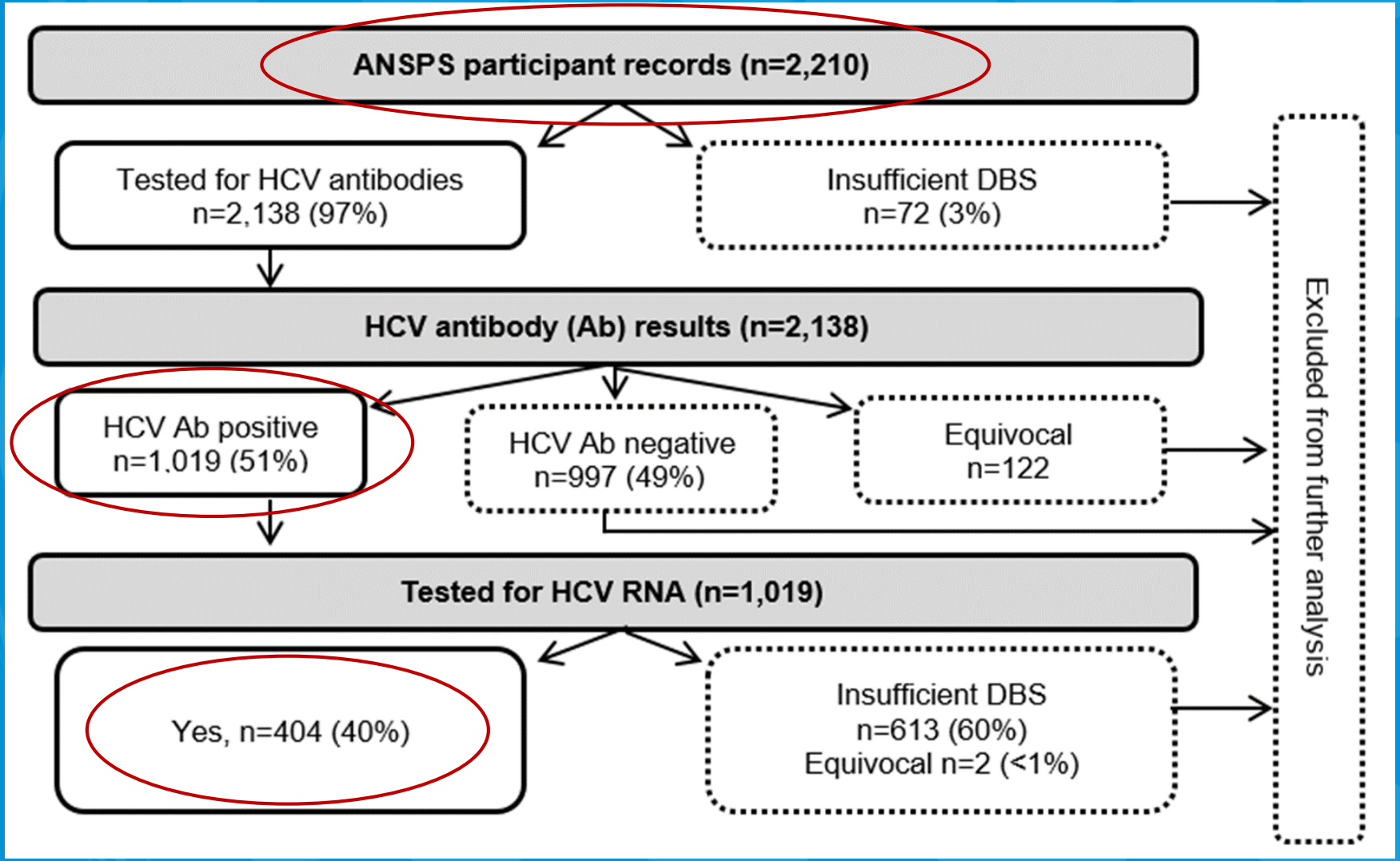
Annually repeated cross-sectional survey

Conducted at ~50 NSPs, all states and territories

2200-2400 respondents per annum

Dried blood spots tested for HIV and HCV antibody and HCV RNA.

ANSPS sample: HCV serology and molecular results



Results

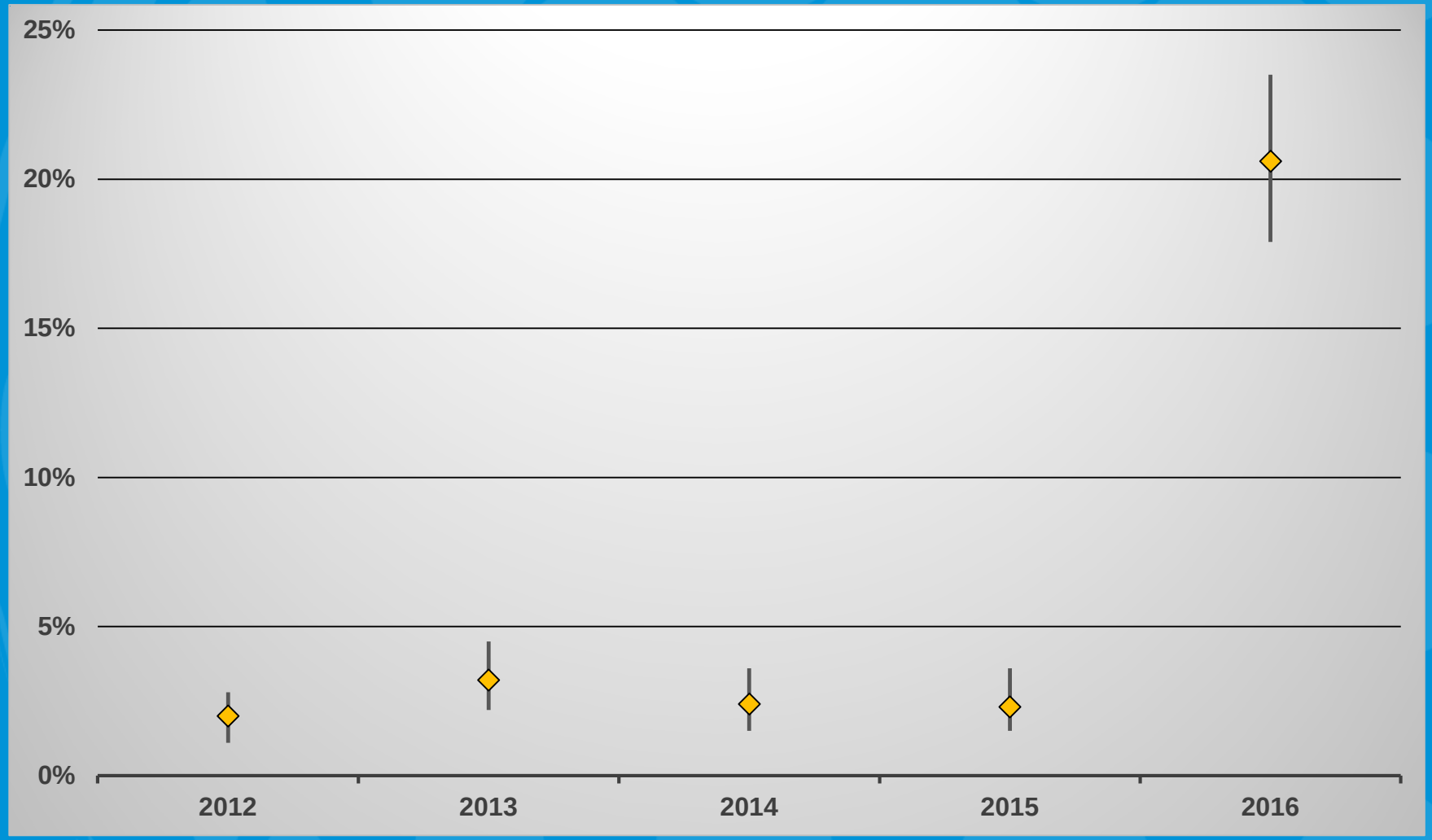
HCV Ab positive sample: RNA & HCV treatment

	Unweighted	Weighted
Active infection (HCV RNA detected):		
No treatment history*	223	232
Recent treatment history*	20	17
Prior treatment history*	11	12
Cleared infection (HCV RNA undetected):		
No treatment history Spontaneously cleared (21% adjusted)	81	86
Recent treatment history*	60	48
Prior treatment history Prior treatment induced clearance (2% adjusted)	9	9

Results

* n=314 (75% adjusted) assessed as eligible for treatment in the 12 months to October 2016

Recent initiation of HCV treatment, 2012-2016



* among those assessed as eligible for treatment

Results

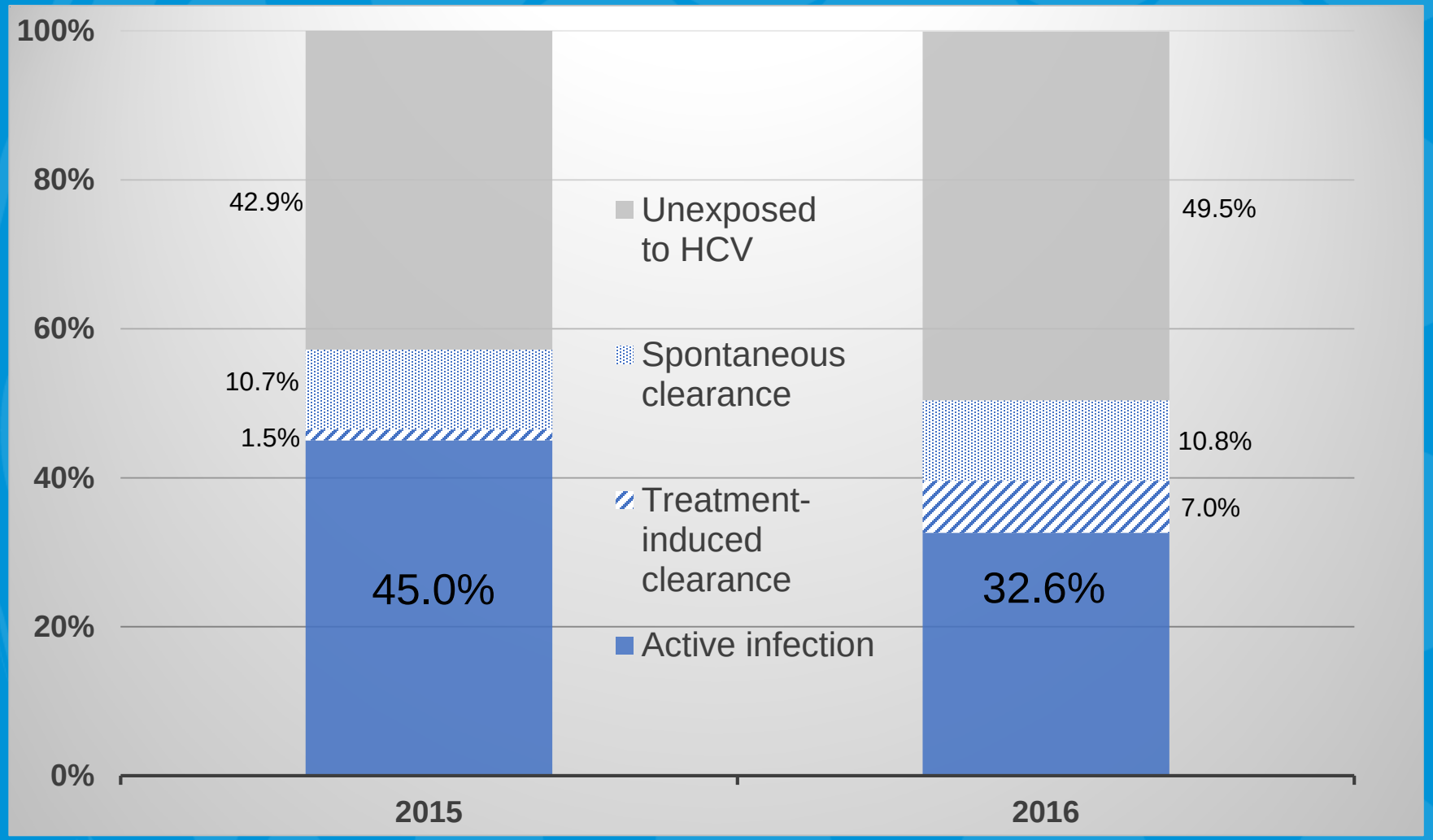
Factors associated with recent initiation of HCV treatment

Results

	Recent treatment	No recent treatment	AOR
Age, quartiles:			
≤37 years (ref)	16 (18)	73 (82)	--
38-42 years	23 (30)	54 (70)	1.89 (0.89-4.01)
43-49 years	13 (16)	66 (84)	0.76 (0.33-1.75)
≥50 years	28 (41)	41 (59)	2.84 (1.34-6.01)
Freq. of injection:			
Daily +(ref)	33 (20)	129 (80)	--
<Daily	45 (32)	97 (68)	1.99 (1.14-3.45)
Receptive syringe sharing (last month):			
Yes (ref)	4 (7)	52 (93)	--
No	75 (29)	180 (71)	4.91 (1.68-4.36)

No associations p<0.10: gender, Indigenous status, born overseas, drug last injected, current engagement in OST, recent imprisonment or geographic location (state or regional/metro)

ANSPS: Viraemic prevalence 2015 and 2016



Results

Strengths & Limitations

Strengths:

Well established surveillance mechanism, national sample

DBS simple and easy to administer → good sensitivity and high specificity for HCV antibody and RNA testing

Capacity for future monitoring:

- → Equity of access, including among potentially marginalized subpopulations
- → Viraemic prevalence

Limitations

Initial 7 months likely captured those highly motivated to initiate treatment

<50% of anti-HCV positive respondents had sufficient DBS for RNA testing

RNA testing expensive/not included in routine surveillance.

Conclusions

Demonstrated rapid and significant increase in HCV treatment initiation among PWID following unrestricted access to DAA therapies

Treatment uptake among PWID (20%) higher than among the general population of people living with chronic HCV infection (14% in 2016)

→ Reflects implementation of specific initiatives prioritising access to HCV treatment among PWID, including within opioid substitution therapy (OST), prison settings and peer-based services

Population-level declines in viraemic prevalence among PWID feasible in settings with unrestricted access to DAAs and high coverage harm reduction programs

However potentially vulnerable sub-populations of PWID at highest risk of transmission (frequent injectors and those reporting recent syringe sharing) were less likely to initiate treatment → need to continue to monitor equity of access to guide progress towards elimination goals by 2030.

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Co-authors: Jenny Iversen, Beth Catlett, Philip Cunningham, Gregory Dore and Jason Grebely

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