CHANGES IN DRUG AND ALCOHOL USE AND INJECTION RISK BEHAVIOURS AMONG PEOPLE WHO INJECT DRUGS DURING AND FOLLOWING HCV DIRECT-ACTING ANTIVIRAL TREATMENT: THE SIMPLIFY AND D3FEAT STUDIES

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Background:
The simplification of HCV treatment with direct-acting antiviral (DAA) therapies has raised concerns regarding possible increases in drug use and risk behaviours among people who inject drugs (PWID) following treatment. Yet, few studies have investigated this question. Our aim was to examine changes in drug and alcohol use and injecting risk behaviours during and following DAA therapy among PWID.

Methods:
SIMPLIFY and D3FEAT are phase IV clinical trials evaluating the efficacy of DAA therapy among PWID with recent injecting drug use (last six months) or those receiving opiate agonist therapy (OAT), through a network of 25 international sites (SIMPLIFY: sofosbuvir/velpatasvir for 12 weeks in PWID with recent injecting; D3FEAT: paritepravir/ritonavir/dasabuvir/ ombitasvir±ribavirin for 12 weeks in PWID with recent injecting or receiving OAT). Participants completed a behavioural questionnaire at baseline and follow-up at weeks 4, 8 and 12, 24 (SVR12) and 36 (SVR24). The impact of time in treatment and follow-up on longitudinally measured recent behavioral outcomes was evaluated using generalized estimating equations.

Results:
At baseline, of 190 participants (SIMPLIFY, n=103; D3FEAT, n=87) (mean age: 47; 75% male), 61% reported past-month injecting, and of these, 9% reported needle/syringe sharing. Current OAT was reported by 64% and hazardous alcohol use by 33%. During HCV treatment and follow-up, there was a decrease in most drugs injected: heroin (OR: 0.90 per incremental study visit, 95% CI: 0.85-0.96), other opioids (OR: 0.92, 95%CI: 0.85-1.00) and amphetamine (0.93; 95%CI: 0.87-1.00). No changes were observed for cocaine injection (OR: 1.03, 95%CI: 0.94-1.13) nor hazardous alcohol use (OR: 1.02; 95%CI: 0.96-1.08). Among those injecting, needles/syringe sharing decreased (OR: 0.81, 95%CI: 0.65-1.01).

Conclusion: Generally, drug use and injection risk behaviours decreased during and following HCV treatment among PWID. Yet, hazardous alcohol use remained unchanged, suggesting efforts are needed to better integrate alcohol use interventions within HCV care.

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