

An intervention to improve HCV testing, linkage to care, and treatment among people who use drugs in Tehran, Iran: the ENHANCE study

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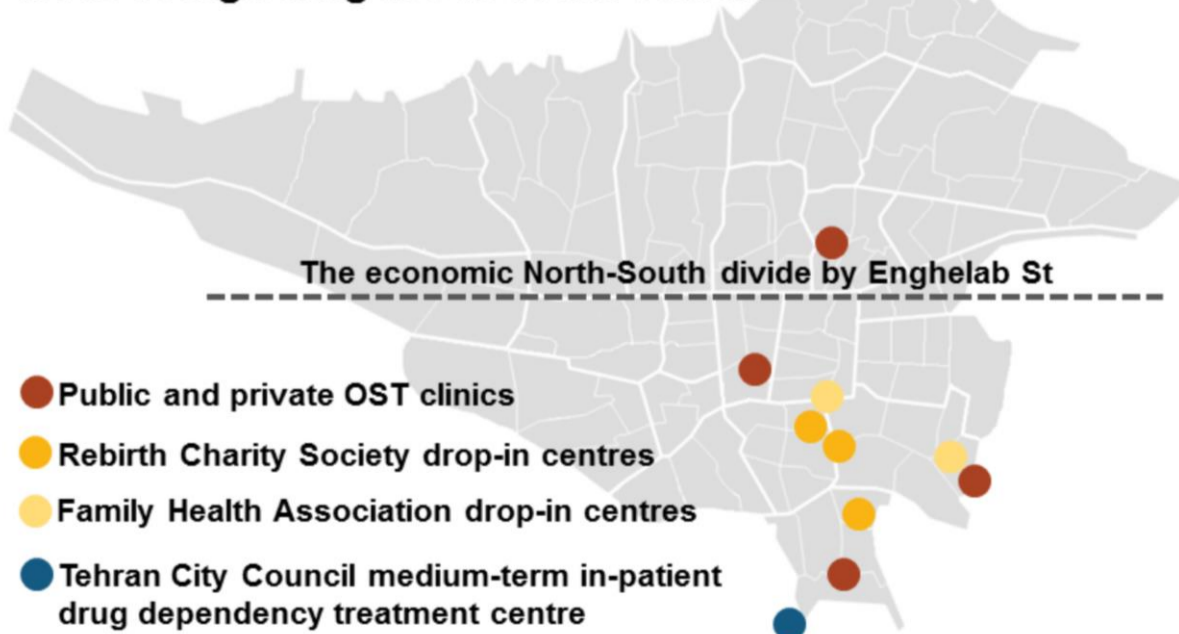
Introduction

- In Iran, hepatitis C virus (HCV) infection is emerging as the leading cause of viral hepatitis-related mortality, surpassing hepatitis B.
- However, HCV diagnosis, linkage to care, and treatment uptake is suboptimal among key populations, including people who use drugs.
- Iran has an extensive network of addiction care, including opioid substitution therapy (OST) clinics, drug user drop-in centres, and short- and medium-term in-patient drug dependency treatment centres.
- Since 2016, low cost, locally produced generic DAA regimens have been available in the country.
- The aim of this study is to evaluate the impact of an innovative model of care to enhance HCV testing, linkage to care and treatment among people who use drugs in Tehran, Iran.

Methods

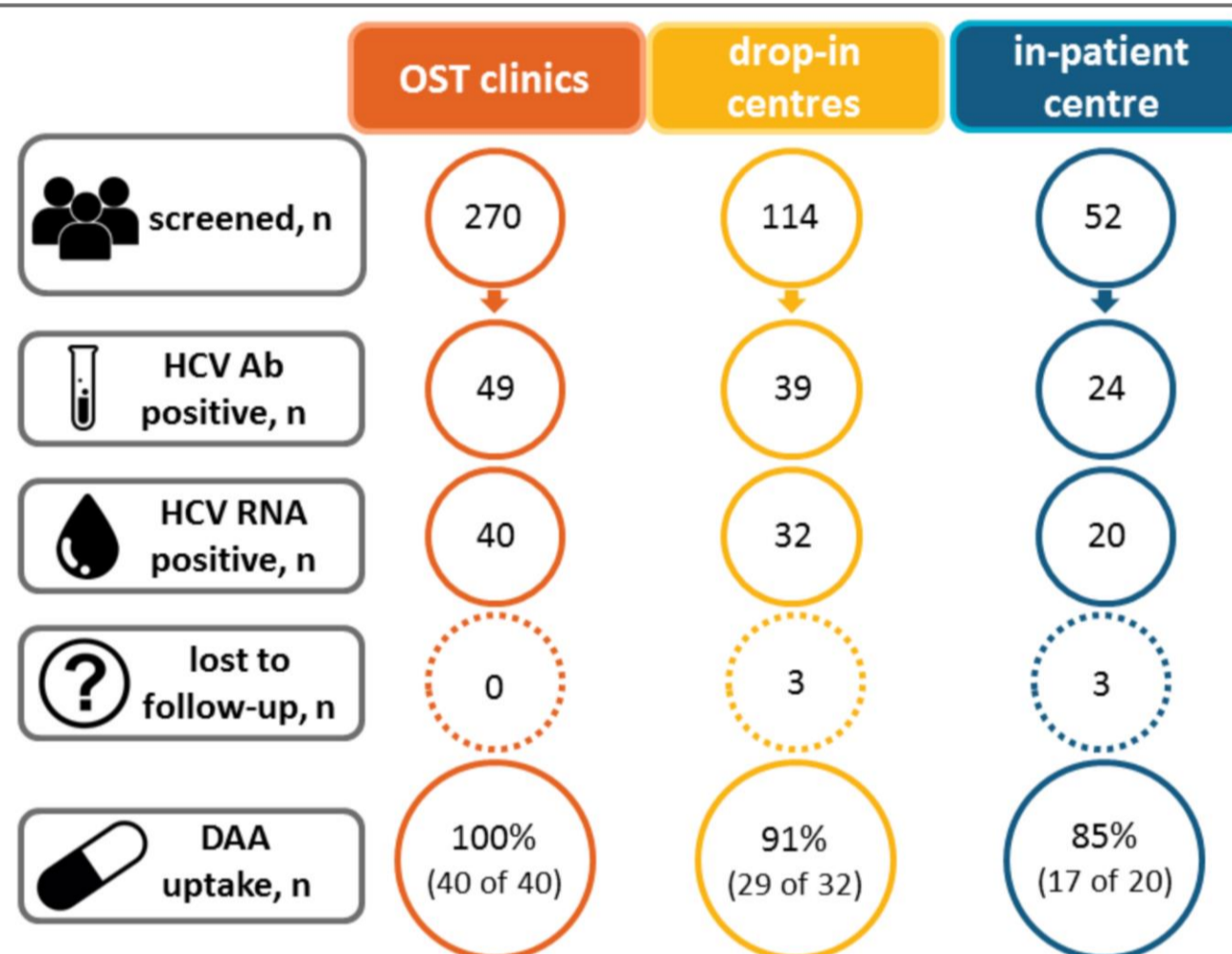
- ENHANCE is a non-randomized trial evaluating the effect of on-site HCV rapid antibody testing, venepuncture for HCV RNA testing (HCV antibody positive only), liver fibrosis assessment, and linkage to care to increase DAA therapy (Sovodak[®], sofosbuvir/daclatasvir) for HCV among people with a history of drug use.
- Recruitment is occurring between May-October 2018, through four OST clinics, five drop-in centres, and one medium-term in-patient drug dependency treatment centre (Figure 1).
- Participants from OST clinics are referred to a specialist liver clinic for non-invasive liver disease assessment and DAA therapy initiation. Among participants from drop-in and in-patient centres, APRI score is used for liver disease assessment and DAA therapy is initiated on-site. Among all participants, DAA monitoring is provided on-site or at the specialist clinic (only for those with cirrhosis attending OST clinics).

Figure 1. ENHANCE study sites are predominantly located in areas of high drug use in South Tehran



Results

Figure 2. HCV diagnosis and treatment uptake among participants in ENHANCE study*



*including participants from two OST clinics, three drop-in centres, and one in-patient centre

Table 1. Characteristics of participants with a history of drug use in ENHANCE Study, n=436

	Total ^a n=436	OST clinics n=270	drop-in centres n=114	in-patient centre n=52
Age, median (IQR) ^b	45 (36, 55)	43 (34, 41)	46 (38, 56)	46 (40, 61)
Male gender	427 (99%)	264 (98)	114 (100)	52 (100)
Not finished high school	189 (45)	105 (40)	55 (50)	29 (58)
Full- or part-time occupation	108 (25)	89 (33)	19 (17)	0 (0)
Homelessness ^c	133 (31)	1 (<1)	81 (72)	52 (100)
History of imprisonment	173 (40)	74 (28)	73 (66)	26 (51)
Age at first drug use, median (IQR) ^b	20 (17, 26)	20 (17, 26)	20 (17, 25)	21 (18, 30)
Drug use in the past year	213 (52)	98 (40)	74 (67)	41 (85)
Most commonly used drug	Heroin (32)	Opium (30)	Heroin (41)	Heroin (39)
History of injecting drug use	119 (29)	62 (25)	47 (42)	10 (21)
History of alcohol use	322 (74)	206 (80)	89 (79)	17 (33)
History of HCV screening ^d	126 (29)	66 (24)	38 (33)	22 (42)

^aincluding participants from two OST clinics, three drop-in centres, and one in-patient centre, ^binterquartile range, ^cshelter and/or sleeping rough, ^dself-reported history of antibody and/or RNA testing

Figure 3. Prevalence of HCV infection in ENHANCE Study, by history of injecting drug use, n=436

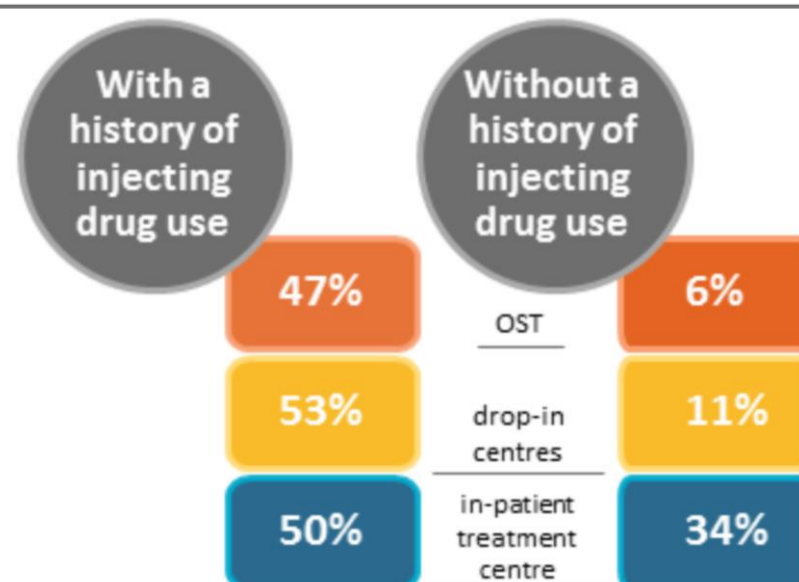


Figure 4. Characteristics of participants who received DAA therapy in ENHANCE Study, n=86

- OST clinics n=40**
 - median age was 50 years (IQR 41, 63 years)
 - 30% used drugs in the past year
- drop-in centres n=29**
 - median age was 46 years (IQR 38, 59 years)
 - 72% used drugs in the past year
- in-patient centre n=17**
 - median age was 51 years (IQR 41, 64 years)
 - 87% used drugs in the past year

First month of DAA therapy has been completed among 29 participants from drop-in centres; 48% were completely adherent, 41% missed 1-3 doses, and 10% missed >3 doses.

Conclusions

- Participants from drop-in and in-patient treatment centres were more marginalised and had a higher prevalence of HCV infection, compared to participants from OST clinics in Tehran, Iran.
- Among participants without a history of drug use from drop-in and in-patient treatment centres, relatively high HCV prevalence is an indicator of stigma associated with injecting drug use.
- Following on-site HCV testing and linkage to care, HCV treatment uptake was 100% among participants from OST clinics and 88% among participants from drop-in and in-patient treatment centres.
- These findings suggest that outreach efforts through addiction care networks could be used to enhance diagnosis and treatment uptake among people who use drugs.

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