THE TREATMENT AS PREVENTION APPROACH RESULTS IN AN EARLY AND MARKED REDUCTION IN PREVALENCE OF HEPATITIS C VIREMIA AMONG PEOPLE WITH RECENT INJECTION DRUG USE. RESULTS FROM THE TREATMENT AS PREVENTION (TRAP HEPC) PROGRAM IN ICELAND.

Runarsdottir V[1], Tyrfingsson T[1], Hansdottir I[1,2], Bergmann OM[3], Björnsson ES[3,4], Johannsson B[5], Sigurdardottir B[5], Fridriksdottir RH[3], Löve A[4, 6], Löve TJ[4, 7], Sigmundsdottir G[8], Hernandez UB[7], Heimisdottir M[4, 9], Gottfredsson M[4,5,7], Olafsson S[3,4] and the TRAP HEP C working group

[1]SAA National Center for Addiction Medicine - Reykjavik Iceland, [2]Faculty of Psychology, School of Health Sciences, University of Iceland, [3]Department of Gastroenterology and Hepatology, Landspitali University Hospital , [4]Faculty of Medicine, School of Health Sciences, University of Iceland, [5]Department of Infectious Diseases, Landspitali University Hospital, [6]Department of Virology, [7]Department of Science, Landspitali University Hospital , [8]Chief Epidemiologist, Directorate of Health, [9]Department of Finance , Landspitali University Hospital, Reykavik, Iceland.

Background:
If elimination goals for hepatitis C virus (HCV) infection are to be achieved, people who inject drugs (PWID) need to be the focus of treatment scale-up. The TraP HepC program in Iceland aims for elimination of chronic HCV infection by targeting those most likely to transmit. Vogur Addiction Hospital, a key sentinel site where >90% of PWIDs seek treatment for their addiction provides an opportunity to monitor early trends in HCV prevalence in this population.

Methods:
All patients with HCV in Iceland have been offered direct acting antiviral agents (DAA) treatment since 01/2016. Relapses and reinfections are promptly treated. PWID admitted at Vogur Addiction Hospital are screened for HCV. We compared the prevalence of HCV viremia among PWID at Vogur Hospital prior to initiation of and following the 2nd year of TraP HepC.

Results:
During the first 24 months 632 patients, 80% of the estimated total patient population, were initiated on DAAs. Recent (within 6 months) IDU was reported by 34%. Stimulants were the preferred IV drug in 86%, opioids in 14% (9% on opioid substitution therapy). Of those who completed treatment, sustained virological response at 12 weeks (SVR 12) was 96%. Of those who discontinued HCV treatment (8.2%) many still achieved SVR12 (40%) and and most of the remaining were re-treated. The prevalence of HCV viremia among recently injecting PWID admitted for addiction treatment was on average 47.9% (2012-2015), dropping to 16.2% in 2017 (66% reduction, $p<0.001$) . Likewise, the prevalence of viremia among patients with history of IDU but not recently injecting fell from 27.4% (2012-2015) to 4.1% in 2017 (85% reduction, $p<0.001$).

Conclusion:
The TrapHepC program has resulted in an early and marked reduction in prevalence of HCV among PWID. These results indicate that treatment as prevention may be a successful approach in the prevention of transmission of HCV among PWID.