REDUCED HEPATITIS C INCIDENCE ASSOCIATED WITH RAPID TREATMENT SCALE-UP IN AUSTRALIAN PRISONS: TREATMENT-AS-PREVENTION IN THE STOP-C STUDY

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Background:
Limited empirical evidence exists for hepatitis C virus (HCV) treatment-as-prevention. The Surveillance and Treatment of Prisoners with hepatitis C (SToP-C) study assessed HCV treatment-as-prevention in four Australian prisons.

Methods:
People incarcerated in two maximum- (male) and two medium-security prisons (one male, one female) were enrolled from late-2014 to 2019. Following HCV testing, participants were monitored for risk behaviors and HCV, among three sub-populations: 1) uninfected (HCV antibody negative); 2) previously infected (HCV antibody positive, HCV RNA negative); 3) infected (HCV antibody and HCV RNA positive). Uninfected and previously infected (at-risk) participants were followed every 3-6 months for HCV primary infection and re-infection, respectively. Infected participants were assessed for treatment, initially standard of care treatment (by prison health services), followed by direct-acting antiviral (DAA) treatment scale-up from mid-2017 (12 weeks sofosbuvir/velpatasvir, through SToP-C). HCV incidence was compared between pre- and post-treatment scale-up periods.

Results:
Of 3,691 participants, 719 (19%) had detectable HCV RNA and 2,965 were at-risk of primary infection (n=2,240) or re-infection (n=725) at baseline. DAA treatment was initiated in 349/499 eligible participants during scale-up. Among at-risk population with longitudinal follow-up (n=1,643; median age 33 years; 82% male), 31% reported injecting drug use in prison. HCV incidence declined by 48%, from 8.31 to 4.35/100 person-years between pre- and post-treatment scale-up periods (Figure) [Incidence Rate Ratio (IRR): 0.52, 95%CI: 0.36, 0.78]. The incidence of primary infection declined from 6.64 to 2.85/100 person-years (IRR: 0.43, 95%CI: 0.25, 0.74), while incidence of re-infection declined from 12.36 to 7.27/100 person-years (IRR: 0.59, 95%CI: 0.35, 1.00). Adjusted analysis indicated 50% reduction in HCV risk between pre- and post-treatment scale-up periods (adjusted Hazard Ratio: 0.50, 95% CI: 0.33, 0.76).

Conclusion:

DAA treatment scale-up was associated with reduced HCV incidence in prison, indicative of HCV treatment-as-prevention. The findings support broad DAA treatment scale-up among incarcerated populations.

Disclosure of Interest Statement:
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