

# HIV/Hepatitis C co-infection in key populations from Romania: Hepcare Europe - a model of management and service delivery

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### Background

In the last decade, the prevalence of hepatitis C (HCV) increased dramatically among Romanian injecting drug users (IDUs). In this context, Bucharest was included in HepCare Europe project, co-funded by the European Commission, whose aim is to improve access to HCV testing, diagnosis and treatment among key risk population, through outreach to the community and integration of primary and secondary care services.

The aim of the study was to analyze the socio-demographic, clinical, immunological and virusological characteristics in HIV/HCV co-infected patients enrolled in HepCare Europe Project and to emphasize the role of educational and peer support programs for health care providers and/or key populations.

### Methods

Prospective study on HIV-infected patients who tested positive for HCV antibodies during the enrolment in HepCare project at Victor Babes clinical site, Bucharest, between April 2016 and April 2018.

Five work packages were developed to enrich management of HCV in key risk populations: **HepCheck** (HCV screening with rapid oral tests - Oraquick); **HepLink** (linkage to care), **HepEd** (inter-professional education), **HepFriend** (peer support programs), **HepCost** (estimation of the cost-efficiency of the model and evaluation of the socio-economic impact)

#### Results HepLink flow chart for HIV/HCV co-infected patients **HepCheck flow chart** Screened n=510 Treatment with DAAs HIV/HCV Ab (+) HIV/HCV-positive n=5 patients with HCV Ab (+)\* **IDUs** patients **HCV-RNA** 213/510 (**41.7**%) 197/213 (**92.4%**) n=58 performed Non-responder n=**45** (77.5%) Linked to care n=1 **SVR** HIV/HCV Ab (+) patients 120/213 (**56.3**%) n=4 Genotype 3 with **Fibroscan** HIV-infected (IDU) evaluation\* 58/120 (**48.3**%) n=**47** (**81.0**%) **HepEd activities** \*HCV positive antibody test HCV Ab (+) Distribution of HIV/ HCV positivity among patients with **FO - F1** n= 19 (40.4%) 2 educational Masterclasses screening sites detectable **HCV-RNA** Screened HCV Ab (+) HIV/HCV (+) **F2** n=14 (29.7%) n=**37/45** (**82.3**%) n (%) n (%) patients 150 health care 58 Drug support/opioid 61 10 **F3 - F4** n=**14** (**29.7**%) professionals Pre- and post course 116 31 (Q5 N) substitution contars (HCPs) \*METAVIR score (kPa) questionnaires positive feedback Lab screen in HIV/HCV co-infected IDUs

substitution centers		(95.0)	(16.3)	
Prisons	153	57 (37.2)	ND	
Night shelters	193	19 (9.8)	0 (0.0)	
Other health care facilities (mainly IDUs from infectious diseases hospital)	103	79 (76.6)	48 (46.6)	
p value		<0.0001		
Socio-demographic characteristics, risk factors and				

## Socio-demographic characteristics, risk factors and drug use behavior in HIV/HCV co-infected IDUs

Characteristics		Total IDUs n=58
Males	n (%)	48 (82.7)
Age (years )	median (IQR)	34 (30, 37)
History of homelessness	n (%)	27 (46.5)
History of imprisonment	n (%)	36 (62.0)
Alcohol use	n (%)	37 (63.7)
Tattoos	n (%)	43 (74.1)
Piercing	n (%)	21 (36.2)
Needle/syringe sharing	n (%)	40 (68.9)
Use of heroin Use of ethnobotanicals Heroin & ethnobotanicals	n (%)	6 (10.3) 37 (63.7) 15 (25.8)
Current OST*	n (%)	21 (36.2)
*OST=opioid substitution treatment		

#### HIV/HCV-co-Characteristics infected IDUs n=58 CD4 cell count/µl 510 median (IQR) (327, 659) $HIV - RNA (log_{10} copies/mL)$ 2.68 median (IQR) (1.27, 4.57)n (%) cART\* 22 (37.9) 15/22\*\* HIV-RNA undetectable n (%) (68.1)ALT (IU/L) 66 median (IQR) (44, 111) $HCV - RNA(log_{10}IU/mL)$ 6.27 (5.66, 6.59)median (IQR) METAVIR score ≥ 9 kPa\*\*\* 14 (29.7)n (%) 7 (12.0) HBs Ag positive n (%) \*combined antiretroviral treatment \*\* 22 IDUs on cART \*\*\*Fibroscan evaluation

### HepFriend activities

Booklets

Video HepEd

**Printed educational materials** 

for medical personnel, peers, psychologists

and social workers

**Flyers** 

Number of peers trained in		
Total	3	
HCV awareness	3	
HCV/HIV testing	3	
Fibroscan use	2	
Peer relapse	1	
Patients with peer support	9	
Participants	45	
Screened for HCV	45	

### Conclusions

- HIV/HCV co-infection among subjects from key populations was high, especially among IDUs from drug support centers. Socio-economic and structural barriers limited the treatment with DAAs in this group.
- There is an urgent need to improve the HIV/HCV screening and linkage to care for patients from key populations (in particular for incarcerated patients), to actively involve HCPs in HIV/HCV management and to find the best modalities to overcome the barriers to treatment.
- Scale up of HepEd and HepFriend activities may improve linkage to care and adherence to treatment.