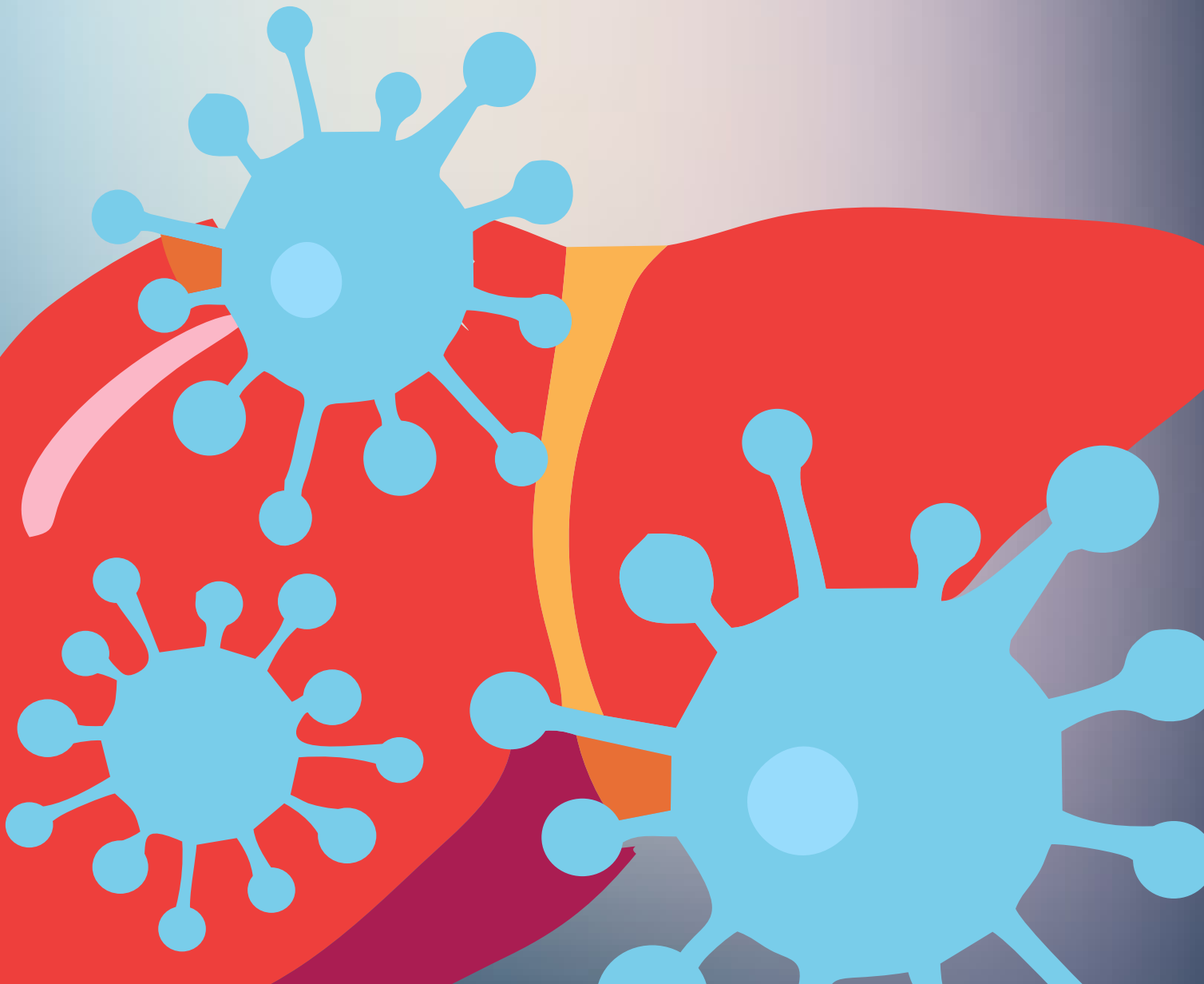




Hepatitis B and C among MSM and Trans* People in South Caucasus



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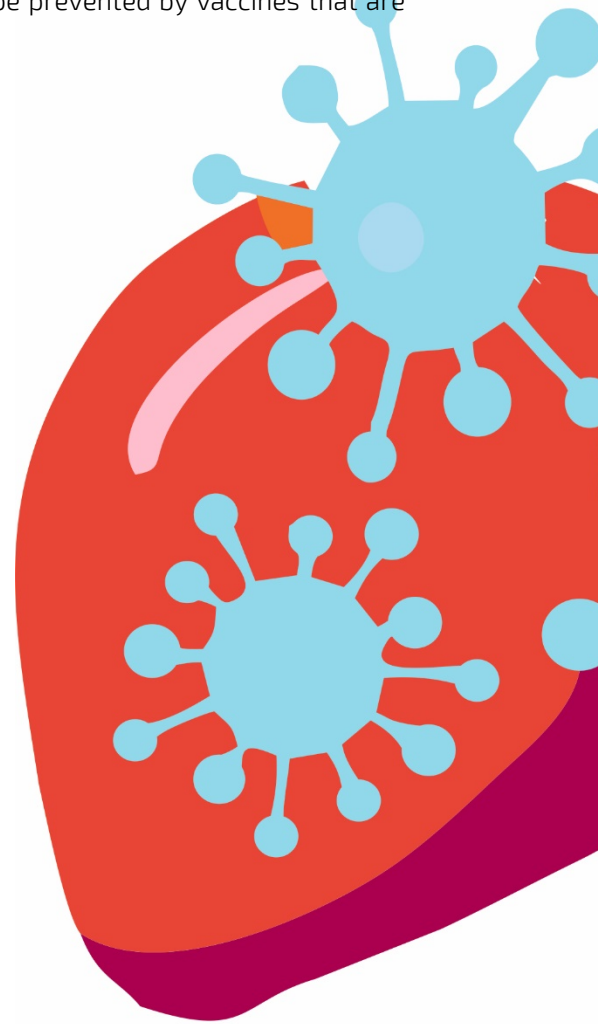
Viral Hepatitis B and C worldwide and in Eastern Europe and Central Asia

Viral hepatitis B and C affect 325 million people worldwide causing 1.4 million deaths a year. It is the second major killer infectious disease after tuberculosis, and 9 times more people are infected with hepatitis than HIV. Hepatitis is preventable, treatable, and in the case of hepatitis C, curable. However, over 80% of people living with hepatitis are lacking prevention, testing and treatment services¹.

WHO estimates that in 2015, 257 million people were living with chronic hepatitis B infection (defined as hepatitis B surface antigen positive). In 2015, hepatitis B resulted in an estimated 887 000 deaths, mostly from cirrhosis and hepatocellular carcinoma (i.e. primary liver cancer). As of 2016, 27 million people (10.5% of all people estimated to be living with hepatitis B) were aware of their infection, while 4.5 million (16.7%) of the people diagnosed were on treatment. Hepatitis B can be prevented by vaccines that are safe, available and effective².

Globally, an estimated 71 million people have chronic hepatitis C virus infection. A significant number of those who are chronically infected will develop cirrhosis or liver cancer. WHO estimated that in 2016, approximately 399 000 people died from hepatitis C, mostly from cirrhosis and hepatocellular carcinoma (primary liver cancer). Antiviral medicines can cure more than 95% of persons with hepatitis C infection, thereby reducing the risk of death from cirrhosis and liver cancer, but access to diagnosis and treatment is low. There is currently no effective vaccine against hepatitis C, however, research in this area is ongoing³.

Recent data shows that in the WHO European Region an estimated 13.3 million people live with chronic hepatitis B (1.8% of adults) and an estimated 15 million people with hepatitis C (2.0% of adults). Two-thirds of infected persons in the Region live in Eastern Europe and Central Asia. The 16 countries of the EECA region are home to 6.6 million people in need of treatment for chronic hepatitis C virus (HCV) infection. HCV prevalence data from EECA countries show a general national population anti-HCV prevalence range of 1.5 to 7.7%, with Kazakhstan and Georgia having the lowest and highest rates, respectively. Using 2016 population figures from national sources, total numbers of HCV-positive people are highest in Russia (5.9 million), Uzbekistan (1.8 million) and Ukraine (2.1 million)⁴.

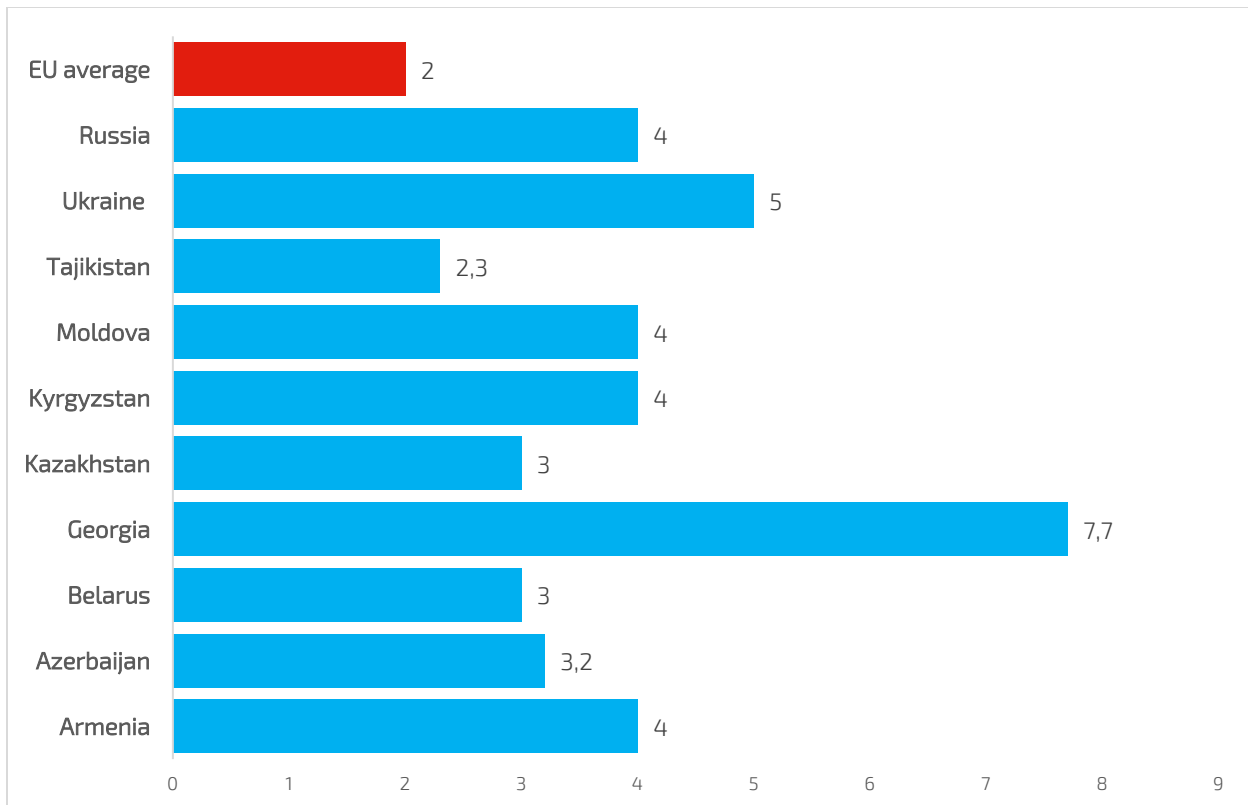


¹ <https://www.who.int/campaigns/world-hepatitis-day/2019>

² <https://www.who.int/news-room/fact-sheets/detail/hepatitis-b>

³ <https://www.who.int/news-room/fact-sheets/detail/hepatitis-c>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6171005/>



Graph 1. HCV prevalence (%) in EECA countries among general population

Together with HIV, other STIs, and violence, hepatitis B and C are among the main threats to the sexual health of MSM. Transmission of HBV and HCV can occur sexually, through blood-to-blood contact or vertically [mother to child]. Over the past decades, the pattern of hepatitis transmission changed in Europe. This is due to various factors, including improvements in blood transfusion and healthcare safety standards, HBV vaccination programs, harm reduction programs targeting injecting drug use, and significant changes in injecting drug use and immigration. However, a number of population groups are still potentially at high risk or have a high burden of HBV/HCV in EU/EEA countries, including people who inject drugs (PWID), men who have sex with men (MSM), people living with HIV (PLHIV), people in prison, and migrants from countries of high endemicity⁵. Stigma and discrimination around these infections and the associated key populations (e. g. MSM, PWID, sex workers) are important barriers to access to care, treatment and prevention⁶.

The percentage of MSM living with hepatitis C in the countries of EECA ranges from 1.6% to 6.5%. The risk of hepatitis B infection among MSM is 22 times higher than among the general population. There is no information about the prevalence of hepatitis B and C among trans* people. In Europe, the prevalence of hepatitis C is significantly higher among HIV-positive MSM than among those who do not have HIV (7.1% versus 1.5%), and higher among MSM who use injecting drugs in comparison with those who do not use injecting drugs (34.8% and 3.5% respectively). Using the vaccine can protect against hepatitis B. Modern treatment of hepatitis B and C exists⁷.

⁵ <https://ecdc.europa.eu/sites/portal/files/documents/HepBC-testing-strategies-2018.pdf>

⁶ <http://journals.lww.com/co-infectiousdiseases/toc/2017/02000>

⁷ <https://ecom.ngo/en/hepatitis-day/>

Viral hepatitis B and C among MSM in Caucasus region (Armenia, Azerbaijan, Georgia)

The prevalence of HCV infection in Georgia is among the highest in the world. Findings from the national population-based serosurvey conducted in 2015 by the National Center for Disease Control and Public Health (NCDCPH) and US CDC revealed that 7.7% of adults have evidence of HCV infection (i.e., are anti-HCV positive); chronic HCV infection (i.e., RNA positivity) was found among 5.4% of those tested, which translates to an estimated 150,000 persons living with HCV in Georgia.

According to the IBBS conducted during 2014–2015, 66.2% of Georgian PWIDs are HCV-infected and the 2015 serosurvey identified history of injection-drug use as a major risk factor for HCV transmission. Other groups of persons who are at higher risk for HCV include men who have sex with men (MSM)⁸.

The only study when both - HCV and HBV were measured in Georgia among MSM was the IBBS of 2010. The prevalence of HBV was detected in 4.2% and positives for HCV - 17.3%. It was interesting that the prevalence of Hepatitis B was much lower than of Hepatitis C, although Hepatitis B is more likely to be transmitted through sexual contacts. Given the small proportion of MSM reporting injecting drugs (4.9%), prevalence of Hepatitis C was quite high.

Although the study did not investigate longterm drug injecting practices among MSM, authors speculated that lifetime risky injecting behavior could have contributed to the high prevalence of Hepatitis C infection⁹. Another interesting fact was that, even in 2010, the literature suggested a sudden emergence of HCV as an STI among HIV-positive MSM¹⁰, however 2010 study did not show an association between HIV and HCV infections. Only 3 respondents out of 19 HIV positive MSM were HBsAg positive.

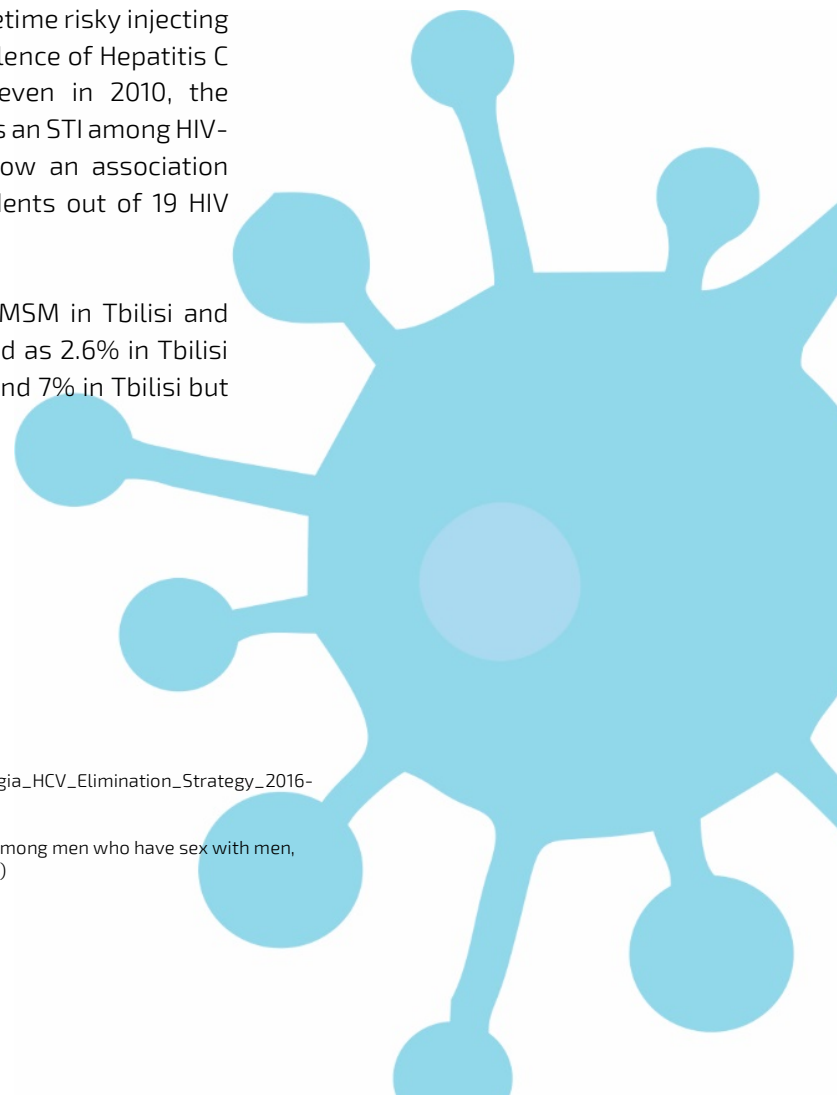
IBBS 2015 and 2018 measured only HCV among MSM in Tbilisi and Batumi. As for Hepatitis C prevalence, it was found as 2.6% in Tbilisi and 1.8% - in Batumi in 2018. In 2015, HCV was found 7% in Tbilisi but much higher in Batumi - 18.9%.¹¹

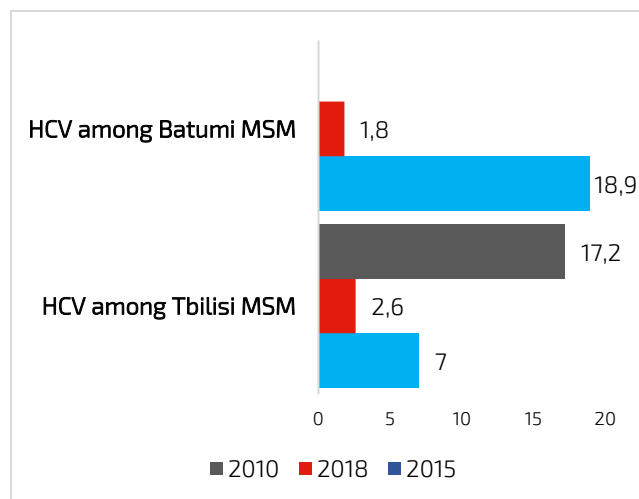
⁸ https://www.moh.gov.ge/uploads/files/2017/akordeoni/failebi/Georgia_HCV_Elimination_Strategy_2016-2020.pdf

⁹ <http://new.tanadgomaweb.ge/upfiles/dfltcontent/3/39.pdf>

¹⁰ Urbanis AT, Van Houdt R, Van de Laar TJ, Coutinho RA. Viral Hepatitis among men who have sex with men, epidemiology and public health consequences. *Euro Surveill.* 2009;14(47)

¹¹ <http://new.tanadgomaweb.ge/upfiles/dfltcontent/3/152.pdf>





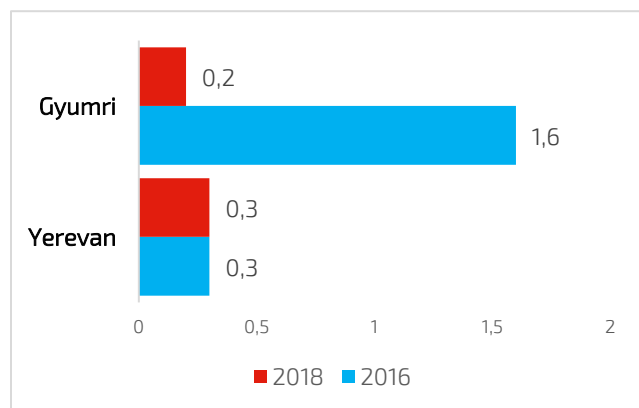
Graph 2. HCV prevalence (%) among Tbilisi and Batumi MSM (measured by IBBS 2010, 2015, 2018)

Armenia has the third highest rate among post-Soviet countries after Georgia and Uzbekistan with 3-5% prevalence of HCV among the general population¹². The last IBBS among MSM and Trans* people was conducted in Armenia in 2018. HBV prevalence was measured in 3 cities of Armenia – Yerevan, Gyumri and Vanadzor. In Yerevan, HIV prevalence was 2.7% and HBV prevalence was 0.3%. Among MSM in Gyumri, HIV prevalence was 1.3%, and HBV prevalence was 0.2%. There were no HBV reported in Vanadzor and HIV prevalence was 0.3%¹³.

According to IBBS 2016, in Yerevan, HIV prevalence was 0.8% and HBV prevalence was 0.3%. Among MSM in Gyumri, HIV prevalence was 0.7%, and HBV prevalence was 1.6%. There

were no cases of HIV, syphilis, or HBV reported in Vanadzor¹⁴.

Armenia was the only country where in 2018 IBBS was conducted among Trans* people as well. The survey did not detect any cases of HBV among Trans* people. No studies have been conducted in Armenia measuring HCV prevalence among MSM.



Graph 3. HBV prevalence (%) among MSM in Yerevan and Gyumri (measured by IBBS 2016 and 2018)

In open sources there are lack of survey data from Azerbaijan. According to the official statistics, the number of people infected with the hepatitis C is decreasing in Azerbaijan, the Health Ministry reported. Official statistics show that about 2 percent of the Azerbaijani population was infected with hepatitis B and approximately 3 percent had hepatitis C in 2014¹⁵. Especially scarce is statistical information on key populations like MSM and other gay men. In 2011, the Republican AIDS Center together with technical partners conducted the first size estimation of key populations, which indicated a population of 71,283 PWID, 25,054 SW and 6,572

MSM in Azerbaijan. HIV prevalence among MSM doubled from 1% to 2% between 2007 and 2011. The prevalence of HCV was 6.5%, HBV - 5.0% in 2011¹⁶. According to UNAIDS 2018 data, MSM SE is 23 900. HIV prevalence 1.1 %, Hepatitis B and coinfection with HIV 7.2%, Hepatitis C and coinfection with HIV 4%¹⁷.

¹² Ministry of Health of the Republic of Armenia. Methodological Guideline for Epidemiological Management of Viral Hepatitis B, C 3691-A. Yerevan; 2015.

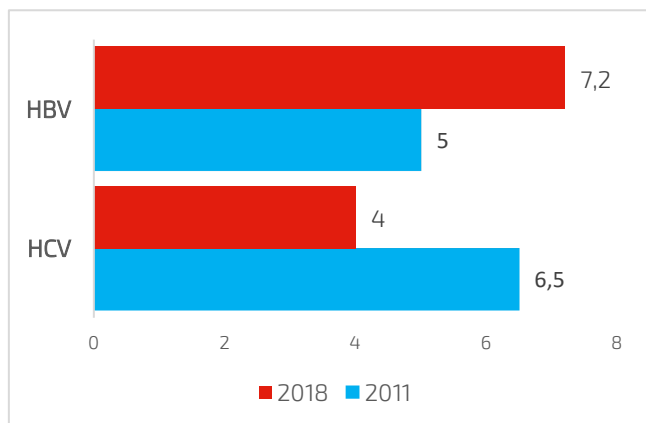
¹³ http://www.arm aids.am/images/IBBS_ARMENIA_2018_eng_FINAL.pdf

¹⁴ http://www.arm aids.am/images/pdf/IBBS_PWID_FSW_MSM_ARM_REPORT_FINAL_2016_eng.pdf

¹⁵ <https://www.azernews.az/healthcare/87751.html>

¹⁶ http://ecuo.org/mvdev/wp-content/uploads/sites/4/2016/09/AZE-H_ConceptNote_0_en.pdf

¹⁷ <https://www.unaids.org/en/regionscountries/countries/azerbaijan>



Graph 4. HCV and HBV prevalence (%) among MSM in Azerbaijan 2011-2018

Georgia is the only country in the region where Hep C elimination program is being running since 2015¹⁸. In April 2015, the Government of Georgia and partners (i.e., the U.S. Centers for Disease Control and Prevention, World Health Organization, Gilead Sciences, The Global Fund, Emory University and Bristol University initiated one of the world's first Hepatitis C Elimination Programs with the goal of 90% reduction in HCV prevalence by 2020. Gilead Sciences, the pharmaceutical company that produces direct acting antiviral (DAA) HCV treatments, agreed to provide of the antiviral medication sofosbuvir (Sovaldi) free-of-charge to support the program¹⁹. As of today the program is accessible to all citizens of Georgia with chronic HCV

infection and is fully free of charge including diagnostics. Since 2015, more than 56 000 were fully cured from chronic HCV. No data is available how many MSM were enrolled and treated in the program.

Current DAA treatment offers unique opportunities for reductions in HCV-related liver disease burden and epidemic control in high-risk populations of PWID and MSM. However, increasing rates of reinfection after successful treatment due to on-going risk behaviours should be anticipated and acknowledged without stigma. Constructive preventive strategies include education and counselling, harm reduction optimization, scaled-up treatment in high-risk groups including treatment of injecting networks and rapid retreatment of reinfections²⁰.

Experience of some EU countries (Netherlands) also shows, that, since DAAs have become available without restriction, which resulted in a decline in incidence of 70% among MSM. However, re-infections are still high and predominantly related to the involvement of MSM in high-risk sexual activities (including chemsex). MSM are, therefore, the key group for interventions. No relation between chemsex or other high risk behavior in MSM and prevalence of HCV or HBV was studied in the countries of Caucasus region.

State funded programs for acute hepatitis exist in Armenia and Azerbaijan. State funded treatment for HCV is available for only PLHIV in Armenia. Treatment for chronic HCV is provided by State in Azerbaijan for all citizens. According to the Deputy Chairman of the Commission for the examination and treatment of people infected with hepatitis B and C under the Health Ministry (Azerbaijan), in 2018 a program for the free treatment of patients with hepatitis B and C was launched in the country, drawing more than 2,000 persons seeking treatment. People infected with hepatitis B are provided with Interferon, and patients with hepatitis C, Interferon and Ribavirin. For patients with hepatitis B, drugs are assigned for 24 weeks, while for patients with hepatitis C from 24 to 48 weeks. The number of people in treatment program is not limited by State program in Azerbaijan. Exact number of patients enrolled and treated is unknown. No data exists in the countries on MSM enrolled and treated in National programs.

Vaccination for HBV is available for newborns in all countries. However there are no vaccination programs for key populations with increased risk of getting HBV. Compared with the general population, sex workers, people with multiple sex partners, and men who have sex with men (MSM) have increased

¹⁸ <https://www.moh.gov.ge/uploads/files/2019/Failebi/25.04.2019-2.pdf>

¹⁹ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0216123>

²⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5809955/>

prevalence of HBV infection. The HBV vaccine effectively protects against sexually acquired HBV infection, and existing guidelines recommend that people at increased risk of sexually transmitted infection, including MSM, be vaccinated²¹. Despite this, vaccine coverage remains low among these populations and health-care providers often do not offer HBV vaccine to them. Implementing strategies to improve coverage of HBV vaccination among individuals at increased risk of sexual transmission is a priority. No state program covers costs for HBV vaccination among adult population (including key populations) in Armenia, Georgia and Azerbaijan.

Neighboring countries

Meta-analysis results from 37 selected studies showed that pooled prevalence of HBV infection among high risk groups in Iran was 4.8% (95% confidence interval: 3.6%-6.1%), with the highest prevalence among in prisoners (5%; 3%-6%), and in central regions of Iran (7%; 4%-11%). Year of study may affect the observed heterogeneity in the estimated prevalence of HBV infection among injection drug users and prisoners²². Due to country specificity, no data is available for MSM and other gay men from Iran.

The findings of population based studies in Turkey with respect to the epidemiology of HBV and HCV revealed HBsAg positivity in 4%, anti-HCV positivity in 1%, and anti-HDV positivity in 2.8% of HBsAg-positive individuals²³. It must be highlighted that viral hepatitis treatment is fully reimbursed in Turkey through the national insurance system, which covers all residents across Turkey. No segregated data was obtained from Turkey regarding HCV and HBV prevalence among MSM and other gay men.

No data is available from Caucasus region of Russian Federation.

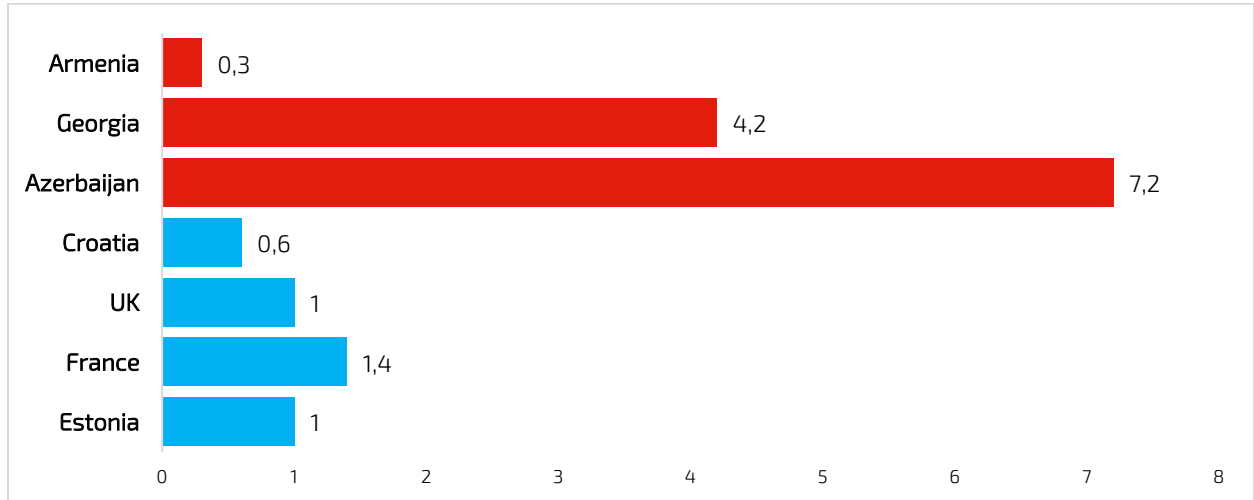
²¹ Accelerating the elimination of viral hepatitis: a Lancet Gastroenterology & Hepatology Commission Graham S Cooke et al. *Lancet Gastroenterol Hepatol* 2019; 4: 135–84

²² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5990920/>

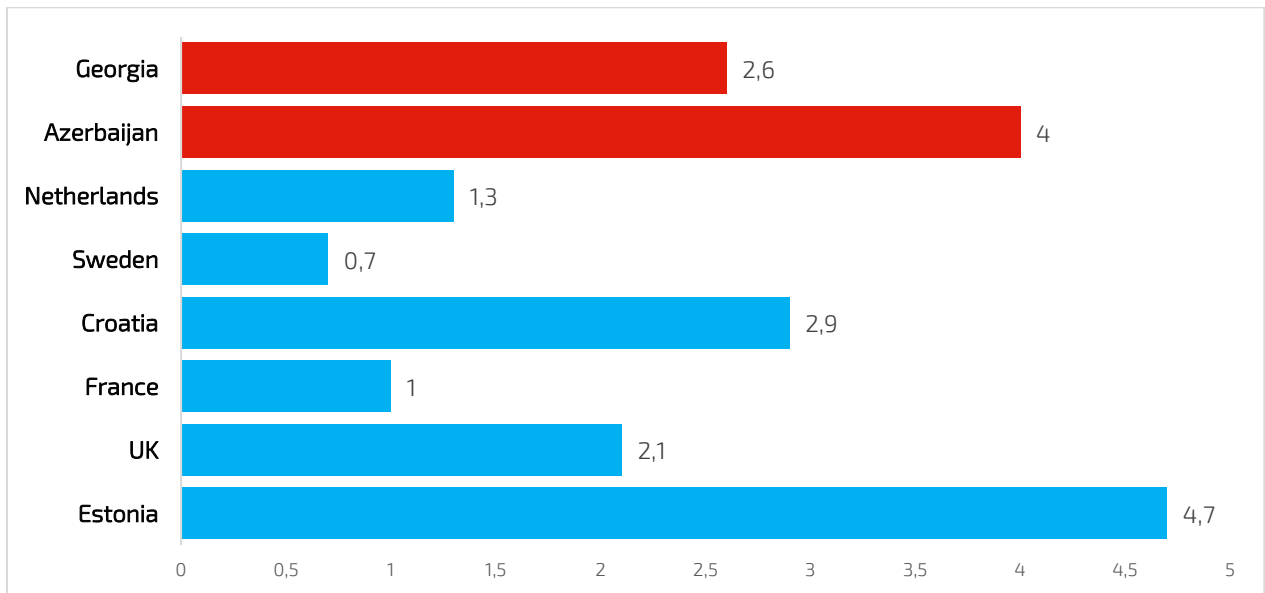
²³ Tozun N, Ozdogan O, Cakaloglu Y, Idilman R, Karasu Z, Akarca U, Kaymakoglu S, Ergonul O. Seroprevalence of hepatitis B and C virus infections and risk factors in Turkey: a fieldwork TURHEP study. *Clin Microbiol Infect* 2015 Nov;21(11):1020-1026.

Comparison with EU countries

According to ECDC technical report "Hepatitis B and C epidemiology in selected population groups in the EU/EEA"²⁴, prevalence among MSM ranged from 0.0% to 1.4% for HBsAg and from 0.0% to 4.7% for anti-HCV. Seventeen estimates from seven countries on HBV/HCV prevalence in MSM were extracted from the previous systematic review on hepatitis B and C prevalence in the EU/EEA²⁵ and updated with the present systematic review to include prevalence data from 2015 onwards, incidence data and data in MSM who belong to multiple-risk groups.



*Georgian data is taken from the IBBS 2010, the only study when HBV was measured among MSM
Graph 5. HBV prevalence (%) among MSM, by EU/EEA country Vs Caucasus countries



Graph 6. HCV prevalence (%) among MSM, by EU/EEA country Vs Caucasus countries

²⁴ <https://ecdc.europa.eu/sites/portal/files/documents/Hepatitis-B-C-epidemiology-in-selected-populations-in-the-EU.pdf>
²⁵ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5809955/>

Conclusions

HCV prevalence among MSM was not studied in Armenia. HCV prevalence was measured in Azerbaijan and Georgia. In both countries HCV prevalence was higher among MSM than in general population. The exception is the results of IBBS 2018 in Georgia which showed the decline of HCV in Tbilisi from 7% (2015) to 2.6% (2018) and decline in Batumi from 18.9% (2015) to 1.8% (2018). Further studies are needed to explain the possible reasons for such decline. By the moment now we can only speculate about the migration processes in the region and/or difference in methodology of surveys.

HBV prevalence was examined during IBBS among MSM in 2016 and 2018. The results shows that the prevalence of HBV among MSM is lower (0.2% in Gyumri and 0.3% in Yerevan) than in general population. Armenia was the only country where IBBS was conducted among Trans* people. However no cases of HBV were detected among Trans* people in Armenia.

The prevalence of viral hepatitis B and C is quite high in neighboring countries like Turkey and Iran, however there are no statistical data on HCV and HBV prevalence among MSM and other gay men. Also, No data is available from Caucasus regions of Russian Federation.

Little is known about MSM awareness on viral hepatitis. The data about HCV and HBV prevalence mostly comes from IBBS reports. IBBS is conducted mainly in the context of HIV and information about knowledge, attitudes etc. regarding viral hepatitis are not usually considered.

Free of charge treatment with DAA medications is available in Georgia for all citizens. Georgia demonstrates the best results in terms of HCV care however how many MSM and gay men underwent the treatment is unknown. No DAA treatment of chronic hepatitis C is available in Armenia. Azerbaijan recently started state program for HCV treatment for all citizens. However no exact data on patients enrolled is available. Treatment of HCV is available for all PLHIV patients in all 3 countries.

Vaccination of HBV is available in all 3 countries for newborns but there are no free of charge vaccination for MSM or any other KP groups with increased risk of getting HBV.

EU experience shows that there are high rates of reinfection after HCV treatment among MSM which is linked to high risk sexual behavior such as chemsex etc. However, no relevant data or surveys exist in Caucasus region. Comparison with EU countries showed that overall HCV and HBV rates among MSM are higher in Caucasus region.

Recommendations

- To obtain high quality statistical data on HCV and HBV prevalence it is recommended to include biomarker component for HCV and HBV in IBBS studies in all 3 countries of Caucasus region.
- It is recommended to improve the system of recording of gay men and other MSM underwent the HCV and HBV treatment within State or donor funded programs.
- At least annual HCV testing with HCV RNA is recommended for sexually active MSM after successfully treated HCV infection.
- Antiviral treatment for HCV-infected MSM should be coupled with ongoing counseling about the risk of HCV reinfection, and education about methods to reduce HCV reinfection risk after cure.
- Study on chemsex and related risks among MSM (including the risks to get infected with viral hepatitis B and C) should be conducted in Armenia, Georgia and Azerbaijan.
- HCV testing at HIV pre-exposure prophylaxis (PrEP) initiation and at least annually thereafter (while on PrEP) is recommended in HIV-uninfected MSM.
- All MSM should be counseled about the risk of sexual transmission of viral hepatitis with high-risk sexual and drug use practices, and educated about measures to prevent HCV and HBV infection or transmission.
- Vaccination for HBV should be considered as part of any STI prevention programs targeted for MSM and other gay men.
- Survey on HBV and HBV prevalence, knowledge and needs should be conducted among Trans* people in all 3 countries of the region.
- Best practice of Georgia on Hepatitis C elimination program should be shared among other countries of the region. Study visits with participation of civil society, communities and State representatives should be organized to explore Georgia experience.



Autor: Sergo Chikhladze, PhD

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