

# Drug and Alcohol use during HCV treatment in the real life among PWID in Southern Switzerland

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### Introduction

Several experiences in different settings and different countries have shown how HCV treatment of PWID is feasible and successful, if managed and delivered by facilities that adopt an adequate setting with a multidisciplinary model of care. The effectiveness of HCV treatment is related to adherence, as treatment failure has been mainly observed in patients who referred to frequently forget the daily dose of antiviral. A global assessment of the patient that includes the management of addiction, social status, psychiatric and physical comorbidities together with tailored strategies to maximize adherence, the management of side effects and drug-drug interactions is crucial to obtain positive results. Historically, active drug use and alcohol consumption has been considered a contraindication for HCV treatment and a major limit to treatment access, whereas PWID were excluded from experimental studies for HCV new generation drugs. More recently, clinical trials including patients with active substance use are providing good evidence of HCV therapy safety and efficacy in this population. On the other hand, limited data has been published on alcohol and illicit drugs consumption during HCV treatment in the real life.

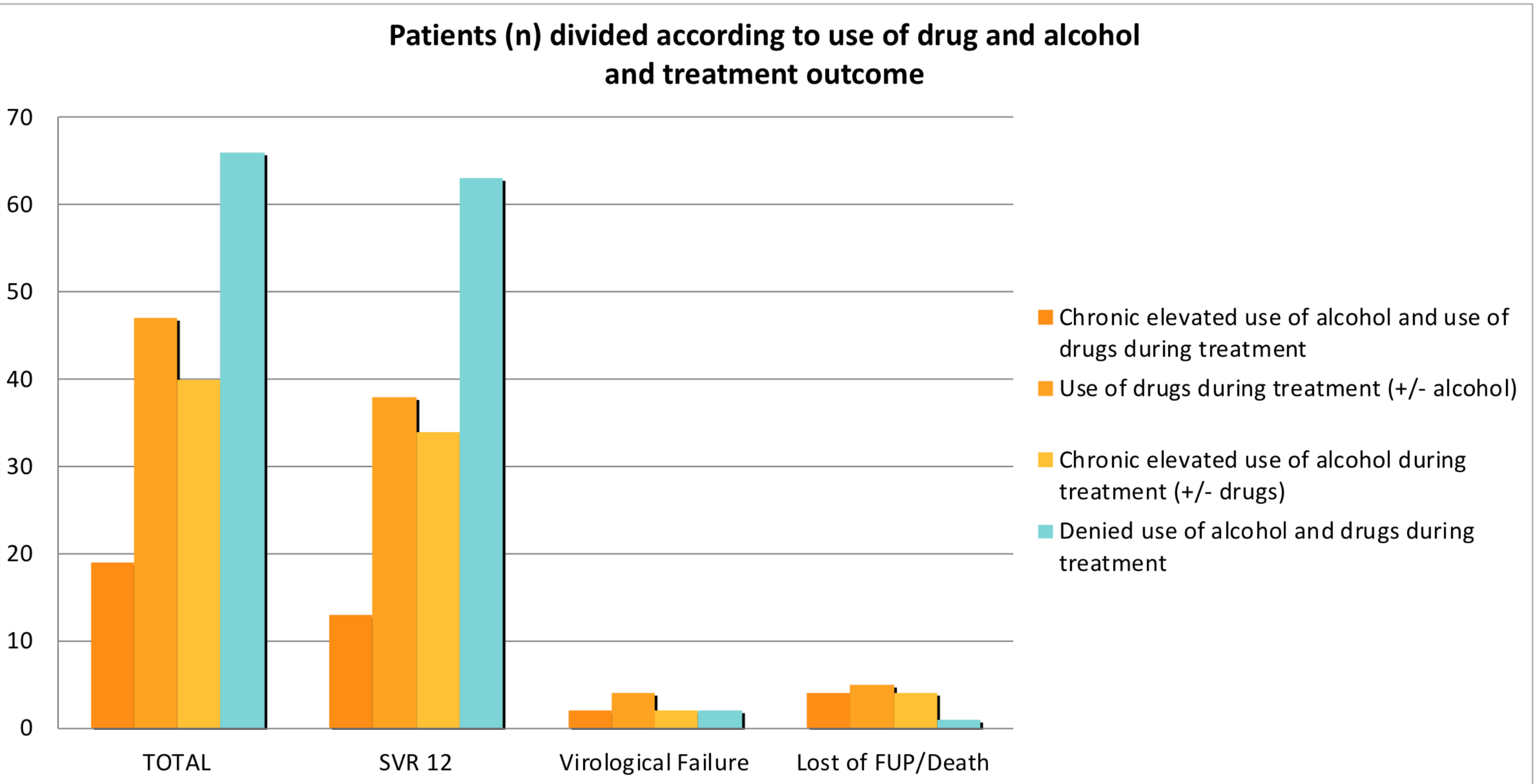
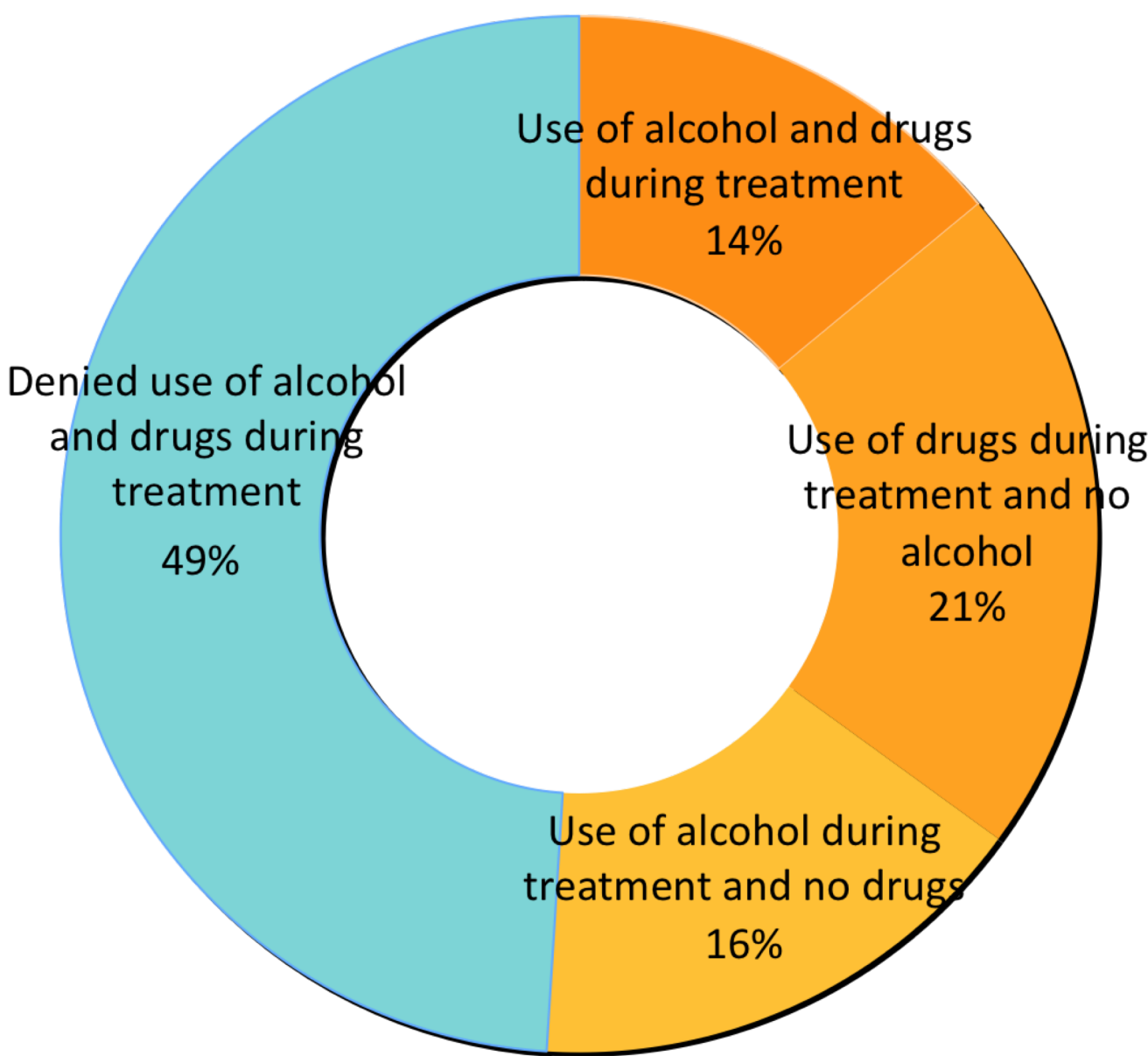
### Results

Among 134 treated patients, 47 (35%) referred active illicit drug use during HCV treatment. Of those active drug users, 2 were lost from the follow-up, 3 died during treatment e 4 encountered a virological failure, with a global sustained virological response 12 week after end of treatment (SVR12) of 90% in an analysis as treated (AT) and 80% in an intent-to-treat (ITT) analysis. Of the 87 patients who denied active drug use, 1 died during treatment and 2 had a virological failure with a SVR12 rate of 98% AT and 97% ITT. Of 40 patients (30%) who reported chronic alcohol consumption during HCV treatment, 2 were lost from the follow-up, 2 died during HCV treatment and 2 had a virological failure with a SVR12 of 93% (AT) and 85% (ITT). Of 94 patients who denied elevated alcohol consumption, 2 patients died during HCV treatment and 4 had a virological failure with a SVR12 of 96% (AT) and 94% (ITT). Patients who denied both illicit drug use and elevated alcohol consumption during HCV treatment were 66, of whom 2 encountered a virological failure and 1 died during treatment, with a SVR12 rate of 97% AT and 95% ITT. As the most disadvantaged subgroup, patients who were referring both active drug use and elevated alcohol consumption were 19, of whom 2 had a virological failure, 2 died during treatment and 2 were lost from the follow-up, resulting in a SVR12 rate of 86% AT and 68% ITT.

### Methods

We included in the analysis 134 patients on opioid substitution therapy (OST) attending a liver clinic, 2 clinics for addiction or a residential center for addiction in Southern Switzerland, who underwent HCV treatment since the introduction of directly active antivirals (DAA) in 2014. The behavior concerning drug and alcohol during HCV treatment was described according to clinical records, based on patient's report and physician's opinion. The outcome of HCV treatment was analysed and presented in relationship with the pattern of substance use and alcohol use.

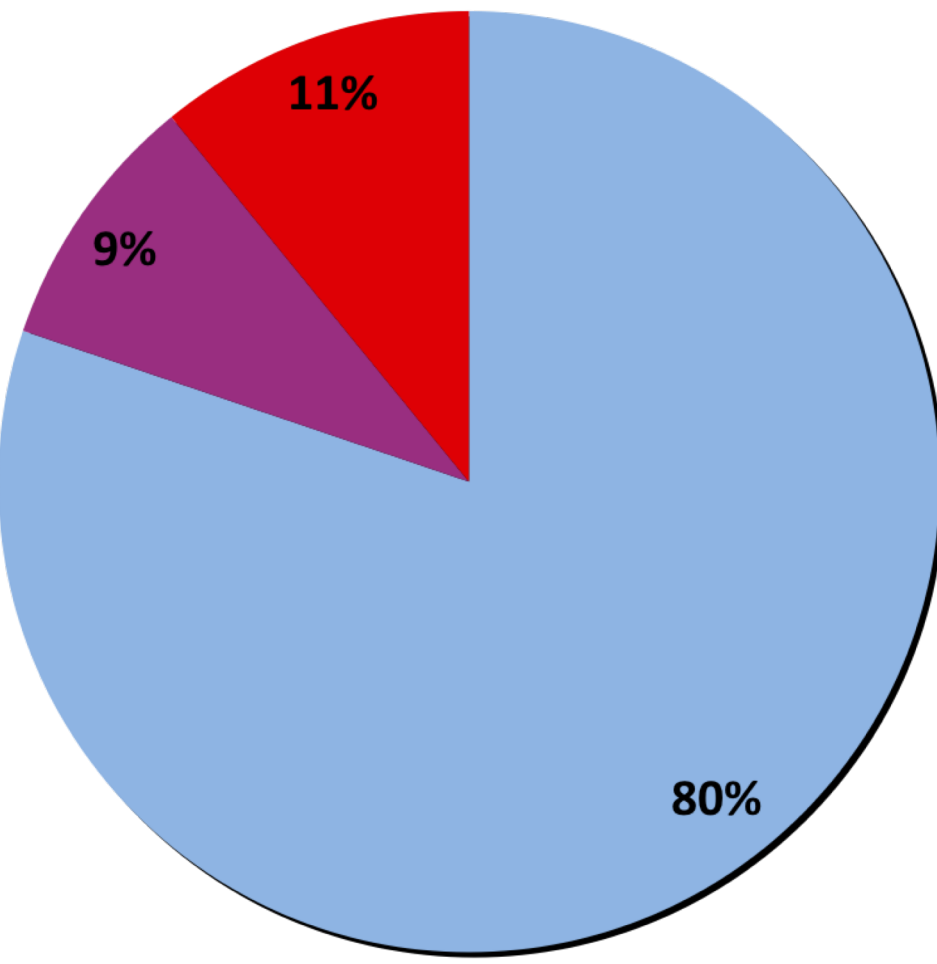
Patients' use of alcohol and drugs during treatment



PATTERNS OF DRUG AND ALCOHOL USE DURING TREATMENT	SVR 12	Virological Failure	Lost of FUP/Death
Chronic elevated use of alcohol and use of drugs	19	2	4
Use of drugs but no use of alcohol	28	2	1
Chronic elevated use of alcohol but no use of drugs	21	0	0
Neither use of alcohol nor of drugs	66	2	1
TOTAL	134	6	6

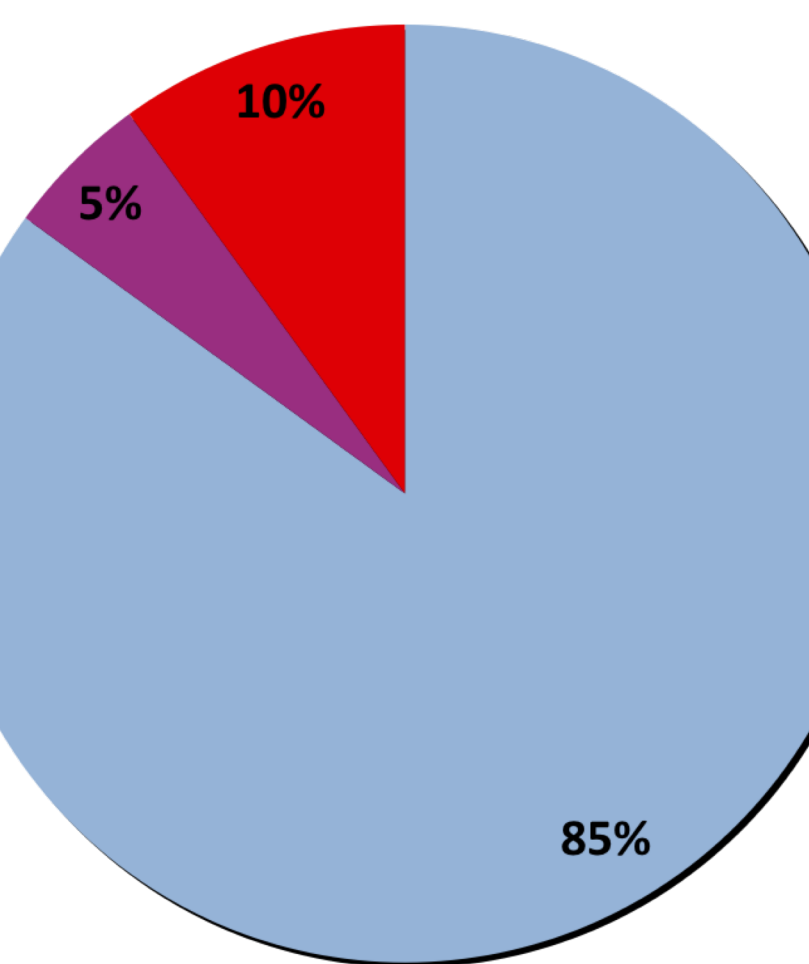
Use of drugs during treatment

SVR12 Failure Lost of FUP/Death



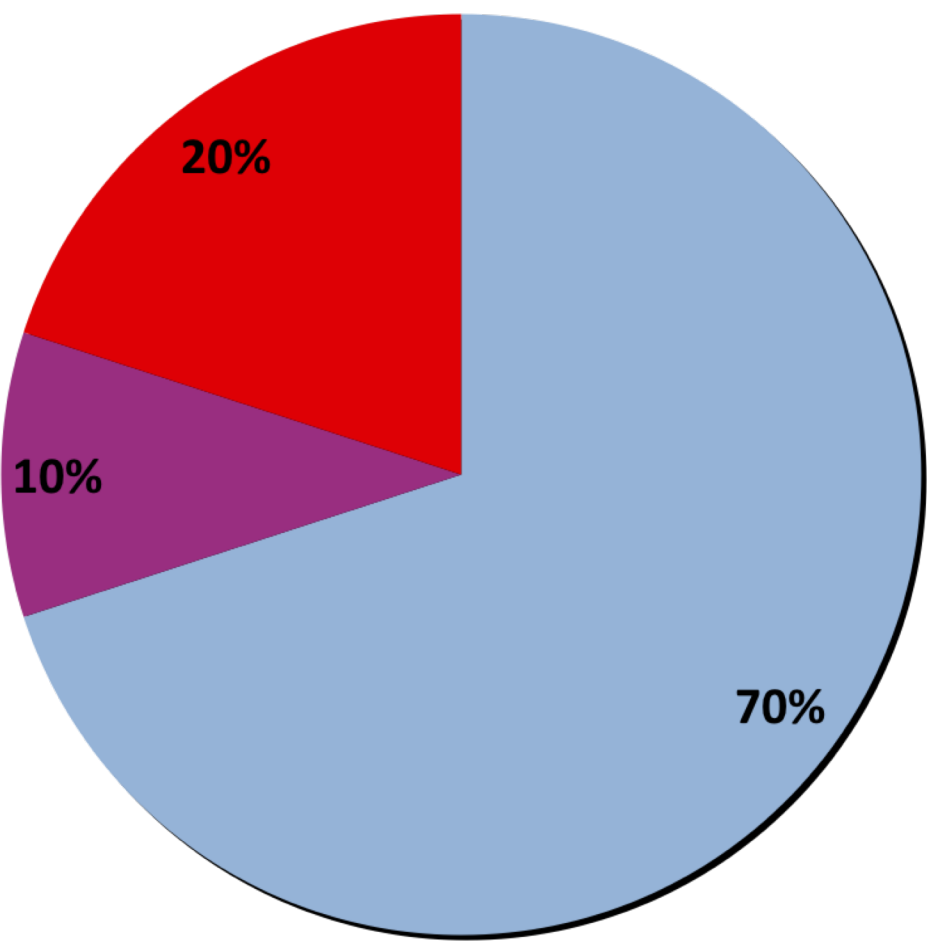
Chronic elevated use of alcohol during treatment

SVR12 Failure Lost if F/Death



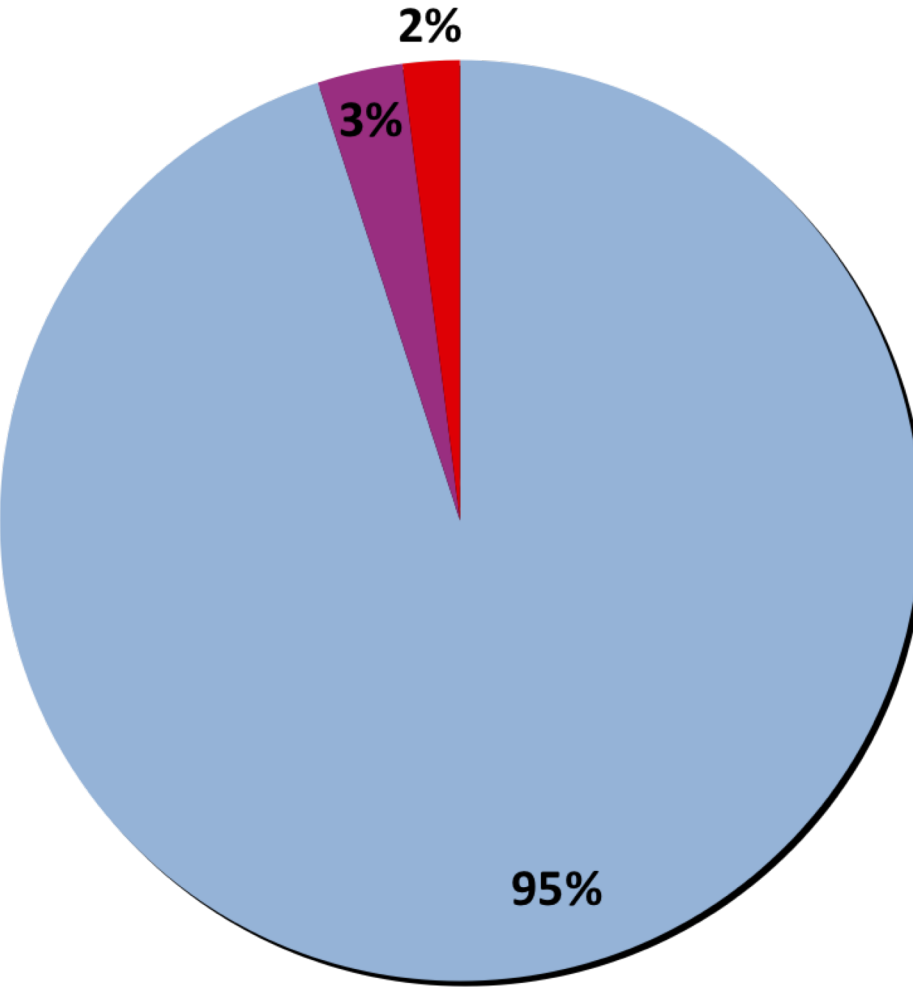
Chronic elevated use of alcohol and use of drugs during treatment

SVR12 Failure Lost of FUP



Neither use of alcohol nor of drugs during treatment

SVR12 Failure Lost of FUP



### Conclusion

HCV treatment with DAAs among PWID who use alcohol and illicit drugs is effective. Active drug use and elevated alcohol consumption among our patients appear to be associated with higher risk of death and premature interruption of HCV treatment. To reduce the impact of drug and alcohol use, specialized and integrated care is mandatory with the management of social and psychiatric comorbidities together with addiction therapy on a multidisciplinary level. Further studies are demanded to describe the use of alcohol and drugs during HCV therapy and to investigate the impact on the outcome of the treatment among PWID. Tailored programs addressing active drug users, such as the implementation of dedicated health staff, patient's navigation strategies, harm reduction and peer-to-peer initiatives, could play an important role before, during and after HCV treatment. Not only prevention of infection/reinfection and linkage to care are determinant, but also patients' support during treatment, with a focus on treatment adherence, psychiatric and social comorbidities, management of side effects and concomitant drug and alcohol use.

### Disclosure of Interest Statement:

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