The Prevalence of Chronic Untreated Hepatitis C Virus Infection and Associated Risk Factors in Irish Prisoners
A Cross Sectional Study

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BACKGROUND AND AIMS

An estimated 26% of prisoners globally have been exposed to hepatitis C virus (HCV) infection, increasing to 64% in those with a history of injecting drug use (IDU). There is limited data on the prevalence of hepatitis C in prisoners. This study aims to estimate the prevalence of untreated chronic HCV infection and identify associated risk factors in an Irish prison setting.

METHODS

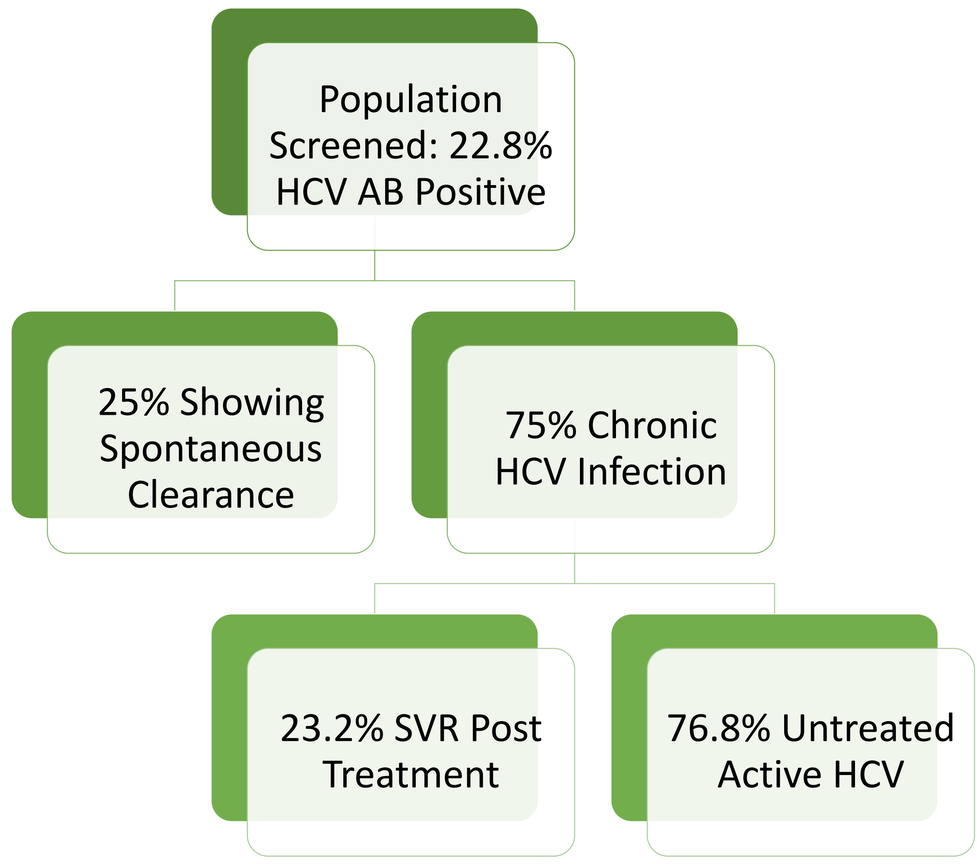
A single site cross sectional prevalence study. Mountjoy prison – a high security male custodial prison, housing 538 male prisoners located in Dublin, Ireland. A total of 78% of prisoners consented to participate in the study, with 403 completing an enhanced HCV screening programme and 298 completing a risk questionnaire.

TABLE 1: RISK FACTORS

Risk Factors	P –value
Injecting drug use (IDU)	<0.0001*
History of prison tattoo	<0.0001*
Unsterile community tattoo	<0.0001**
Sharing needles	<0.0001*
Other drug taking paraphernalia	<0.0001*
Sharing razors	=0.95
Sharing toothbrushes	=0.32

* Indicates significant risk factor
**Indicates significant risk factor independent of IDU

FIGURE 1: SCREENING



Reflecting an untreated chronic HCV infection population prevalence of 13.1%!!

RESULTS

Of those screened, 22.8 % were HCV antibody positive with 25.0 % of this group showing spontaneous clearance. Of those with chronic infection, 23.2 % had an SVR post treatment and 76.8 % untreated active HCV infection, reflecting an untreated chronic HCV infection population prevalence of 13.1% (Figure 1).

Of those exposed to HCV, 11% were co-infected with HIV and 6% with HBV

The prevalence of HCV infection among prisoners with a history of IDU was 79.7 %. Significant risk factors identified were IDU ($p<0.0001$), history of prison tattoo ($p<0.0001$), unsterile community tattoo ($p<0.0001$), sharing needles ($p<0.0001$) and other drug taking paraphernalia ($p<0.0001$). The sharing of razors ($p= 0.95$) and tooth brushes ($p= 0.32$) while incarcerated was not shown to be a significant risk. On multivariate analysis, a history of non-sterile community tattoo was the only significant risk factor independent of IDU ($p=0.005$, $\beta=0.468$) (Table 1).

CONCLUSIONS

Estimating the prevalence of untreated HCV infection in prison populations is essential to reliably inform HCV treatment strategies and to capture treatment uptake and outcomes along with HCV reinfection rates and prevention strategies.

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