

Recent syringe sharing, long injecting history, past incarceration and not living with the family are independently associated with HCV infection among PWID in Greece

Anagnostou O1, Fotiou A2, Kanavou E2, Andarakis A2, Richardson C3, Micha K1, Kafetzopoulos E1 and Terzidou M2, OKANA Medical Doctors Group*1

1 Greek Organisation Against Drugs - OKANA, Athens, Greece, 2 Greek Reitox Focal Point of the EMCDDA, University Mental Health Research Institute, Athens, Greece, 3 Panteion University of Social and Political Sciences, Athens, Greece

*[OKANA Medical Doctors Group: Alexakou K, Androulakis G, Chalkiadakis E, Detsi I, Drimousi A, Frontzou D, Gargoulaki M, Iosifidou M, Kaliva K, Katsilli A, Kollia S, Kollitsida M, Kotsalis A, Makristathi S, Papadopoulos T, Petroylaki E, Pinakas V, Spirellis M, Stamatopoulos K, Stavridou V, Stepen Topalidi Y, Tanis C, Tsantilas A, Tsekoura P, Tsirogianni E.]

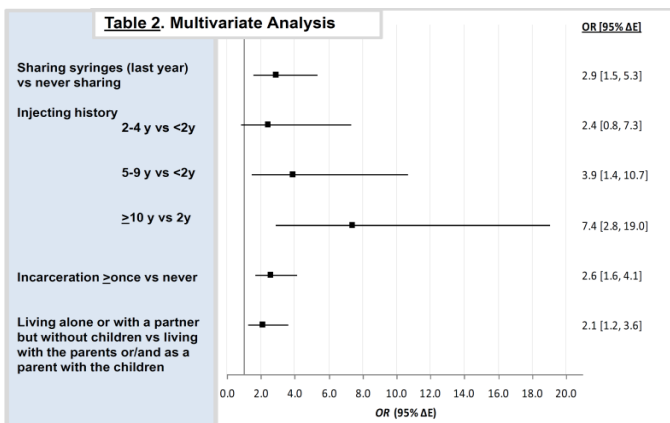
Introduction: The prevalence of HCV infection among people who inject drugs (PWID) is high in Greece. HCV infection may lead to severe chronic liver disease and premature death, and also places a burden on the treatment system. Unsafe injecting is the main route for HCV transmission, but other factors may increase infection risks. This study examines the factors associated with HCV infection among PWID entering opioid substitution treatment(OST) in Greece.

Methods: Anonymous serological and behavioural data were available for 563 people (80% male, 95% Greek) who entered OST in central and southern Greece in 2013 and reported recent injecting drug use. The outcome measure was the presence of HCV antibodies. The correlates comprised sociodemographic (gender, age, living with family and/or partner with children, homelessness, imprisonment etc.), drug use (number of substances used, frequency of use etc.) and high-risk behavioral characteristics (injecting history, sharing syringes and other paraphernalia, etc).

Results: HCV infection was detected in 79.4% of the cases. The majority of the PWID who enter the OST programs in Greece are men with long injecting history, and incarceration in the past. (See [Table 1](#) for Descriptive Data).

	Total n=580		antiHCV(-) n=116, 20.6%		antiHCV(+) n=447, 79.4%	
	N	%	N	%	N	%
Men	463	79.8	98	84.5	352	78.7
Age ≥35 years	321	55.3	59	50.9	251	56.2
Residence Conditions						
Living at urban area during the last 5 years	444	79.6	87	77.0	349	81.4
Living alone or with partner without children	182	31.4	25	21.6	152	34.0
Homeless for ≥1 day during the last year	186	32.6	27	23.3	152	34.7
Socio-economic Status						
Unemployed, student, other	356	61.6	67	57.8	279	62.7
Economically not active	85	14.7	17	14.7	64	14.4
Incarceration ≥1 time	382	66.7	56	49.6	312	70.3
Data on High Risk Behaviors						
≥10 years of injecting	402	70.0	60	52.6	332	74.9
5-9 years of injecting	97	16.9	24	21.1	69	15.6
2-4 years of injecting	52	9.1	18	15.8	32	7.2
61-90 injections during the last month	38	6.7	8	7.1	28	6.4
≥ 91 injections during the last month	70	12.3	9	8.0	58	13.2
Syringe sharing during the last year	137	25.4	18	16.4	113	27.3
Paraphernalia sharing during the last year	237	43.6	43	39.8	183	43.7
No Condom Use last time of Having Sex	246	43.5	53	47.7	185	42.1
Tested for HCV and HIV during last year						
Tested for HCV	385	67.9	56	49.6	315	72.1
Tested for HIV	400	69.9	63	55.3	324	73.5

Multivariate logistic regression analyses adjusting for gender and age showed independent associations between HCV infection and long injecting histories, ever being imprisoned, recent sharing of syringes and not living with parents and/or a partner plus children. ([Table 2](#))



On two separate analyses (results not shown in Tables or Figures) we explored whether the protective role of the factor “living with at least one parent and or a child” in the antiHCV(+) persists after adjusting for factors known in the literature for their strong association to HCV infection in this group (sharing syringes and long history of injection).

In the first model (n=557), in the univariate analysis “not living with parents and/or children” was positively associated with the risk of antiHCV(+) (OR =2.0, 95% CI: 1.2-3.3, p=0.007). Their association persisted (adjusted OR [aOR]=2.1, 95% CI:1.3-3.5, p=0.004) even when “shared a syringe in the last 12 months” entered the model. In the second model (n=524), in the univariate analysis “not living with parents and/or children” was positively associated with the risk of antiHCV(+) (OR =1.9, 95% CI:1.1-3.0, p=0.012). However, their strong association did not persist (aOR=1.7, 95% CI:1.1-2.8, p=0.031) when “having an injecting history of more than five years” entered the model. “Not living with parents and/or children” increased the likelihood of antiHCV(+) with a lower OR compared to that of “having an injecting history of more than five years” (aOR=3.2, 95% ΔE: 1.9-5.5, p<0.001).

Conclusions: The scaling-up of both OST and needle/syringe programs in the community and in prisons may reduce HCV infection vulnerabilities among PWID in Greece. Further investigation of the association of living conditions (with or without the family) and their relation with HCV infection is needed.