

Background

Georgia is implementing HCV elimination program and People Who Inject drugs (PWID) represent one of the severely affected population with Hepatitis C virus (HCV) infection. Harm reduction programs (HRP) aim to reduce the risk of HIV and transmission among this key population. We assessed correlation of HRP intervention, behavioral factors and anti-HCV positivity among PWID in Georgia.

Methods

A Cross-sectional bio-behavioral study using respondent-driven sampling (RDS) was conducted among 2,049 PWID in 7 cities of Georgia during 2016-2017. RDS-weighted estimates were used and bivariate and multivariate logistic regression analyses were conducted to identify correlates of anti-HCV positivity and harm reduction program coverage along with behavioral factors.

Results

Prevalence of Hepatitis-C was 61.2% among study population. Awareness about HIV testing possibilities and receiving sterile injecting equipment and condom from HRP during the last 12 months- “Program general coverage” reported 14.2% and “program full coverage “- receiving brochures and qualified educational information in addition to “general coverage” reported 11.5% of PWID. Significant association was found between anti-HCV positivity and HRP service reach. PWID, who were not covered with “general coverage” had lower odds (OR 0.32, $p < 0.05$) while those without “full coverage” had higher odds (OR 5.07 $p < 0.01$) of anti-HCV positivity. Those who were tested on anti-HCV during last 2 years or more than 2 years were more likely to be infected, (OR 2.93 $p < 0.01$) and (OR 1.67 $p = 0.01$) respectively. PWID, who used condom at their last intercourse were less likely to be positive, compare to those, who did not have sex last year OR 2.02, $p < 0.01$. A one-year increase of drug use practice increases risk at 8.5% of anti-HCV positivity $p < 0.01$. Use of non-sterile injecting equipment at their last injection was associated with lower risk of anti-HCV positivity (0.65 $p < 0.05$).

Table 1 Multivariate regression predicting of HCV positivity among PWID in seven cities in the Republic of Georgia 2016-2017

Factors		Odds Ratio (95% CI)	P value
Preventive program general coverage ¹ (yes=reference)	No	0.32(0.13-0.8)	0.02
Preventive program full coverage ² (yes=reference)	No	5.07(1.96-13.11)	0.00
Received Hep C test (never=reference)	Less than 2 years ago	2.93(2.08-4.13)	0.00
	more than 2 years ago	1.67 (1.15-2.44)	0.01
Used condom at last intercourse (yes=reference)	No	1.2(0.94-1.53)	0.15
	Did not have sex	2.02(1.28-3.18)	0.00
Duration of drug injection_years (continuous)		1.09 (1.07-1.09)	0.00
Safe injection practice at last injection ³ (safe=reference)	Unsafe	0.65(0.43-0.97)	0.04
1 Aware about HIV testing possibilities and received sterile injecting equipment and condom last 12 months			
2 Aware about HIV testing possibilities and received sterile injecting equipment and condom and brochures/ pamphlets/ booklet and qualified educational information last 12 months			
3 No usage of needle/syringe previously used by somebody else, no usage of needle/syringe left at a place of gathering, no usage of syringe prefilled by somebody else without his presence, no usage of shared equipment, no usage of drug solution from shared container prepared without his/her presence			

Conclusion

HCV positive PWID benefit from HRP mostly due to access to sterile injecting equipment and condoms. On the other hand, HCV positive PWID have lower risky behavior, possibly because of HRP influence. Scaling-up access to the HRP will reduce HCV transmission risks on the way to eliminate HCV infection in the country.