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## Background

Despite current guidelines prioritizing people who use drugs (PWUD) to receive HCV treatment, many healthcare providers remain concerned about the risk of re-infection after cure. An approach to mitigate this may be to identify those at particular risk and evaluate interventions to reduce its occurrence. We hypothesize that patients who attend their SVR12 appointment will have lower rates of re-infection than those who miss this appointment, as this can be understood as a function of patient stability and commitment to HCV cure.

## Methods

We analyzed charts of all active PWUD patients (drug use within <6 months of treatment initiation) who received all-oral DAA HCV therapy and who currently have a positive HCV-RNA. We then stratified them based on attendance of their SVR12 appointment.

## Results

From 12/14 to 04/18, 143 active PWUD have initiated HCV therapy. Patient characteristics are as follows: mean age 52 years, 23% female, 15% HIV co-infected, 63%/26% GT 1a/3, 34% encountered through a community outreach program, 10% reporting having experienced an opioid overdose event, 54% with confirmed poly-substance use, 49% on opioid substitution therapy. Of these, 117 achieved SVR12, 5 were lost to follow up (LTFU) on treatment, 4 were LTFU after treatment and remain LTFU (all 4 with negative EOT HCV RNA), 1 discontinued therapy prematurely, 12 with outcome still pending, and 4 experienced what can be classified as a late relapse or early re-infection. This gives us a per-protocol SVR rate of 96% (117/122). Of those with recurrent viremia (RV) (n = 4), none attended a visit scheduled at the SVR12 time-point. RV was diagnosed 14-52 (median 22) weeks after EOT. Of the 4 cases of RV, all were actively injecting drugs. All were of the same HCV genotype as noted at baseline and genotypic analysis is underway to differentiate relapse from reinfection.

**Table 1: Patient Characteristics (n = 143)**

Age (mean)	52
Female	33 (23%)
HIV co-infected	21 (15%)
Encountered through community outreach	49 (34%)
Opioid overdose event	14 (10%)
Polysubstance use (by UDS)	77 (54%)
On OST	70 (49%)
GT 1a	90 (63%)
GT 3	37 (26%)

**Table 2: Treatment Outcomes**

LTFU on TX	5
LTFU post TX	4
Discontinued	1
Late relapse/early re-infection	4
ITT SVR	117/131 (89%)
Per-protocol SVR	117/122 (96%)

## Conclusion

RV was associated with disengagement from care after EOT. Although this may simply be a correlate of poor treatment adherence and a predictor of relapse, it is possible that it defines a population at particular risk of early re-infection. More intensive follow-up post-EOT is indicated among HCV-infected PWUD with ongoing injection drug use, which may also afford an opportunity to develop interventions to reduce risk behaviors for HCV re-infection.

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