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Reduction in hepatitis B vaccine uptake in young people who inject drugs (<25 years old) and recent Initiates to injecting (<3 years): England, Wales and Northern Ireland, 2018 and 2019

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Background

- Self-reported uptake of the hepatitis B virus (HBV) vaccine (receiving at least one dose) is high in England, Wales and Northern Ireland (71% in 2019) ¹.
- Vaccine uptake has plateaued at around 73% between 2010 and 2019¹.
- Decline in HBV prevalence across the UK from 16% in 2010 to 9.5% in 2019 reflects a decline in exposure and transmission of, HBV over time
- HBV vaccine uptake among young people (<25 year old) and / or recent initiate to injecting has declined over the same period.
 - Young people: 66% in 2010 to 57% in 2019¹
 - Recent initiates: 64% in 2010 to 49% in 2019¹

1. [Shooting Up: infections among people who inject drugs in the UK, 2019 - an update, December 2020 \(publishing.service.gov.uk\)](#)

Aims and objectives

Among HBV negative unvaccinated young and /or recent initiates to injecting who reported injecting drugs in the last year we explore:

- Reported risky behaviour to assess the implication of these on the prevalence of HBV
- Contact with health services in the last year in those not vaccinated to assess the potential missed opportunities for vaccination
- Factors associated with HBV vaccine uptake in the young and recent initiates to injecting to explore how vaccine provision could be improved.

Methods

- **Data source:** Unlinked Anonymous Monitoring (UAM) Survey of People Who Inject Drugs (PWID)
 - Cross-sectional annual bio-behavioural survey in England, Wales and Northern Ireland
 - People who have ever injected psychoactive drugs recruited through drug services provide a biological sample and self-completed a questionnaire.
- **Inclusion criteria:**
 - Participants taking part in 2018/2019 with vaccination status reported
 - PWID who were < 25 years and / or had recently (<3 years) started to inject drugs
 - Anti-HBV core antigen (HBc)-negative participants who injected drugs during the previous year
- **Analysis:**
 - Factors associated with HBV vaccination
 - Univariable analysis (Chi2) ($p < 0.05$)
 - Logistic regression model with likelihood ratio tests

Results

37%, (130/354) HBV-negative young / recent initiates who injected the previous year reported not being vaccinated for HBV

Sexual and injecting risks	% of unvaccinated
Shared needles/syringes in the last month	46%
Sex in the last year	64%
of whom ≥ 2 sexual partners	33%
of whom never used condoms	50%
Engaged in transactional sex	
Yes, but not in the last year	2%
Yes, in the last year	5%
Injected heroin	98%
Injected crack	75%
Injected speed	15%
Injected other drugs	5%

There is risk of acquiring HBV through risky sexual and injecting behaviour

Contact with services	% of unvaccinated
Used needle exchange in the last year	94%
Used a GP in the last year	52%
On treatment for drug use	
In the past	15%
Currently	58%
Used Emergency department (A&E) in the last year	33%
Used GUM or STI clinic in the last year	12%
Ever been to prison	57%
Ever homeless	72%

There are missed opportunities of vaccinating against HBV

Factors associated with HBV vaccine uptake among young PWID and / or recent initiates to injecting

Characteristic ^a	Number Vaccinated	<i>p</i>	Univariate		Multivariate	
	(%)		OR	95% CI	AOR	CI
Gender						
Male	65%	0.082				
Female	35%		0.68	0.43-1.05	^b	
Engaged in transactional sex						
Never	60%	0.030				
Yes but not in last year	84%		3.5	0.99 - 12.4	^b	
Yes in last year	78%		2.29	0.89 - 5.89		
Ever imprisoned						
No	53%	<0.001				
Yes	74%		2.53	1.59 - 4.01	2.05	1.22 - 3.45
Ever homeless						
No	54%	0.047				
Yes	66%		1.67	1.00 -2.77	^b	
Ever been in treatment						
No	48%	0.019				
Yes, but no currently	64%		1.86	0.88 - 3.90	^b	
Yes, currently in treatment	67%		2.19	1.25 - 3.86	1.95	1.04 - 3.64
Used a GP or family doctor in the last year						
No	57%	0.035				
Yes	68%		1.63	1.03 - 2.57	^b	

^a No associations with gender, using a needle exchange either currently or previously, injecting cocaine, heroin, speed or other drugs in during the preceding 12 months, geographical region ,country of birth and using a sexual health clinic the previous year.

^b Entered in the multivariate analyses but not included in the final model.

Conclusions

- Vaccine uptake is lower among young PWID and in those who have recently began injecting.
- This is concerning as a higher proportion of PWID are vulnerable to HBV infection during the first years of injection.
- Moreover risky behaviour imply that this group of injectors remain at a higher risk of acquiring HBV.
- Missed opportunities indicate that more can be done to engage those in contact with services.
- Initiatives to promote vaccine uptake are essential in protecting this group from HBV acquisition.

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