

THE REPUBLIC OF CROATIA

MINISTRY OF HEALTH



COUNTRY PROGRESS REPORT
Croatia

Reporting period:
January 2014 - December 2015

March 2016

GLOBAL AIDS RESPONSE PROGRESS

COUNTRY REPORT

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II. Introduction

Croatia has been reporting since 2005, first within reports formerly called UNGASS and later called GARP which have been submitted in years 2005, 2008, 2010, 2012 and 2014. This narrative part of the report represents an account of the HIV/AIDS situation in Croatia for the period January 2014 – December 2015. It is based on data from routine HIV/AIDS surveillance, (i.e. the National HIV/AIDS Register jointly maintained by the Health Promotion Division and Epidemiology Division of the Croatian Institute of Public Health), data obtained through regular reporting of VCT centers, Transfusion Medicine Institute, University Hospital for Infectious Diseases “dr. Fran Mihaljević”, NGOs and from studies among the most-at-risk-populations conducted by various institutions in this reporting period.

III. Status at a glance

The inclusiveness of the stakeholders in the report writing process

All the relevant stakeholders have taken part in compiling this report. Even though no workshop has been organized solely to this purpose, the major partners gave their contribution to this report through everyday work they have done during this reporting period and have helped the M&E Unit when compiling the report through providing extensive consultations and phone interviews, promptly and expertly providing the information needed per email.

These are:

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Bojana Knežević, Croatian Institute for Health Protection and Safety at Work
and the following NGOs:

NGO Iskorak – a LGBTIQ group for promotion and protection of different
sexual orientations,

NGO Help – a youth help organization

NGO Institut

NGO for improving the quality of life "LET",

NGO Terra,

The Croatian Red Cross,

Croatian Association for HIV (CAHIV)

NGO HEPATOS Rijeka,

UN Theme Group for HIV/AIDS

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The status of the epidemic

The HIV/AIDS situation has been monitored in Croatia since 1985, when the first AIDS cases were documented. Since beginning of reporting until end of 2015, there were 1321 documented cases of HIV infection, 458 of which progressed to AIDS. During the same period, of the 1321 diagnosed with HIV infection, 201 patients died of AIDS. A large majority of the HIV/AIDS cases are male (87.2%), who are mostly diagnosed between the age of 25-44.

With respect to probable transmission routes HIV is predominantly transferred sexually, 61.8% of all HIV infections are attributed to sex between men (MSM), also 18.4% HIV infections occurred through heterosexual route outside a stable relationship and 8.6% through a heterosexual route of transmission from a HIV positive steady partner. Only 5.5% of all HIV infections occurred through injecting drug use. When we consider the receiving of blood products as a transmission route, 0.2% of all infections occurred in this way. Additionally, 1.1% of all infections were found among hemophiliacs. Also, 1.1% of the HIV infections cases were cases of mother to child transmission. Finally 3.4% of all HIV/AIDS cases were of unknown mode of transmission. For the year 2015 itself, it was reported 116 new HIV/AIDS cases,

including 16 AIDS cases and there were 16 AIDS deaths. In the past five years, an average number of annually reported HIV/AIDS cases was 89 (range 77-116).

According to laboratory annual reports, in 2014 there were 283.862 doses of blood tested of which 163 (0.05%) were HIV positive (this is not excluding possible double testings).

The policy and programmatic response

The Epidemiology Division in the Croatian Institute of Public Health has been following the epidemiologic situation regarding HIV/AIDS surveillance since 1985, when first AIDS patients were registered in Croatia. The Epidemiology Division is following the situation using its own information system based on individual reporting of HIV/AIDS cases and deaths. Data is collected within the surveillance of all communicable diseases that are under surveillance in Croatia which is regulated by law (reports/ notifications of infectious disease/death). HIV infected persons as well as AIDS cases and deaths are reported and are being entered into the National HIV/AIDS Registry, maintained at the Epidemiology Division in collaboration with Health Promotion Division of the Croatian Institute of Public Health. Registry data are part of the world information system and are being reported to WHO/ECDC through TESSy.

Unlike some European countries with a low level AIDS incidence, Croatia has had all the necessary prerequisites for an early entrance of the HIV epidemic into the country – open borders, citizens travelling abroad, migrant workers, developed tourism industry etc. The Croatian National Programme for HIV/AIDS prevention includes measures of primary, secondary and tertiary prevention. A large proportion of measures for HIV/AIDS prevention are based on health education in the general sense, especially focusing on populations with high risk behaviour, with the goal of changing such behaviour. These measures refer to risk reduction among populations such as MSM, IDUs, CSWs, heterosexuals with a high partner change rate, sexual partners of HIV positive persons, prisoners and others. Due to the low level of HIV/AIDS risk in the Republic of Croatia these measures are predominantly focused on promotion of protective behaviour in general population and adolescent population and on prevention

of determined risk behaviour within certain most-at-risk groups. Protection measures against nosocomial infections as well as blood control and control of immunobiologic preparations are continually conducted in Croatia and all blood donations and blood products have been tested since the mid-1980s.

In the 1993. Committee for Human immunodeficiency syndrome prevention was founded by the Ministry of Health and Government of Republic of Croatia has issued Conclusion about accepting first Ministry of health's program for AIDS health care in Croatia. Current National program for HIV/AIDS prevention is for the period 2011-2015. The new revised HIV/AIDS prevention program for the period 2016-2020, is in the process of being adopted. The action plan of the Croatian National Programme for HIV/AIDS prevention includes five major areas, described in more detail in chapter V. - National response to the AIDS epidemic.

IV. Overview of the AIDS epidemic

a) The HIV/AIDS situation has been monitored in Croatia since 1985, when the first AIDS cases were documented here. Between 1985 and 2015 there were reported a cumulative total of 1321 cases of HIV infection, including 458 AIDS cases. During the same period of time, of the 1321 diagnosed HIV, 246 patients died, (Figure 4). A large majority of HIV/AIDS cases are male (87.2%) (Figure 1), who are mostly diagnosed with HIV infection at the age of 25 – 49, (Figure 2).

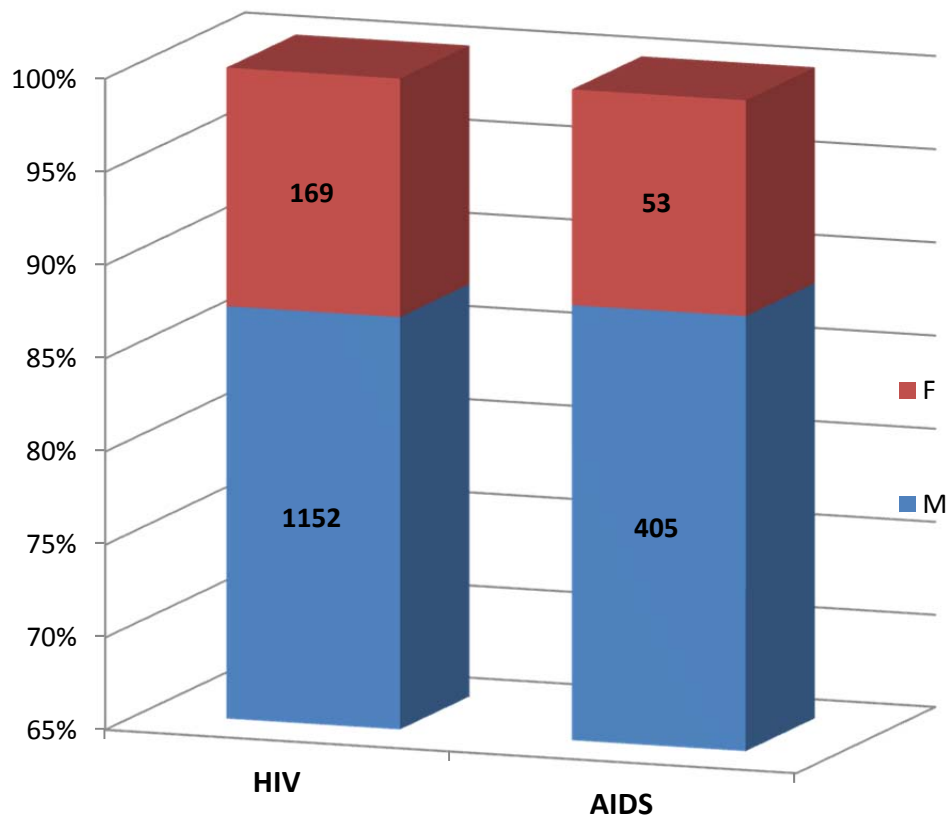


Figure 1. Gender distribution of HIV and AIDS cases in Croatia 1986-2015

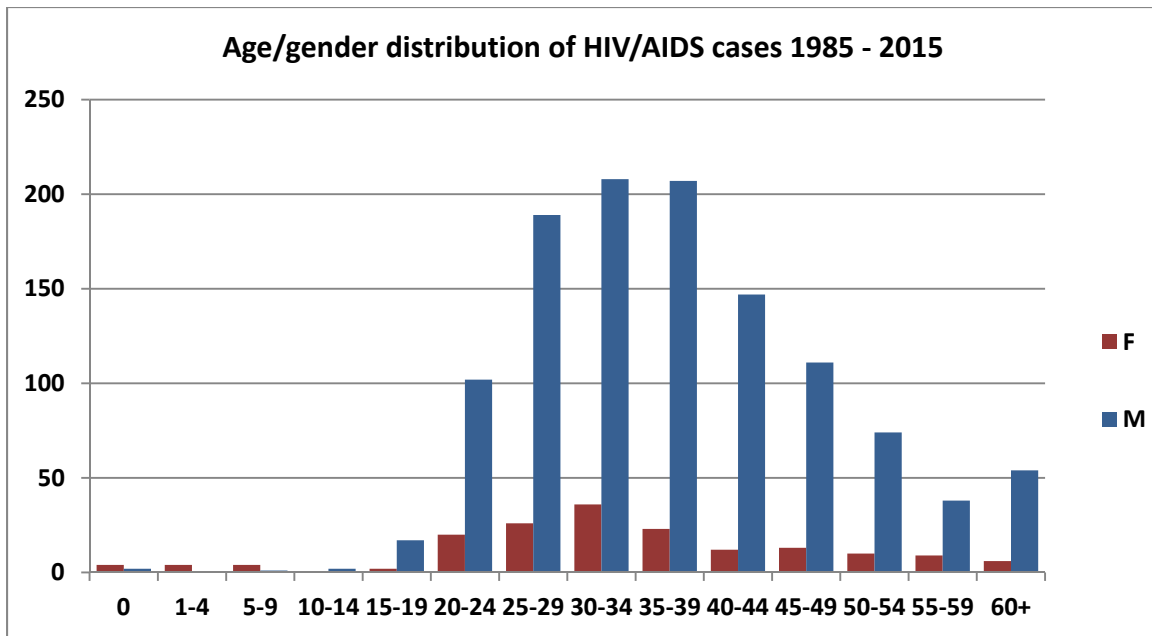


Figure 2. Age/gender distribution of HIV/AIDS cases at the time of diagnosis in Croatia

b) With respect to probable transmission routes (Figure 3), while the majority of all HIV/AIDS cases are attributed to sex between men (MSM) (61.8%), 18.4% HIV infections occurred through heterosexual route outside a stable relationship and 8,6% through a heterosexual route of transmission from a steady partner and 5.5% of all HIV infections occurred through injecting drug use. HIV incidence among MSM population is rising. When we consider the receiving blood products as a transmission route, 0.2% of all infections occurred in this way. Additionally, 1.1% of all infections were found among hemophiliacs. Also, 1.1% of the HIV infections cases were cases of mother to child transmission. Finally 3.4% were of unknown mode of transmission.

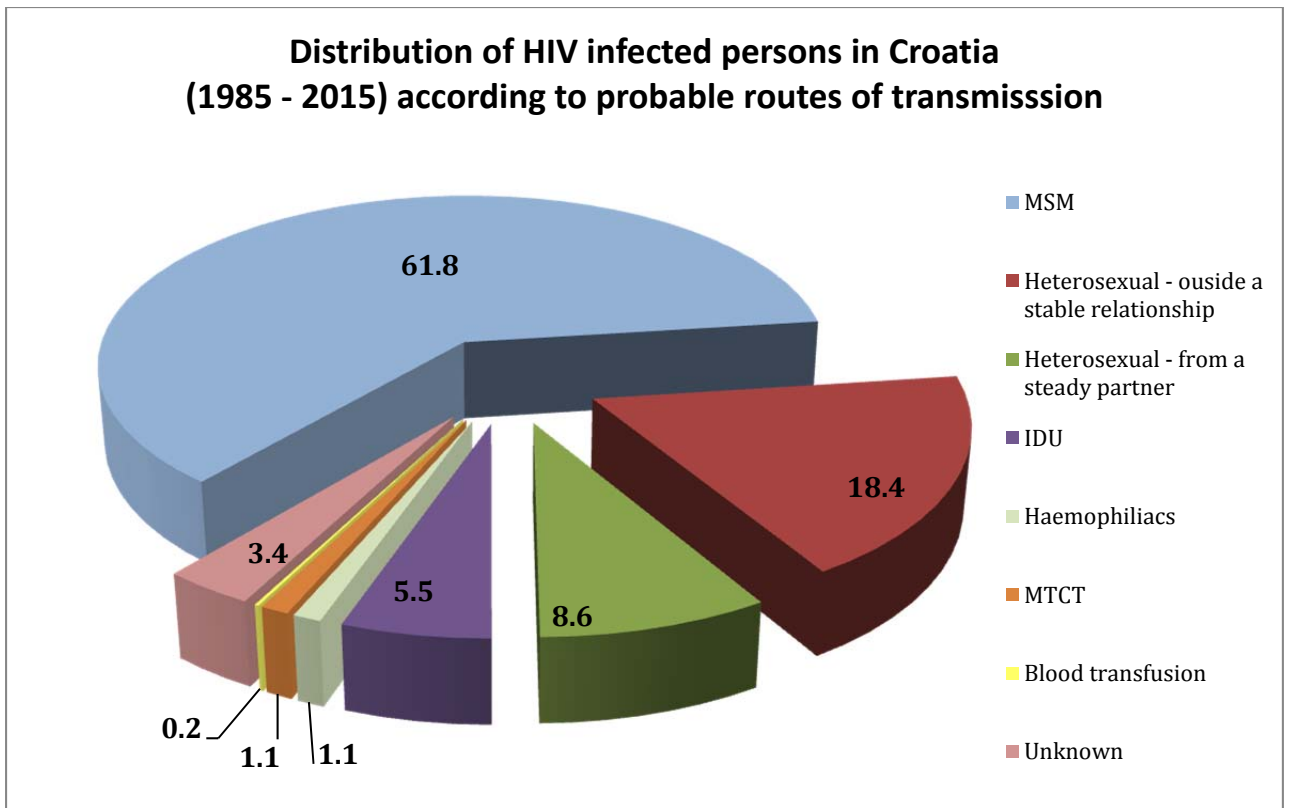


Figure 3. Probable routes of transmission

c) According to reports from all laboratories that provide HIV testing, in 2014 there were 286.862 doses of blood tested of which 163 (0.05%) were HIV positive (this is not excluding possible double testings).

Ad a) According to obligatory registration of infectious disease, the incidence of AIDS cases in Croatia increased yearly until 1994, when it began to stabilize and stayed so till 1999. Between 1994 and 2005, there was a mean of 17 reported cases per year. In the last ten years there are more than twenty reported cases annually. With the introduction of the anti-retroviral therapy, the number of AIDS cases and deaths from AIDS showed a slight decrease, while the number of HIV positive persons increased. The number of new reported HIV cases also increased, which can partially be explained by increased reporting due to improved diagnostic measures (increased availability of HIV testing services), especially within MARPs. HIV infection incidence in the period between 2004-2012 has been recorded at 12-17 per 1 million inhabitants, in 2013-2014

years it increased and was recorded at about 20 per 1 million inhabitants to reach even 27 per 1 million inhabitants in 2015. These values still place Croatia in the category of countries considered to have a low HIV/AIDS incidence.

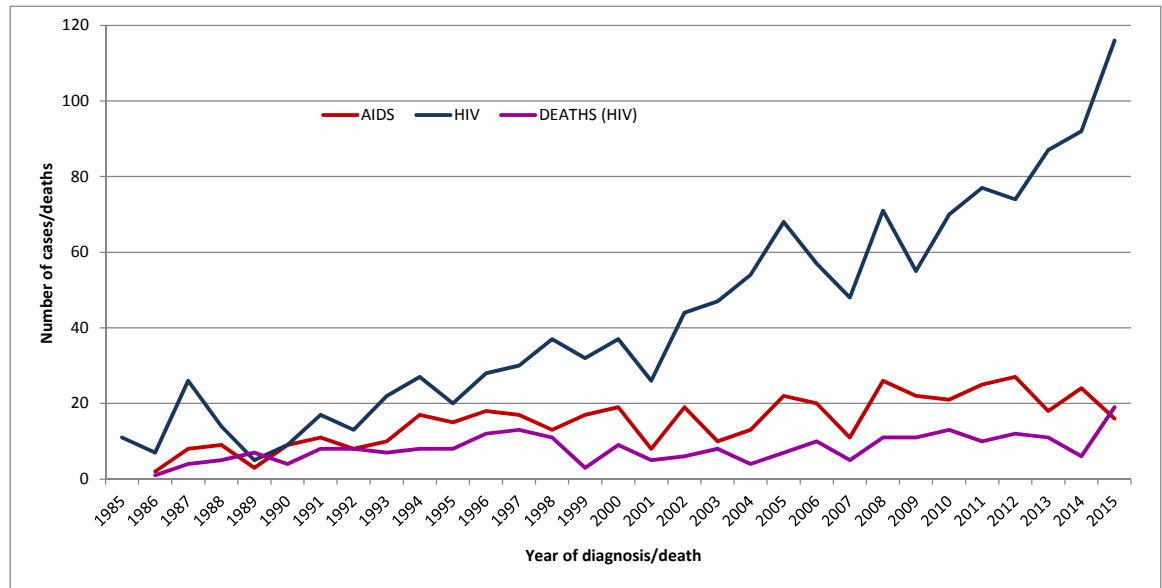


Figure 4. Annual number of registered HIV/AIDS cases and deaths in the Republic of Croatia, for the period 1985-2015

AIDS patients and the HIV infected persons are found in all parts of the country. Incidence and prevalence of HIV infection vary by region in Croatia and with respect to dominant modes of transmission. In the past decade the MSM transmission route seems to be slowly becoming the leading transmission route in the entire country. The incidence and prevalence, of both HIV and AIDS, is somewhat higher in the coastal areas, though the total number of HIV/AIDS cases is by far the highest in the capital, city of Zagreb. Among the infected in Zagreb, HIV is transmitted most frequently through MSM contact (76,81% of all HIV/AIDS cases in the city of Zagreb). Epidemiological data shows that this is the case of virus transmission among the domestic MSM population. In the northern and middle coastal regions (Primorje-Gorski kotar, Split-Dalmatia and Zadar counties) HIV transmission via heterosexual route is dominant, the majority of infections are obtained outside a stable relationship and a lower number of cases from an HIV positive steady partner. Historically, in the coastal regions of Croatia the infection was

often transmitted by men infected abroad (seafarers) conferring the infection to their regular sexual partners, usually wives and girlfriends, living in the country. Today the heterosexual mode of transmission in this part of the country seems to be shifting more and more towards the MSM route of transmission which is slowly gaining in numbers and is the second leading transmission route in the coastal areas, while the third being intravenous drug use. In the northern and southern coastal regions (Primorje-Gorski kotar and Split-Dalmatia counties) aside from the MSM and heterosexual transmission routes also transmission through intravenous drug use is present. In northern coastal regions (Istria county), transmission via intravenous drug use and needle sharing used to be dominant, but in the last decade other routes of transmission are gaining in share in this area also so now the MSM route of transmission and the heterosexual route of transmission (outside a stable relationship and from a steady partner cumulatively) are responsible for about the same number of cases in this county and are leading before the intravenous drug use as a transmission route. In the continental part of the country the MSM route of transmission accounts for the majority of cases in this region with Osijek-Baranja county reporting the same number of cases attributable to the MSM route of transmission as is found in the Zagreb county (area immediately surrounding the capital).

Ad b) Among all HIV infected heterosexuals, 8,6% have acquired the infection from their HIV positive steady partner among which the majority are women who have obtained the infection from their partners returning from work abroad or from a promiscuous partner (about 80%).

From a total of 18,4% of those acquiring the infection through a heterosexual route of transmission outside a stable relationship the majority are men (about 85%) and a large majority of which have spent longer time-periods abroad (79%).

As already mentioned, historically, the heterosexual route of transmission was considerable within which the great majority of (male) individuals acquired the infection abroad as migrant workers, mostly sailors and then transmitting the infection to their wives when returning to Croatia.

However, incidence among MSM population is raising and the sexual route of transmission is dominated by the MSM route of transmission particularly so in the last decade, the share of MSM route of transmission in the overall reported cases has

increased from 40% to 61.8% in the period from 2005-2015. A cumulative total fourteen children in Croatia have contracted HIV from their mothers, and four have progressed to AIDS.

Intravenous drug users (IDUs) comprise 6.3% of total AIDS cases in Croatia and 5.5% of the total HIV infected population. Among IDUs, the HIV prevalence is less than 1% and the trend among them is stable. The percentage of HIV infected IDUs has not increased over the last 15 years. According to the data of the Register of persons treated for psychoactive drug use at the Croatian National Institute of Public Health, in 2014 among all treatment clients (7.812), 58% (4.533) persons reported injection drug use of their primary drug. The prevalence of HIV, HBV and HCV is 0.2%, 6.3% and 25.1% respectively (anamestic data) and this prevalence has shown decrease in the last ten years. Regarding risk behavior of persons treated for psychoactive drug use according to the data of the Register of persons treated for psychoactive drug use there has been a decrease of injecting equipment sharing in the period 2005-2014. (Table 1).

Sharing needles and syringes ever in life:										
YES	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	71.3	70.7	70,2%	68,0%	68,1%	61,3%	61,0%	59,7%	56,1%	57,9%
Sharing needles and syringes in the last month:										
YES	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	23.0	21.6%	19,9%	17,8%	20,7%	10,5%	3,6%	2,7%	2,2%	1,8%

Table 1: Persons treated for drug use 2007-2014 according to sharing of needles and syringes ever in life and in the last month. Source: Annual report on persons treated for drug abuse in Croatia in 2014., Croatian Institute of Public Health

Ad c) Voluntary donation, low prevalence of HIV infection, and mandatory blood product testing has kept the rate of infection via receipt of blood and blood products low. In Croatia, all donated blood has been tested on for HIV since 1987, and additional prevention measures are employed when taking blood from donors. According to the National HIV/AIDS Health Protection Programme, only blood from donors in Croatia is used, a principle known as “self-containment”. This principle is likewise followed with other blood products. If import of blood derivatives is necessary, a set of procedures exist to ensure the safety of the blood products. Approval by the Croatian Agency for

Medicinal Products and Medical Devices is required. Also, the principle of gratuitousness is applied. Donors with a higher risk to HIV and other blood-transmitted infections are temporarily or permanently (depending on the risk characteristics) refused.

A number of cases have been reported in Croatia in which HIV has been transmitted through blood or blood products. Since 1985, 14 patients with haemophilia have contracted HIV and 8 have developed AIDS (1.1 % of all HIV cases). All patients with haemophilia received imported blood derivatives. Since 1992, there were no new registered HIV infected patients from this group. There were also two (0.2% of all HIV cases) registered non-hemophiliac cases of HIV infection after transfusion of blood within the country (in 2004).

The system of monitoring HIV infected persons through reports from all laboratory who provide HIV testing provides a valuable indicator of trend movements, but as with all the information systems used to collect data from laboratories, it is subject to over-reporting (testing the same person in another laboratory, testing of earlier reported cases). According to data obtained from laboratory reports in 2014 a total of 283.862 blood samples have been tested of which 163 were positive for HIV (0.05%). In 2013 a total of 214.740 samples were tested of which 178 were positive for HIV (0,08%). In 2012: a total of 225.275 samples were tested of which 163 were positive for HIV (0,07%). According to data of the Croatian Institute for Transfusion Medicine among 183.410 tested samples from voluntary blood donors (VBD) in 2014, two were HIV positive, in 2013 among 183.072 VBD samples four were positive for HIV while in 2012 of 182.068 tested samples from blood donors six were positive for HIV (Figure 5).

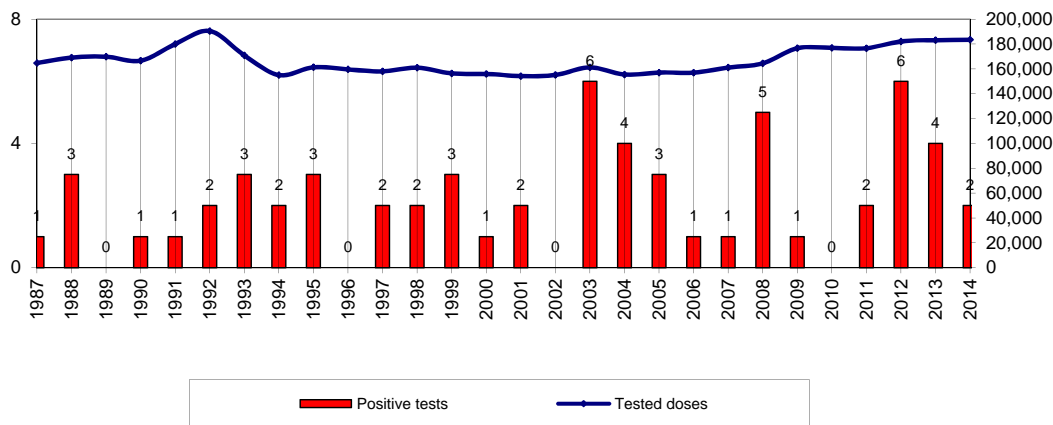


Figure 5. Number of tested doses and HIV positive tests among voluntary blood donors in Croatia

V. National response to the AIDS epidemic

The Croatian National Programme for HIV/AIDS prevention includes measures of primary, secondary and tertiary prevention. A large proportion of measures for HIV/AIDS prevention are based on health education in the general sense, especially focusing on populations with high risk behaviour, with the goal of changing such behaviour. Due to the low level of HIV/AIDS risk in the Republic of Croatia these measures are predominantly focused on promotion of protective behaviour in general population and adolescent population and on prevention of determined risk behaviour within certain most-at-risk groups. A part of these measures refers to risk reduction among populations such as MSM, IDUs, CSWs, promiscuous persons, sexual partners of HIV positive persons and others. Protection measures against nosocomial infections as well as blood control and control of immunobiologic preparations are continually conducted in Croatia and these measures should be conducted further on. Respecting and promoting human rights of HIV infected persons is also of exceptional importance. HIV infected people have a right to privacy, normal education, health care, housing and non-discriminating relations in all aspects of their life. The public should be introduced to the importance of overcoming prejudice, ignorance and discrimination prevention in the fight against AIDS.

The current National HIV/AIDS Prevention Program is for the period 2011-2015- In 2015 an expert working group was formed within the National Committee for HIV Prevention which has revised the program for the period 2011-2015 and has written a draft of the National HIV/AIDS Prevention Program for 2016-2021. The new program is in final stages of being adopted (e-counselling has been completed). The structure and the goals of the previous program have been retained in the new one. Along with other goals and measures, the draft of the new program also contains as one of the main goals the UNAIDS and WHO vision 90-90-90 and includes strengthening community testing and consideration of preexposure prophylaxis for the MSM population, depending on implementation possibilities in the country.

The action plan of the Croatian National Programme for HIV/AIDS prevention includes: first, strengthening of national forces for the surveillance of the infection development, analysis of the epidemiologic situation and monitoring of risk behaviour as well as development and implementation of efficient programs for HIV prevention and conducting and evaluating these programs through monitoring normative activities, monitoring the epidemiologic situation in Croatia and the world and improving cooperation and coordination; second, increasing the number of voluntary counselling and testing so as to enable a timely counselling and prevention of the progress of the disease by introducing new models of voluntary testing, counselling and referral; third, providing optimal care to the HIV infected, development of preventive services for the HIV infected and fight against their stigmatization and discrimination by implementing the diagnostics procedure, therapy and treatment regarding the HIV infection, providing care for the HIV infected and by implementation of promotional activities; fourth, application of standard protection measures with the goal of minimizing risks of HIV transmission and other causative agents transmitted by blood through conducting standard protection measures in health organizations, educational organizations, institutions of social care, sports and other organizations and through blood safety, safety of immunobiologic preparations, tissues and replacement organs; and fifth reducing the infection transmission among particular populations through prevention of HIV spreading among high risk populations (MSM, IDU, heterosexual men and women of risky

behaviour, migrant-workers) and the prevention of HIV spreading among adolescents and grown-up population.

Treatment and care

Croatia has a low-level epidemic; the epidemic started in 1985. The first cases were identified among labor migrants who returned from western European countries, and seafarers who acquired HIV in Africa and Eastern Asia. However, recent data suggest that a concentrating epidemic among men who have sex with men is emerging.

Croatia has a centralized system of treatment and care for patients with HIV infection and all patients are treated in Zagreb at the University Hospital for Infectious Diseases (UHID). Antiretroviral drugs are only given from the hospital pharmacy at UHID. HIV infected patients need no referral from primary care physicians to enter care at UHID. There is a close collaboration of Voluntary testing and counseling centers and other hospitals with UHID. There are also two community based testing sites in Zagreb, the capital of Croatia.

Health insurance is universal and all health care expenses including the cost of antiretrovirals and monitoring are free of charge for the individual. Highly active antiretroviral therapy became available through the national health insurance scheme in April 1998. At the end of 1997 determination of HIV-1 RNA by PCR became available. Since 1997, there is a comprehensive electronic database on HIV infected patients available at UHID.

The process of registration and approval of antiretrovirals is slow. However, in recent years new drug and drug combinations were included into the Croatian National Health Insurance Drug List: raltgravir, dolutegravir, and fixed combinations of tenofovir/emtricitabine/rilpivirine and abacavir/lamivudine/dolutegravir.

Reduction in HIV prevalence

Since we are dealing with a low-prevalence epidemic in Croatia, we are concentrating on one major impact indicator, that is, the reduction in HIV prevalence among most-at-risk populations. These groups, in Croatia include MSM (men who have sex with men), commercial sex workers (CSW), sex workers' clients, PWID and mobile populations.

According to the results of the HIV/STI seroprevalence study among MAPRs in Croatia conducted 2003-2006 (n=1361), the highest prevalence among most-at-risk groups is found within the MSM (men who have sex with men) population, amounting to 3.3%, the next most-at-risk group are commercial sex workers, where data shows a prevalence of 1.5%. HIV prevalence within the group of clients of sex workers is somewhat lower compared to the two previously mentioned groups, amounting to 0.6%, whereas the same prevalence (0.6%) is to be found among PWID (iv drug users) and mobile populations were found to have the lowest prevalence (0.2%). The prevalence in those having more than 2 partners in the last 12 months was found to be 1.2% and those with a history of STI 0.8%.

A more recent study of seroprevalence of HIV and STI among MARPs in Croatia was conducted from 2011-2014 and while it has not reached the intended coverage of 1200 respondents (actual number of respondents was 443), the results (still unpublished) show that in persons with risk sexual behavior enrolled in the 2011-2014 study, HIV prevalence was reported to be overall 1.4%, and higher among MSM (3.3%). Comparing the prevalence rates in MSM and bisexual persons with previous Croatian studies, the seroprevalence found in this study is comparable with the results of 2010 and 2007 study (2.8% and 3%, respectively) (Bozicevic et al., 2012¹; Kolarić et al., 2011²), while in 2006 the seroprevalence was higher (4.5%) (Bozicevic et al., 2009³).

¹ Bozicevic I, Lepej SZ, Rode OD, et al. Prevalence of HIV and sexually transmitted infections and patterns of recent HIV testing among men who have sex with men in Zagreb, Croatia. *Sexually Transmitted Infections* 2012;88(7):539-44.

² Kolarić B. Croatia: still a low-level HIV epidemic? - seroprevalence study. *Collegium Antropologicum* 2011; 35:861-5

³ Bozicevic I, Rode OD, Lepej SZ, et al. Prevalence of sexually transmitted infections among men who have sex with men in Zagreb, Croatia. *AIDS Behav* 2009;13(2):303-9.

While we are aware that due to a small number of participants in some risk groups (SW) as well as HIV-positive participants, some calculations should be interpreted with caution, despite these limitations, these results provide new data on the epidemiology, including risk factors for STD in groups with high-risk sexual behavior in Croatia.

Regarding risk sexual behavior, HBV positivity in this study was significantly related to a history of STD. Although a higher seroprevalence of anti-HBc was found in participants who reported sex work than in those who did not (22.7% vs 11.6%), the difference was not significant. Probability of being syphilis seropositive was significantly higher in persons who reported homo/bisexual orientation, a history of STDs and higher number of sexual partners.

Lifetime IDU was common in persons tested in this study (34.5%). Participants who reported lifetime IDU were significantly more likely to HBV and syphilis seropositive compared to those who did not (23.0% vs 6.2% and 5.0% vs 0%, respectively). There was no difference in HIV seropositivity among IDUs and non-IDUs (0.7% and 1.8%).

In conclusion, the results of this study showed that HIV seroprevalence did not change substantially. Although prevalence of some STDs in groups with risk sexual behavior is not high, a high proportion of sexual risk behaviors in these population groups highlight the importance of continuing STDs screening and prevention.

Knowledge and behaviour change and HIV testing

Basing on the data of the Croatian HIV/AIDS Registry preventive measures, actions and programs are in place to ensure that all MAPRs identified in the Croatian National HIV/AIDS Prevention Programs are reached by IEC material and provided with harm reduction, counselling and testing services. We aim to achieve higher testing rates, particularly for the MSM population but also other MAPRs as this is crucial for timely diagnosis and treatment. The HIV testing policy in Croatia is, due to the low level epidemic present, a non-mandatory one. This means that there is no mandatory testing prescribed neither for general population, nor for most-at-risk populations. The 10 VCT centres established during the Global fund project (2003-2006) (including one for the prison system) through which voluntary and free-of-charge services of counselling and

testing are offered to the clients continue to offer services meant to target most-at-risk populations in Croatia (MSM, IDU, CSW, migrants, prisoners).

Eight VCT centers function within Public Health Institutes, one within the prison system and one in the Referent Center for HIV/AIDS at the University Hospital for Infectious Diseases “Fran Mihaljević”. In 2014 and 2015 all VCT centers in Croatia have provided 9.958 counselling sessions for 5733 clients and conducted 5697 HIV tests of which 78 were positive.

Additionally, in the Croatian Institute of Public Health in collaboration with the NGO Iskorak first started, first as a pilot in 2012 and then regularly since October 2013 community testing on HIV targeted for MSM is offered on the premises of the LGBT center in Zagreb using rapid tests. In 2012 this service was offered in the community for two months (pilot) and in 2013 in the period October-December and has since then been offered continually throughout the whole year. During 2014 a total 743 persons were tested and 18 reactive results were found while in 2015 from a total of 482 tested persons 9 reactive results were found.

In collaboration the Croatian National Institute of Public Health, University Clinic for Infectious Diseases and NGO Iskorak plan to implement another preventive activity within which we plan to use the Internet to promote testing among the MSM population referring them to get tested in VCT centers in Croatia, advise and motivate them to test regularly. The idea is to monitor their testing practices and testing results in order to obtain more accurate data on HIV incidence among the MSM (cohort follow-up). The title of the project is “Responsible” and the it is currently in preparatory phase.

The NGO HUHIV in collaboration with the Clinic for Infectious Diseases “dr. Fran Mihaljević” and the support of the city of Zagreb has set up another community testing location in Zagreb which was opened on May 3, 2013 and is known under the name “CheckPoint Zagreb”. Unlike other checkpoint services in Europe this one is not targeted on MSM exclusively but aims to test all persons who consider themselves to be at risk of acquiring HIV. In 2014 Checkpoint Zagreb has provided 2843 counselling sessions and using rapid tests conducted 1339 HIV tests of which 9 were reactive. This community testing location also offers rapid testing for HCV, in the mentioned period 1230 HCV tests were performed of which 14 were reactive. In 2015 Checkpoint has

performed 1338 counselling sessions, 998 HIV tests of which 9 were reactive and 738 HCV tests of which 5 were reactive.

Aside from the above mentioned community testing locations, public health institutes in Split-Dalmatia, Zadar and Primorje-Gorski kotar counties are also offering community testing in collaboration with local NGOs (HELP in Split, Red Cross in Zadar and Hepatos in Rijeka).

All those whose tests either in VCT or community settings came back positive/reactive were referred to further confirmatory testing and inclusion in care to Clinic for Infectious Diseases “dr. Fran Mihaljević”.

Good collaboration with NGOs conducting harm reduction programs continues and according to the reports received, NGOs HELP, LET, Institute, Red Cross and TERRA have in 2014 distributed 701.059 needles and 307.910 syringes and collected 146.013 used needles and 68.090 used syringes. In 2015 the mentioned NGOs have distributed 711.019 needles and 314.366 syringes and collected 134.777 used needles and 77.998 used syringes.

Recent studies

Aside from the still unpublished results of the national study on Seroprevalence of HIV and STI among MARP mentioned above, an RDS research among the PWID was conducted in from November 2015 until February 2015 recruiting a total of 830 PWID in three Croatian cities – Zagreb (176), Rijeka (255) and Split (399). The results of this study are also still unpublished. Participants provided biological specimens for HIV and HCV testing and completed a behavioural questionnaire. A low-level HIV epidemic and a sizable HCV epidemic among PWID in Zagreb, Split and Rijeka was found. The results of the study point to a need to develop a comprehensive approach to harm reduction and scale up the coverage with needles and syringes exchange programmes, OST and HIV and HCV testing services, as well as to strengthen sexual health interventions due to the presence of high-risk sexual behaviours.

In this reporting period another interesting article was published by Lakoseljac et al. titled *Sexually Transmitted Diseases as a Risk for Acquiring HIV Infection among the*

Population of Men Who Have Sex with Men – A Case-Control Study. The article presents the results of a case-control study on the MSM recruited within the Seroprevalence study on HIV and STI conducted in Croatia in 2003-2006 (mentioned above) investigating the risk factors among those MSM who tested positive (patient group) and those who tested negative (control group). A total of 296 men who have sex with men (MSM) were included in this case control study. Differences among the frequencies of sexually transmitted diseases among the MSM of HIV positive and HIV negative status were tested. The history of HIV positive more often states falling ill with sexually transmitted diseases than this was the case before they became HIV positive, unlike those MSM who are not HIV infected (45,9% : 11,1% that is OR 6,79, 95% CI 3,49-13,19). Hepatitis B infection is more frequent in HIV positive MSM (11,5% : 1,9%; OR 6,58, 95%CI 1,86-23,3). The frequency of gonorrhoea in case history of HIV positive MSM is significantly higher than in the HIV negative group (11,5% : 3,8%, OR 3,24 , 95%CI 1,13-9,34). In the group of HIV positive MSM, unlike the HIV negative group, syphilis (14,8 : 1,0%, OR 17,74 , 95%CI 3,43-122,87) and genital herpes (8,2% : 0,5%, OR 18,39 , 95%CI 2,03-424,7) are more frequent . The results of this study will be used in future preventive activities focused on the population of MSM, as a population under particular risk for acquiring sexually transmitted infections. The article has been published in *Collegium Anropologicum* 39 (2015) 3:729-734.

Another interesting article presenting the comparison of results of two cross-sectional behavioural studies (convenience sampling) carried out among the female sex workers in Zagreb and Split in 2007-2008 and 2014 was published in 2015 by Stulhofer et al titled *HIV risks and HIV prevention among female sex workers in two largest urban settings in Croatia, 2008–2014* (published in *AIDS Care*, 2015 <http://dx.doi.org/10.1080/09540121.2014.996519>). The study interviewed 154 FSW in the first wave and 158 in the second. The period under observation was characterized by a stable prevalence of most HIV relevant risk behaviors and experiences. Significant changes in client-based victimization and HIV knowledge were observed only among FSWs in the capital city where a decreased rate of client-based victimization has HIV-relevant implications, as client-based victimization was found related to lower odds of

condom use with nonpaying partners. This research shows that Substantial and mostly sustained levels of sexual and nonsexual victimization call for more research into the limits of the current behavior-based harm reduction approach to HIV prevention in the country. Because of non-probabilistic sampling and potential differences between FSWs who were enrolled and those who were not enrolled in HIV prevention programs the study findings cannot be generalized. In addition, the low variability in some indicators and relatively small samples by city and year affected estimates and decreased statistical power. Despite these limitations, our study provides insights into the dynamics of HIV risk among FSWs in the two largest urban settings in Croatia. In addition to finding that overall HIV vulnerability among the sampled FSWs did not increase during the period studied, our findings have policy implications. In the context of the current harm reduction programs, the HIV testing rates reported in the two cities suggest that efforts to promote free, anonymous HIV testing need to be intensified. Substantial levels of victimization observed in the study point to a need to focus on the causes and consequence of victimization among FSWs, an effort that could be facilitated by including a community empowerment component in the existing harm reduction programs in Croatia. However, more research is needed to clarify the limits of the current prevention programs and to provide evidence that would justify a paradigm change.

Just before turning in the 2016 GARP report, authors Aleksandar Štulhofer, Matija Sinković, Jasmina Božić, and Valerio Baćak published an article titled *Victimization and HIV Risks Among Croatian Female Sex Workers: Exploring the Mediation Role of Depressiveness and the Moderation Role of Social Support* (Violence Against Women 1077801216636241, first published on March 28, 2016 as doi:10.1177/1077801216636241) The aim of the study was to assess the association between victimization and HIV vulnerability among Croatian female sex workers (FSWs), a survey involving 157 FSWs recruited from Croatia's two largest urban areas was conducted in 2014. A majority of participants reported direct and indirect victimization, which was found to be significantly associated with condom use at most recent noncommercial sexual intercourse and sexually transmitted infection (STI) diagnosis in the past 12 months. The association between victimization and STI diagnosis

was partially mediated by depressiveness and moderated by social support. The buffering role of social support points to the importance of including counselling services in HIV prevention programs in Croatia.

Another article investigating behavioural factors for non-use of condoms among clients of the VCT center in Zadar was published in 2014, titled *Risk Factors Influencing Non-Use of Condoms at Sexual Relations in Populations under Heightened Risk* authored by Alan Medić, Boris Dželalija, Karlo Kožul, Iva Pem Novosel, and Tomislav Dijanić. *Coll. Antropol.* 38 (2014) 3: 895–900. The aim of the study was to determine risk factors for non-use of condoms when engaging in sexual intercourse among high-risk population groups for acquiring HIV/STIs. We collected the data obtained by interviews in the period from 2005 to 2011 in the Voluntary Counseling and Testing Center for HIV/AIDS at the Institute of Public Health of Zadar County. Four hundred ninety four respondents were divided into risk and control groups. The majority of the respondents in our population does not consistently use condoms, in the risk group as much as 89.9%, and in the control group 65.7% of them ($p < 0.001$). Persons consuming alcohol when having sexual relations use condoms about 5× less often compared to those not consuming alcohol at all (OR=5.00; CI=1.69–14.29). There are significant differences among women and men in the risk group regarding reasons for non-use of condoms. The main reason with women is »I trust my partners« 33.7% while men »do not like having sex with condoms« 53.6% of them ($p < 0.001$). The main risk factors for non-use of condoms are alcohol consumption at sexual relations, non-use of condoms in a casual relationship. Having in mind the non-use of condoms among populations of high-risk groups of acquiring HIV there are significant differences among genders.

An study looking into the repeat testing in VCT centers in Croatia titled *Repeat HIV Testing at Voluntary Testing and Counseling Centers in Croatia: Successful HIV Prevention or Failure to Modify Risk Behaviors?* was published in 2014 in PLoS ONE (Matkovic Puljic V, Kosanovic Licina ML, Kavic M, Nemeth Blazic T (2014) PLoS ONE 9(4): e93734. doi:10.1371/journal.pone.0093734). HIV testing plays a critical role in preventing the spread of the virus and identifying infected individuals in need of care.

Voluntary counseling and testing centers (VCTs) not only conduct testing but they also provide counseling. Since a proportion of people who test negative for HIV on their previous visit will return for retesting, the frequency of retesting and the characteristics of those who retest may provide insights into the efficacy of testing and counselling strategies. In this cross-sectional, retrospective study of 1,482 VCT clients in Croatia in 2010, 44.3% had been tested for HIV before. The rate of repeat HIV testing is lower in Croatia than in other countries. Men who have sex with men (MSM) clients, those with three or more sexual partners in the last 12 months, consistent condom users with steady partners, and intravenous drug users were more likely to be repeat testers. This finding suggests that clients presenting for repeat HIV testing are those who self-identify as being at a higher risk of infection. Our data showed that testing positive for HIV was not associated with repeat testing. However, the effects of repeat testing on HIV epidemiology needs to be explored.

Best practices

Croatia has received a GFTAM grant for the period 1. Dec. 2003 – 30. Nov. 2006 with the following key objectives of this project also identified in the national action plan:

1. Maintain the universal access to treatment and improve the psycho-social support to PLWHA.
2. To increase the level of protected behaviors among young people, through school based peer education prevention program.
3. To increase access to VCT services, particularly for members of vulnerable groups
4. To implement targeted interventions for people under increased risks.
5. To strengthen the HIV surveillance system

Prior to the Global Fund project there were only two voluntary counselling and testing (VCT) sites in Croatia. These testing sites were at the University Hospital for

Infectious Diseases (UHID) in Zagreb and at the Clinical Centre Rijeka. HIV testing, albeit with limited counselling, has also been performed at Transfusion centres throughout Croatia. Anonymous testing was not widely available before the Global Fund project. However, all citizens of Croatia are entitled to Health Care Insurance and HIV testing was free of charge if proof of insurance was presented. The Global Fund project enabled us to open altogether 10 VCT sites during 2004 and 2005. Positive HIV screening tests are sent to the Reference Laboratory at UHID in Zagreb where confirmatory testing is performed.

The support of the GFTAM project resulted in the establishment of an Outpatient Centre for HIV/AIDS which was opened at UHID in June 2005, the integral part of which is also psychosocial support. HIV infected patients need no referral from primary care physicians, which is usually required for other diseases, to enter care at UHID. Antiretrovirals are also given to patients at UHID from the hospital pharmacy. There is a close collaboration of VCT centres and other hospitals with UHID. In addition, a small renal dialysis unit for HIV infected patients was opened at UHID in 2005.

Multisectoral cooperation has significantly improved thanks to the Global fund project, notably resulting in involvement of civil society in the policymaking process through civil society representatives' active role in the NAC.

Another important achievement one must mention are studies conducted during the period 2003-2006 which were published as a supplement 2 to *Collegium Antropologicum* volume 30 in 2006.

Considered as the most valuable achievement in previous rounds was the fact that the state budget, although to a more modest level, has continued financing HIV prevention through a dedicated budget line, ensuring thus continuity and sustainability. Unfortunately, currently the situation is such that there is a tendency to even fund HIV prevention less (that might be currently the case because in the new state budget for 2016 no budget line allocated specifically to HIV prevention is foreseen. The information obtained by the Ministry of Health was that the activities would be continued to be financed extrabudgetary.

VI. Major challenges and remedial actions

The major challenges are still the stigma and taboo of HIV infection connected to additional discrimination of “hard-to-reach” populations.

Also, despite preventive measures implemented, of concern is the rising (or lack of decline) HIV infection among men who have sex with men (MSM).

Additional possible challenges lie in the process of increasing knowledge about HIV/AIDS among medical staff and problems related to second generation HIV surveillance goals.

Generally, at this point of the epidemiologic situation in Croatia, aside from the necessary continuous application of all protection measures according to the National HIV/AIDS Health Protection Program it is a priority to:

1. Continue with the work of HIV testing services (HTS) - Centers for voluntary counseling and testing including strengthening of community based HIV testing within key populations.

2. Intensify prevention among MSM population, particularly early detection of infection (HIV testing) and education and promotion of protective measures and behaviors..

3. Systematically and efficiently combat the still existing prejudice towards the HIV infected persons and groups of high risk.

4. Intensify education on healthy lifestyle, sexual and reproductive health education, health education within the school curriculum, for general population, and particularly young people, and other key populations, as comprehensive approach to HIV prevention.

VII. Support from the country's development partners

The private sector in Croatian economy has still not shown interest in investing finances into fight against AIDS.

VIII. Monitoring and evaluation environment

Epidemiologic monitoring of the HIV situation as well as the evaluation of the implementation of the National HIV/AIDS prevention program is the responsibility of the Infectious Diseases Epidemiology Service of the Croatian National Institute of Public Health which has been monitoring the situation even before the first HIV and AIDS cases were registered in Croatia.

Additionally, in 2006, M&E units at the Croatian National Institute of Public Health and Ministry of Health and Social Welfare were established. These units enable a better flow of information and ensure that all the data are collected from all the relevant stakeholders taking part in implementation of the National HIV/AIDS prevention program, including both the health sector and the nongovernmental sector. This is an additional help to the implementation of the National HIV/AIDS prevention program as such. Major challenges in improving the M&E environment is still the lack of human resources, i.e. there are no responsible persons who would devote their full attention to M&E, but work only part time on this issue. In the 2016 reporting round the M&E units at the Croatian Institute of Public Health and Ministry of Health are still functioning.

An improvement in resolving the lack of human resources is seen as an additional person has been devoted to tasks related to monitoring and regular data collection activities. This is by no means sufficient but represents big progress particularly regarding the quality of collected data.

ANNEXES

ANNEX 1: Consultation/preparation process for the country report on monitoring the progress towards the implementation of the Declaration of Commitment on HIV/AIDS

The following is a list of steps that have been taken within Croatia preceding the production of this report. The Ministry of Health and the Croatian Institute and its M&E Unit responsible for the compiling of this report would like to thank

the following NGOs for their work, without which it would not be possible to collect data necessary for the completion of this report:

- NGO Iskorak – a LGBTIQQ group for promotion and protection of different sexual orientations,
- NGO Help – a youth help organization
- NGO for improving the quality of life "FLIGHT",
- NGO Terra,
- PRO-REPRO a non-government organization for education in, promotion and protection of reproductive health,
- The Croatian Red Cross,
- International Organization for Migrations,
- Croatian Association for HIV and viral hepatitis (CAHIV),
- NGO Institut
- NGO Hepatos Rijeka

the following health organizations:

- National HIV/AIDS Reference Centre University Clinic for Infectious Diseases “Fran Mihaljević”
- Prison hospital in Zagreb (where one VCT center is located)
- Croatian Institute for Health Protection and Safety at Work

and of course the regional Public Health Institutes in which VCT centres are located:

- Brod-Posavina,
- Dubrovnik-Neretva,
- Istria,
- Osijek-Baranja,
- Primorje-Gorski kotar
- Split-Dalmatia and
- Zadar counties.

All of the abovenamed partners have continuously collaborated in everyday work and have helped complete this report providing extensive consultation whenever this was needed.

Steps taken that preceded the production of this report include the following:

- Collecting and compiling data
- Entering data into the online tool
- Generation of relevant tables and graphics
- Insertion of graphics into the narrative report. Source for all the epidemiological data, including the graphs and charts is the Croatian HIV/AIDS Register, maintained jointly by the Health Promotion and at the Epidemiology Division of the Croatian National Institute of Public Health.