

**REPORT ON IMPLEMENTED ACTIVITIES AND
ACHIEVED RESULTS IN ACCORDANCE WITH THE
PROGRAM FOR HIV PROTECTION IN 2018**

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Introduction

Despite the United Nations Joint Program on HIV and AIDS (UNAIDS) 's efforts to end the epidemic by 2030, the HIV epidemic is still one of the leading public health problems in the world. So far 35 million people have died due to HIV-related causes of which 940,000 died in 2017. It is estimated that approximately 36.9 million people are living with HIV, of which 1,8 million were infected in 2017. In 2017, 59% of adults and 52% of children living with HIV received antiretroviral therapy (ART).

HIV does not affect all regions equally, with the majority of cases being in the low- and middle-income countries, and approximately 64% of cases are in the sub-Saharan Africa region. In contrast, only 6,3% (2,3 million) of HIV-positive people live in the countries of Central, Western Europe and North America.

HIV is the leading cause of death from infectious diseases, with an estimated 39 million deaths since the first case was reported in 1981. However, due to the significantly improved availability of antiretroviral therapy (ART) the number of deaths in 2016 (1 million) decreased by 48% compared to the peak in 2005 (1,9 million).

Although there is a tendency to reduce the number of new HIV infections, the line of decline is too slow to achieve the goal agreed by the United Nations General Assembly in 2016: less than 500,000 new infections by 2020.

In addition, trends for new HIV infections are not the same in all regions, although in the majority of the world there is a decline in the number of new HIV infections, in Eastern Europe and Central Asia the annual number of new infections has increased by 60%.

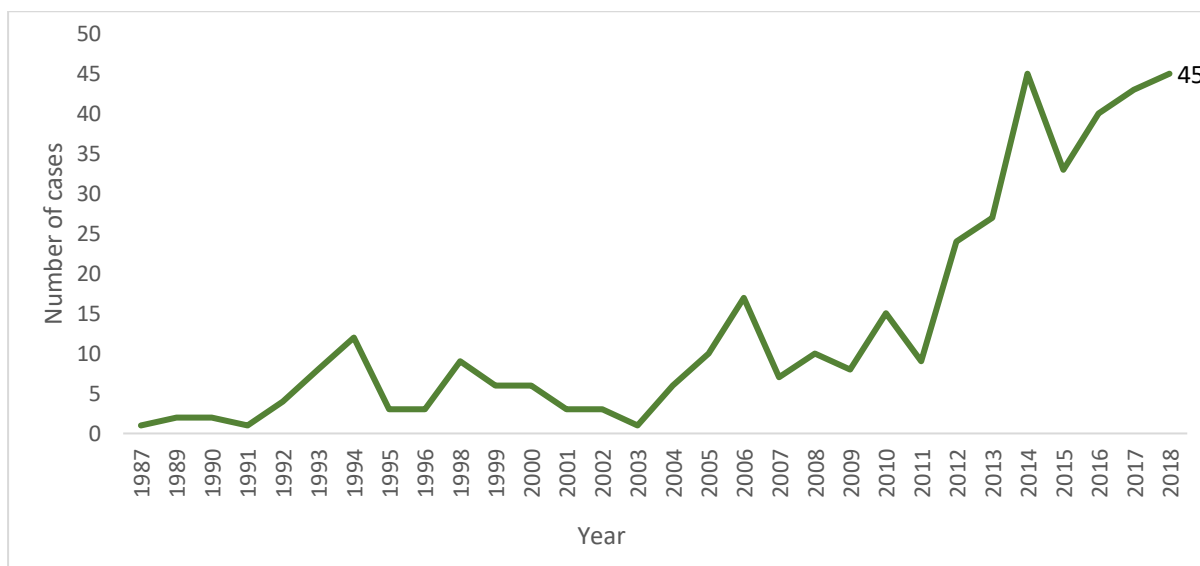
In countries with low HIV prevalence, gay men and other men who have sex with men (MSM) are at higher risk of HIV, in the WHO European Region 24% of newly discovered cases are in MSM, and in EU / EEA countries MSM account for 40% of new cases.

I. HIV / AIDS situation in North Macedonia

II.1 Cumulative Data

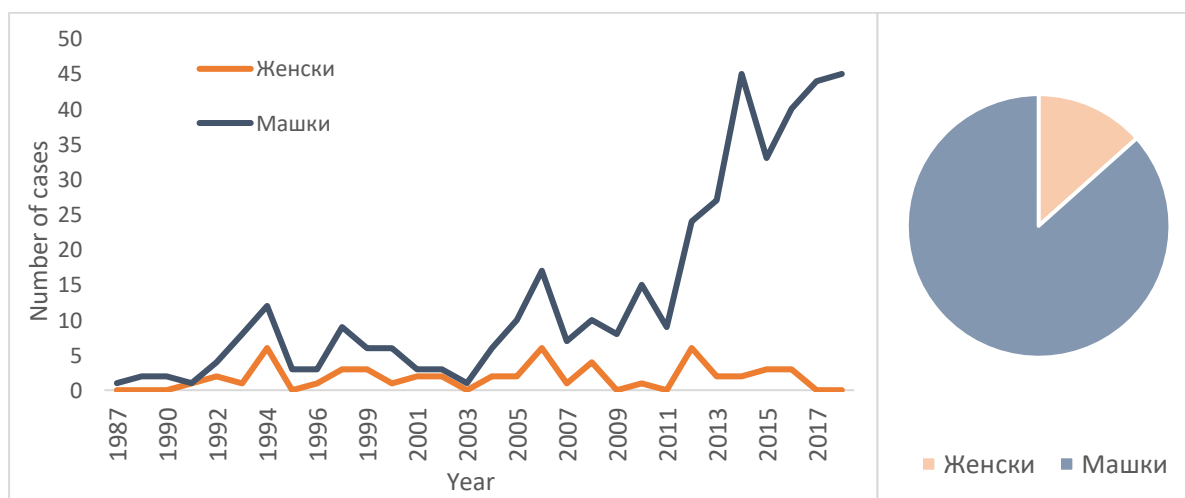
North Macedonia is a country with a low HIV prevalence, from 1987 to the end of 2018 there have been 404 cases of HIV, but in recent years there has been an upward trend in the number of new HIV cases, so more than half (52%) of all cases are registered in the last five years (Chart 1).

Chart 1. Number of newly registered cases per year, North Macedonia period 1987-2018



Cumulatively, from the registered cases, 339 (86%) were male and 54 (14%) were female. The high proportion of male participation in the number of newly registered cases has been a trend for the past 15 years, and in the last two years all newly discovered cases were male (Chart 2).

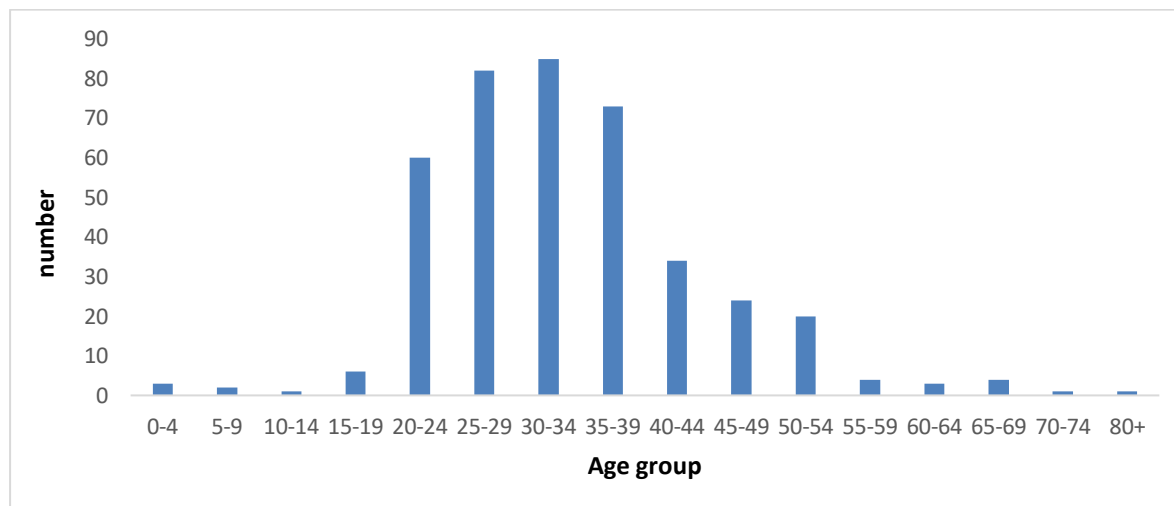
Chart 2. Distribution of HIV cases by sex in the period 1987-2018



*Male/female

The median age of registered cases at diagnosis was 32 years (mean 33.6 years; range 0-80 years). Distribution by age indicates that the most affected are sexually active persons aged 20-39 who make up nearly three quarters of diagnosed cases (74%, n = 300). Young people aged 15-19 account for less than 2% (chart 3).

Chart 3. Distribution by age of newly discovered HIV cases, 1987-2018



From 1987 to 2018, a total number of 99 cases in North Macedonia died of AIDS-related causes, representing a 24,5% mortality rate. With the introduction of antiretroviral therapy in North Macedonia, the survival of people living with HIV has improved significantly, with 26 deaths in the last 10 years out of 289 registered, representing a mortality rate of 9.0% (Chart 4).

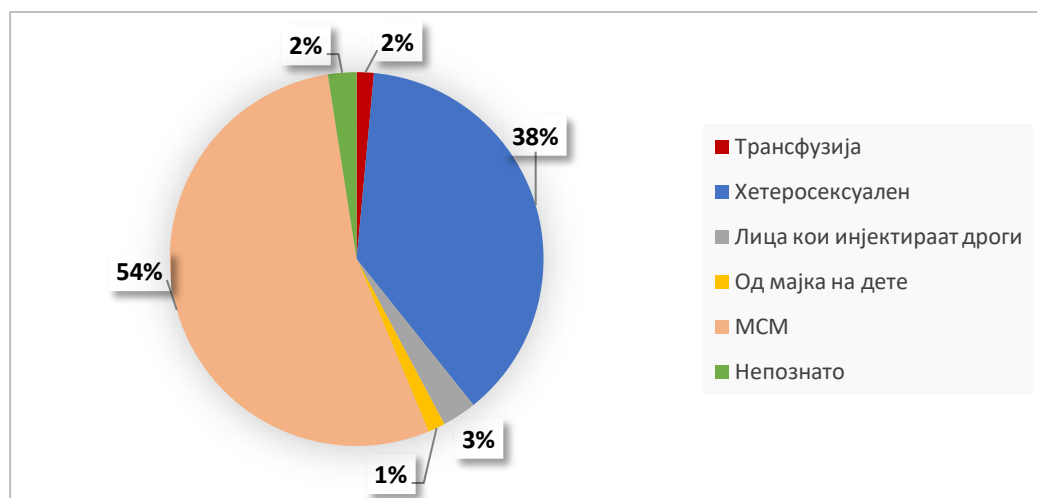
Chart 4. Distribution of cases by year of diagnosis and death due to HIV-related causes in North Macedonia 1987-2018



*deceased/ number of reported cases

Cumulatively by mode of transmission, the majority of cases (218; 54%) were in men who had sex with men, heterosexual transmission was reported in 153 cases (38%), people who are injecting drugs accounted for 2,5% (n = 10), 6 cases were registered in persons with hemophilia (last 15 years ago) and 6 mother-to-child transmission (Chart 5).

Chart 5. Distribution of HIV cases by mode of transmission, 1987-2018

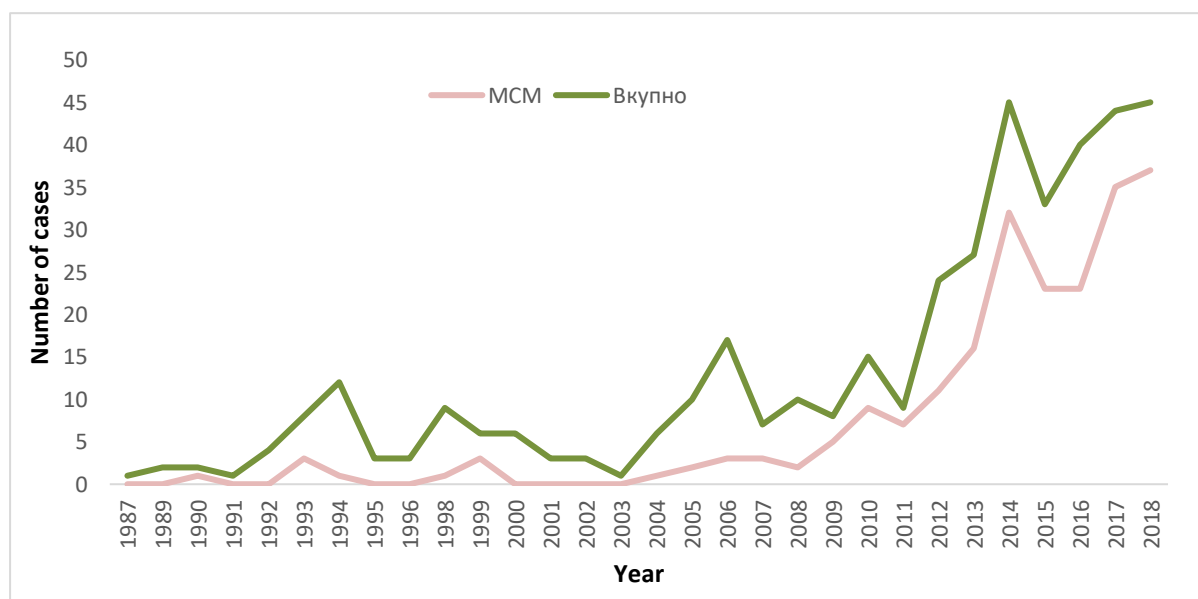


*transfusion, heterosexual, inject drug users, mother to child transmission, MSM, Unknown

Similar to other countries in the European region, in North Macedonia gay and other men who have sex with men are at higher risk of HIV infection, in the last 5 years on average 72% of registered cases have been with men who have had sex with men (Chart 6).

The latest bio-behavioral survey conducted by MSM in Skopje, where the estimated HIV prevalence was 5,4% (95CI 1.8 - 9.0%) is in line with the data obtained from epidemiological surveillance and the finding that MSM in North Macedonia is at higher risk of HIV infection.

Chart 6. Distribution of HIV cases by mode of transmission, 1987-2018



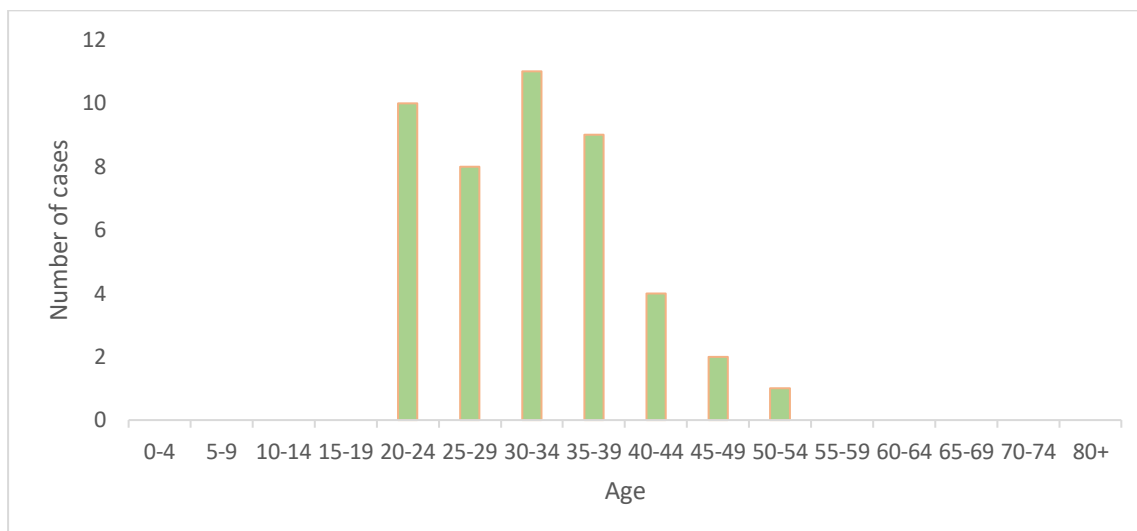
*MSM/Total

I.2 HIV situation in the Republic of North Macedonia

There are 45 new HIV cases registered in 2018, an incidence of 2,2 per 100.000 population. All cases registered in 2018 are male.

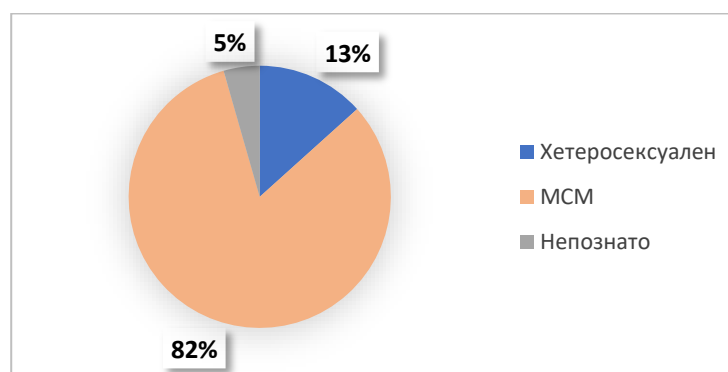
The age distribution of the cases registered in 2018 does not differ significantly from the cases reported so far. The average age of new cases is 32 years, ranging from 21 to 51 years, 84% of cases being between 20 and 39 years (Chart 7).

Chart 7. Distribution by age of newly discovered HIV cases in 2018



According to the mode of HIV transmission, 82% (n = 37) of the cases were men who had sex with men, 13% (n = 6) of the newly registered reported heterosexual transmission, and 2 (4%) did not know the method of transmission. (Chart 8).

Chart 8. Distribution of HIV cases by mode of transmission in 2018



*heterosexual, MSM, unknown

The number and proportion of MSM cases registered in 2018 follow the trend of the previous period, what is worrying is the increase in HIV prevalence in this population. In 2018, according to a survey of

men who have sex with men in Skopje, the estimated prevalence is 5.4% (95% CI 1.8-9.0%), which means that for the first time in North Macedonia a concentrated epidemic is registered in a certain population group.

From the cases in 2018, more than half (n = 22) have a place of residence in Skopje with an incidence of 3.6 / 100.000 inhabitants, while in Prilep 3 cases have been registered with an incidence of 3.1 / 100.000. The remaining 19 cases are registered as sporadic cases in 15 cities in N.Macedonia. One case in 2018 is a foreign national. The distribution of cases diagnosed in 2018 and the total number of cases per health region is presented in Table 1.

The total incidence of HIV in 2018 is 2.2 / 100.000 cases which is significantly above the average for EU / EEA countries where the rate of new diagnoses in 2017 was 0.7 / 100.000.

Table 1. Distribution by PHC (Public health centers) of newly discovered and total HIV cases, 1987-2018

Place of residence by health region	Cases in 2018	Incidence of 100,000 in 2018	Total cases	Cumulative incidence of 100,000
PHC Bitola	2	1.1	20	10.9
PHC Veles	6	2.9	30	14.5
PHC Kocani	2	1.9	19	18.2
PHC Kumanovo	2	1.1	26	14.8
PHC Ohrid	2	1.3	18	11.9
PHC Prilep	4	3.8	21	19.7
PHC Skopje	22	3.6	186	30.1
PHC Strumica	1	0.9	10	9.4
PHC Tetovo	1	0.3	36	11.3
PHC Stip	2	2.0	26	25.8
Foreigners	1	/	10	/
Unknown	0	/	1	/
Total	45	2.2	404	19.5

There are 3 AIDS-related deaths registered in 2018.

II. Results and activities implemented under the HIV Population Protection Program 2018

II.1. Prevention of HIV in key populations

Programs and activities for HIV prevention in key populations cover a total of 11,132 persons belonging to key populations (Chart 9).

Chart 9. Coverage of key populations with a basic HIV prevention package in 2018



*inject drugs users, sex workers, MSM, prisoners, PLWHIV, Total number

In total, HIV prevention programs for key populations are distributed:

- 313.266 condoms or 124% of the target for 2018
- 99.344 lubricants or 86% of the target
- 416.411 injection sets, 44% of the target
- 72.758 Information materials

Inject drug users (IDUs)

In 2018, the HIV and STI Prevention Program for Injecting Drugs (IDUs) was implemented by 12 associations in 13 cities across the country.

The basic prevention package consisting of the distribution of information materials, lubricants, condoms and sterile injectable kits covers 4,450 LEDs or 94% of the annual target (Chart 9). These people are covered through day care centers where a total number of 36,092 services are provided, and on the field where a total number of 6,436 different HIV, STI and bloodstream infections prevention services are provided.

In 2018 in this population are distributed:

- 417.010 safe injection sets, or 44% of annual target.
- 93.008 condoms, or 257% of the annual target.
- 43.391 informative and educational materials.
- 12.539 Lubricants which is 139% realization of the set target for 2018.

Additionally as part of the expanded service package, members of this target population in 2018 received the following services:

- 42.981 Medical services and information
- 18.063 Social Services
- 456 Legal Services
- 988 Psychological Services

Sex Workers (SW)

The basic HIV and STI Prevention Program for sex workers consists of a condom, a lubricant and information-educational material. The implementation of the program involved 8 associations in 7 cities in N. Macedonia.

In 2018, a total of 1.825 SWs were covered or 99% of the annual target (Chart 9), 144 new SWs were covered this year. Clients are covered by providing 5.906 services in the day care centers of the associations, and a total of 9,102 services were delivered in the field.

In 2018 the following are distributed:

- 154.168 condoms, or 75% of the 2018 target.
- 56.585 lubricants or 102% of the target for 2018.
- 19.052 information and education materials 86% of the target for 2018.

In addition, within the expanded package of services intended for this target population, a total of: 54 medical and gynecological services and information are provided; 12.075 social services and 116 legal services.

Men have sex with men (MSM)

The HIV prevention program among MSM population is implemented in 5 cities in N.Macedonia by EGAL from Skopje in cooperation with the associations involved in the realization of the annual program for protection of the population against HIV in 2018.

The basic package of services consisting of condom distribution, lubricants and information-educational materials covers 4.807 MSM or 96% of the intended target for 2018 (Chart 9). For the first time in 2018, new 1.159 MSMs are covered, and 1.594 MSMs through internet counseling.

During 2018, the following were distributed:

- 64,859 condoms, or 90% of the annual target.
- 29,968 lubricants or 83% of the target for 2018.
- 10,161 informational-educational materials representing 56% of the 2018 target.

In addition, members of this target population received the following services from the expanded prevention package: 451 clients received peer education, 342 received psychological services, and 1,354 received day care services.

A detailed overview of the activities carried out is given in Annex 3 of this report.

Psychosocial support and peer education

The psychosocial support programs for people who inject drugs cover a total of 194 clients, or 194% of the projected target for 2018, and 151 people who inject drugs have participated in creative workshops. Through this program, 17,530 condoms and 5,187 informational materials were distributed.

The peer support and education program for people living with HIV in 2018 covers a total of 50 people, 17 of whom are new, 1291 condoms, 252 lubricants and 166 informational materials. The program for psychosocial support of people living with HIV within the Infectious Disease Clinic covers 213 people.

HIV testing program for key populations

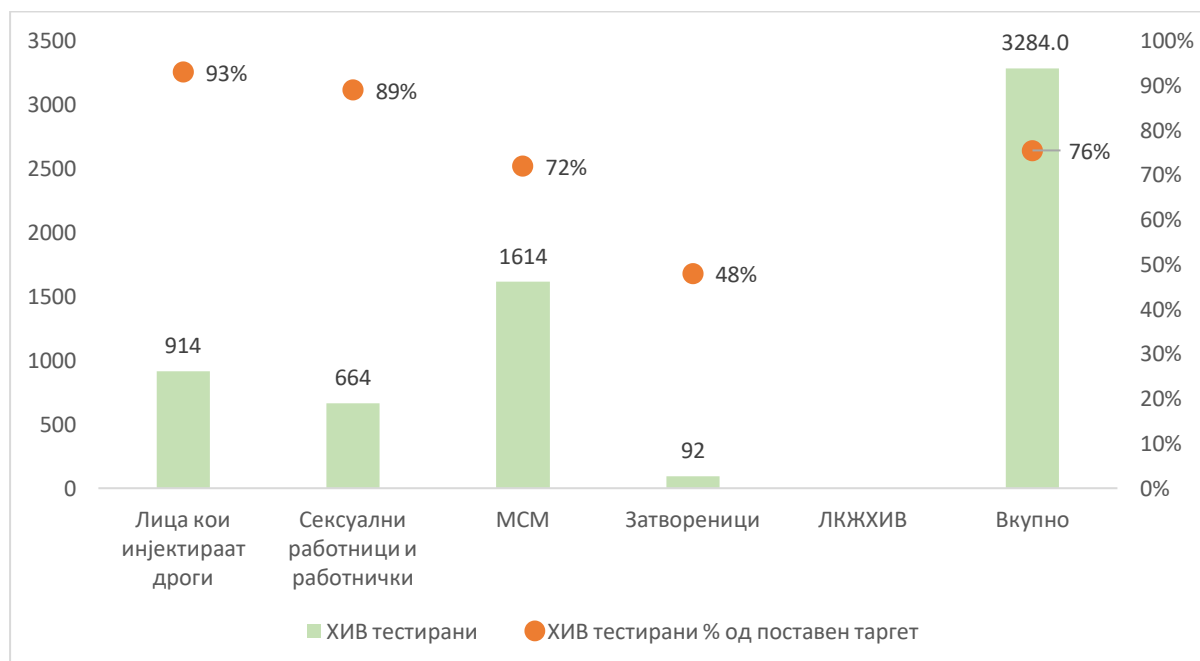
In 2018, the voluntary and confidential HIV testing program for key people is being conducted on-site and within associations, through collaboration with the Institute of Public Health, the Centers for Public Health, and associations that work with these populations. In 2018, HIV testing covers 3,284 people from key populations (chart 8):

- 914 LED 93% of the annual target
- 664 SR 89% of the annual target

- 1.614 MSM 72% of the annual target

- 92 prisoners 48% of the annual target

Chart 9. Coverage of key populations with HIV testing and counseling in 2018



Inject drug users, sex workers, MSM, prisoners, PLWHIV/AIDS, Total number of HIV tested, percentage of HIV tested

In addition to HIV testing, as a part of other STI prevention services, STI testing and counseling has been performed on:

- 57 LEDs (23% of target for 2019)
- 285 SR (68% of target for 2019)
- 93 MSM (19% of target for 2019)

II.2. HIV testing and education activities for the general population

Public Health Centers

Public Health Centers are included in the program through the provision of free and confidential HIV testing and screening counseling to the general population, services for diagnosis and treatment of sexually transmitted infections, sexual and reproductive health counseling services, HIV education and other blood and sexually transmitted infections, as well as the distribution of educational materials.

During 2018, 1092 people were covered by voluntary and confidential HIV testing which is 91% realization, and 217 educational sessions were held in schools and collectives on ways to prevent HIV and STI which is 127% of the projected target for 2018 (Chart 10).

Chart 10. PHC activities in 2018



Number of performed tests (voluntary canceling and testing for HIV – VCT)

Number of educational seminars for the problem of HIV

HIV testing within public health and private institutions

As part of the activities to monitor the number of HIV tests performed, the Institute of Public Health regularly reviews reports on the total number of HIV tests performed on medical and other indications in public health and private institutions (Table 2). In 2018, a total of 31,350 HIV tests were performed, a slight increase compared to 2017.

Table 2. Total number of HIV tests performed on medical and other indications in North Macedonia in 2018

<i>Number of HIV tests performed in Public Health Institutions in 2018 in the Republic of North Macedonia</i>	<i>Total number of tests</i>
PHC Bitola	105
PHC Kumanovo	100
PHC Skopje	270
PHC Tetovo	41
PHC Stip	69
PHC Ohrid	120
PHC Kocani	159
PHC Prilep	61
PHC Strumica	120
PHC Veles	120
Institute of public health	2220
Clinic for Infectious diseases and febrile conditions	4096
Biochemistry institute	2541
City hospital-8 september-Skopje	7428
Clinic hospital Adzibadem Sistina-Skopje	8755
Diagnostic Farmahem - Skopje	21
SYN lab - Skopje	1650
REMEDICA - Skopje	4540
Hospital "Plodnost"-Bitola	875
Special hospital Diamed Skopje	279
Total	31 350

II.3 Stage of diagnosis, treatment and care for people living with HIV (stadium)

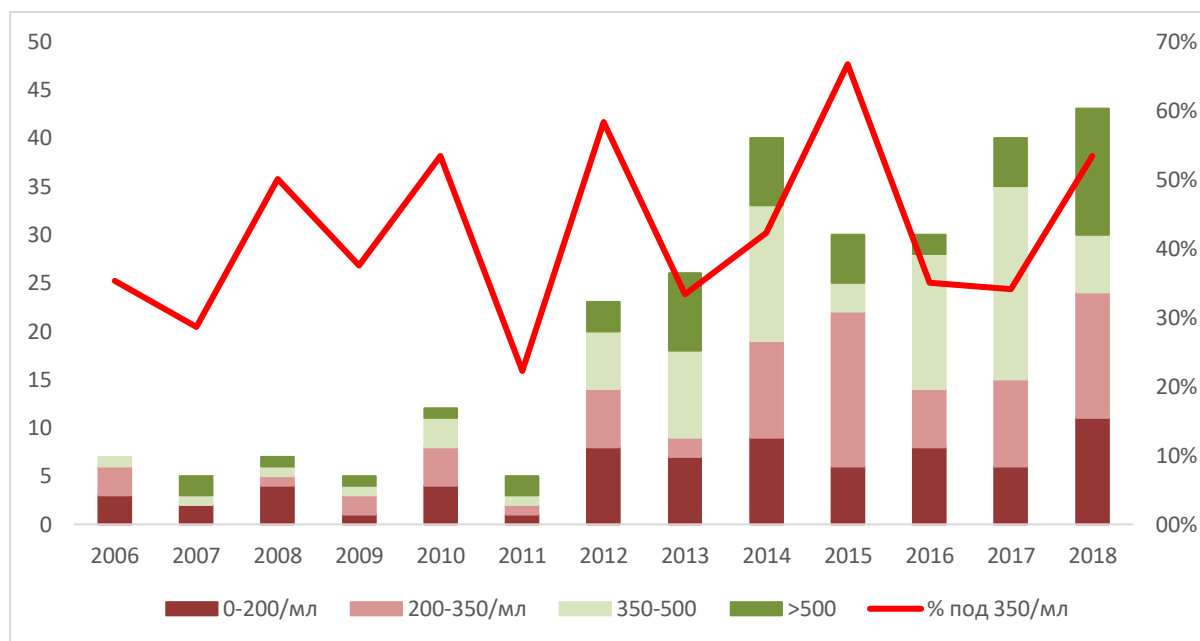
Stage of HIV infection at the moment when it is first diagnosed

From data obtained from the Clinic for Infectious Diseases and Febrile Diseases, the median value of CD4 cells at patient diagnosis in 2018 was 333 CD4 cells / ml (in the range of 0 - 1934 CD4 / ml). The median value of CD4 cells in 2018 is 17% lower than in 2017 when it was 401 CD4 cells per ml, which is lower than the average for the last 5 years which is 347 CD4 cells / ml.

Additionally, in 53% (n = 24) of the cases in 2018 the diagnosis was late, with CD4 cell counts less than 350 / ml, and nearly one quarter of the cases (n = 11) were advanced at the time of diagnosis. infection with a CD4 cell count less than 200 / ml (Chart 11).

This indicates a late diagnosis in people living with HIV, and in 9 cases (20%) in 2018 the diagnosis was set when the individuals had manifest symptoms of the disease.

Chart 11. Distribution of diagnosed HIV cases in North Macedonia by CD4 cell count / ml, period 2006-2018



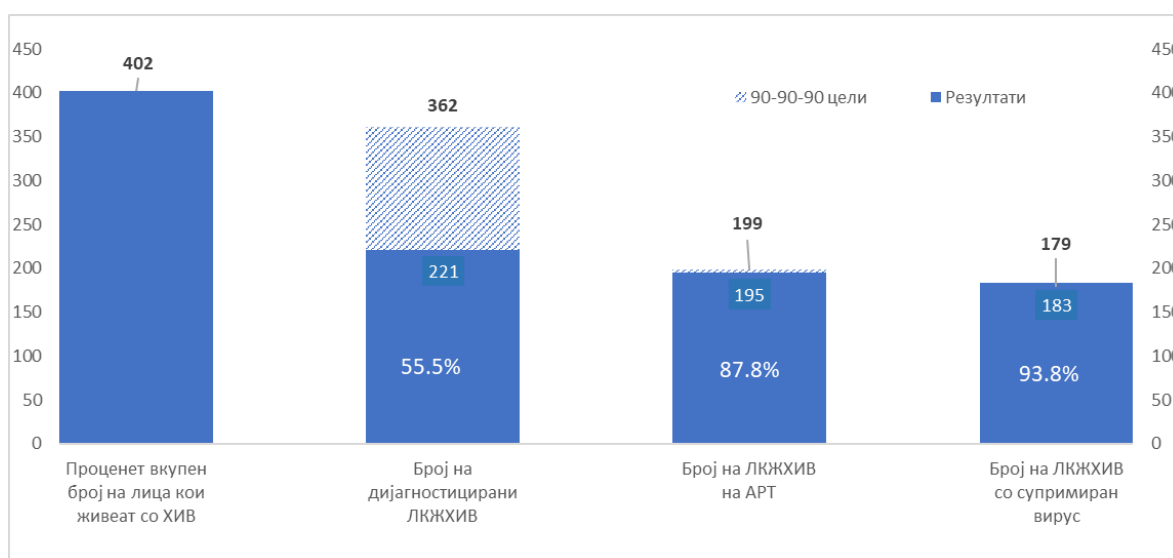
A cascade of HIV care

As part of the activities to achieve the UNAIDS Global Goal “90-90-90”, a study was conducted for the first time in North Macedonia to determine the results achieved for this purpose.

According to the results, if deceased and displaced persons are removed so far, it is estimated that by the end of 2017 in North Macedonia 402 people have been living with HIV. From these, 221 or 55% of the estimated number of LKIV have been diagnosed so far.

From those diagnosed, 88.3% (195) were exposed to ART, while 93.4% of them with ART had a virus suppression (chart 4). This result speaks in favor of good care and successful treatment for diagnosed patients, as well as the need to increase the number of HIV tests.

Chart 12. HIV cascade in the Republic of North Macedonia by the end of 2017



Epidemiological surveillance data and a cascade study of HIV care indicate that the problem of late diagnosis is still present in N. Macedonia, but treatment is successful and viral suppression is achieved in 93.4%.

Conclusions

Epidemiological data point to an increasing trend in the number of newly diagnosed HIV cases, the number in 2018 being the highest in the past period (the same number was registered in 2014).

Worrying is the fact that more than half of the cases in 2018 are late diagnosed, which increases the risk of further spread of infection.

An additional risk is the fact that 45% (n = 181) of people living with HIV do not know their HIV status.

Although the goals for the 2018 Annual Program for Protection of the Population against HIV are in most cases well realized, the number of HIV performed tests indicates the need for additional measures to increase the number of tested individuals.

The Improvement of HIV testing is particularly relevant to MSM where 1,614 people are tested or 72% of the annual target.

The need to intensify HIV testing activities is also evident given the population size of MSM estimated at 11,054 in 2018 in North Macedonia.

Taking into account the estimated number of MSM, only 14.6% of the MSM population were covered by HIV testing activity last year. If the baseline data from the above-mentioned MSM survey in 2018 are taken into account then the HIV testing coverage in this population is still at a low level of 28.8% (95% CI 21.4 - 36.2%).

The above suggests that an urgent revision of the existing model of HIV testing services in the country is needed, with a focused approach to the MSM population.

Recommendations

According to the epidemiological situation in the country and UNAIDS quarterly recommendations for MSM members, it is necessary to increase the number of MSMs who are regularly tested for HIV by conducting targeted campaigns and activities conducted by CSOs.

In line with WHO recommendations for the demarcation of HIV testing, a revision of the National HIV Testing Protocol is needed in order to simplify the VCT procedure, thereby increasing the availability and number of tested individuals. The revised protocol should enable:

- Introduce HIV testing in the day care centers of the CSOs involved in the Program for the Protection of the Population against HIV. Testing should be available daily during the center's working hours and without the presence of a laboratory / medical officer.
- It is necessary to introduce the possibility of self-testing for HIV by developing a specific protocol / guidelines for that purpose.

Since pre- and post-exposure prophylaxis for HIV is not yet available in our country, a protocol / plan should be developed that would allow the gradual introduction of this method of prophylaxis for key populations and professionally exposed individuals.

It is particularly important to carry out cross-sectional studies, knowledge attitudes and HIV / STI prevalence every 2 years in order to assess the effectiveness of the measures and activities implemented.

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