



Ukrainian Center for Socially
Dangerous Disease Control of
The Ministry of Health of Ukraine

**State Institution “Ukrainian Center for Socially Dangerous Disease Control of
the Ministry of Health of Ukraine”**

**State Institution “L.V. Gromashevsky Institute of Epidemiology and Infectious
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HIV Infection in Ukraine

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List of Abbreviations and Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARVs	Antiretroviral Drugs
ATO	Anti-Terrorist Operation
CD4	CD4 T-lymphocytes (CD4 cells)
CDH	Central District Hospital
CLASS	Clinical Assessment for Systems Strengthening
ECDC	European Centre for Disease Prevention and Control
ELISA	Enzyme-Linked Immunosorbent Assay
ES	Epidemiological Surveillance
EU	European Union
GB	Government Budget
GF	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCI	Healthcare Institution
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
IEID	State Institution “L.V. Gromashevsky Institute of Epidemiology and Infectious Diseases of the Academy of Medical Sciences of Ukraine”
M&E	Monitoring and Evaluation
MARPs	Most-At-Risk Populations for HIV
MC/MOS	Mobile Clinic/Mobile Outreach Site
MCPC (AIDS)	Municipal Center for Prevention and Control of AIDS (or ‘City AIDS Center’)
MDGs	Millennium Development Goals
MH	Municipal Hospital
MMFU	Medical Monitoring and Follow-Up
MoH	Ministry of Health
MSM	Men Having Sex with Men

MTCT	(Rate of) Mother-To-Child Transmission
NDTB	Newly Diagnosed Tuberculosis
NGO	Non-Governmental Organization
OCPC (AIDS)	Oblast Center for Prevention and Control of AIDS (or 'Oblast AIDS Center')
OI	Opportunistic Infection
OST	Opioid Substitution Therapy
PCR	Polymerase Chain Reaction
PLHIV	People Living With HIV
PMTCT	Prevention of Mother-to-Child Transmission of HIV
PWIDs	People Who Inject Drugs
RCPC (AIDS)	Regional Center for Prevention and Control of AIDS (or 'Regional AIDS Center')
RDT	Rapid Diagnostic Test
RES	Routine Epidemiological Surveillance
SDGs	Sustainable Development Goals
SEM	Sero-Epidemiological Monitoring of HIV Prevalence
SHCF	Specialist Health Care Facility
SPSU	State Penitentiary Service of Ukraine
STI	Sexually Transmitted Infection
SWs	Sex Workers
TB	Tuberculosis
TBCS	TB Control Service
TMA	Territorial Medical Association
UCDC	State Institution "Ukrainian Center for Socially Dangerous Disease Control of the Ministry of Health of Ukraine"
UCPMC	Unified Clinical Protocol for Medical Care
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
VH	Viral Hepatitis
VL	Viral Load
WHO	World Health Organization

Section 1. Ukraine's Global Strategies and Government Policies on HIV/AIDS

Ukraine's government policies on HIV/AIDS are closely aligned with appropriate international commitments and recommendations. The key role in shaping global strategies in response to the HIV pandemic is played by the United Nations General Assembly. Established in 1945 in line with the United Nations Charter, the General Assembly acts as the UN's principal advisory and representative body responsible for policy making and development. Ukraine is one of the countries that founded the UN in 1945. After the country's declaration of independence in 1991, Ukraine's participation in UN activities has figured among the top priorities of its foreign policy.

In June 2001, the United Nations General Assembly called a special session on HIV/AIDS to explore ways to relieve world-wide human suffering and address global negative effects caused by the epidemic already well under way at that point in time. In the course of that meeting, government heads and representatives signed a Declaration of Commitment on HIV/AIDS (2001), which defined the global objectives and action steps to halt the spread of HIV.

In 2005, in collaboration with WHO, UNAIDS, and other international organizations, the leaders of the G8 countries agreed to develop and implement global-scale efforts for a scaled-up response to the HIV epidemic worldwide. This strategy was subsequently approved by all member countries of the UN at the 2005 Millennium Summit. Ukraine also took part in that event, being represented at the highest level possible by the President of the country. In the 2006 Political Declaration on HIV/AIDS, the participating countries committed to ensuring universal access to HIV prevention, treatment, care and support for all those who need it by 2010.

After adopting the 2006 Declaration, the UN member countries proceeded to define the key goals and targets at national levels. A majority of the countries integrated their designated goals into their strategic plans through appropriate national strategies and regulatory frameworks, as well as incorporated them into their resource mobilization plans.

In 2009, for the first time ever, the Verkhovna Rada of Ukraine adopted a nationwide program on HIV/AIDS as a law of Ukraine, while the MoH of Ukraine approved a range of national M&E targets as part of HIV/AIDS countermeasures.

In June 2011, the world's leaders assembled at the United Nations Headquarters in New York (USA) to bring the HIV/AIDS agenda into the spotlight as part of the session of the UN General Assembly. From a historical perspective, 2011 marked thirty years since the first case of AIDS was reported, ten years after the landmark Special Session of the UN General Assembly on HIV/AIDS, and five years after the 2006 UN General Assembly High-Level Meeting on AIDS, which adopted the commitment to ensuring universal access.

On the eve of the 2011 High-Level Meeting, the UN Security Council passed the 1983 (S/RES/1983) Resolution, which reaffirmed the need to address the epidemic as a global security concern and highlighted the contribution of UN peacekeeping efforts in response to the spread of HIV. The Resolution was aimed at strengthening programming to improve HIV awareness and prevention among the military and civil personnel of peacekeeping missions and communities served by this personnel, as well as called for alignment of preventive measures among armed forces, security, and law enforcement personnel with the efforts intended to stop sexual violence during and after military conflicts.

At the 2011 High-Level Meeting, the UN member countries unanimously adopted a new Political Declaration on HIV/AIDS, outlining therein their ambitious goals and urging national governments to double down on their efforts to ensure universal access by 2015 with the intent to reach Millennium Development Goal # 6 (MDG).

In 2014, the UNAIDS strategy for Fast-Track response to HIV/AIDS proposed new progress milestones and targets to halt the global pandemic of HIV after 2015: 90–90–90 (by 2020) and 95–95–90 (by 2030). This means that if 90/95% of all PLHIV are aware of their HIV-positive status, and 90/95% of all people who know their HIV-positive status are on ART, then 90/95% of all those receiving appropriate treatment will have undetectable viral loads, thus significantly reducing the likelihood of transmission of HIV and the spread of the virus.

The approach adopted by UNAIDS is intended to prevent roughly 28 million new infections by 2030, 21 million deaths due to AIDS-related causes, as well as save 24 million U.S. dollars in additional HIV-related costs, and generally put a stop to the global pandemic of HIV.

In the context of the need to achieve the global goals on HIV/AIDS in the WHO European Region by 2030, WHO developed a 2016–2021 action plan with HIV/AIDS prevention and control measures for the European Region, which is aligned with the Sustainable Development Goals (SDGs), Global Health Sector Strategies on Viral Hepatitis and Sexually Transmitted Infections, Health 2020 Health Policy Framework for the European Region), and WHO's Strategy to End TB by 2035.

A unique opportunity to ensure the global commitment to UNAIDS Fast-Track Targets was created by the High-Level Meeting of the UN General Assembly held on June 8–10, 2016 at the UN Headquarters located in New York (USA). The General Assembly Session was attended by official representatives from 192 countries. The Ukrainian delegation included representatives from the country's MoH, UCDC, the Permanent Mission to the United Nations, ICF "Alliance for Public Health," and the All-Ukrainian Network of People Living with HIV (all-Ukrainian charitable organization).

Participants in the High-Level Meeting stressed the fact that health sector efforts in response to the HIV/AIDS epidemic resulted in spectacular successes on a worldwide scale in line with the planned objectives of the UNAIDS Global Strategy for

2011–2015, more commonly referred to as the ‘Getting to Zero’ Strategy: zero new HIV infections; zero AIDS-related deaths; zero discrimination.

However, HIV infection continues to negatively affect birth and death rates, as well as the age and gender distribution of the world's population. AIDS remains as one of the leading causes of mortality among women of childbearing age and adolescents worldwide. According to UNAIDS global estimates: nearly six thousand people are infected daily; among 36.9 million people living with HIV — 19.8 million are not aware of their HIV-positive status; 22 million PLHIV are deprived of access to ART; nearly 14 million children have become orphans due to the epidemic.

The Eastern Europe and Central Asia Region, which includes Ukraine, is the only region in the world where MDG # 6 has not been reached, every fifth HIV-positive person lives below the poverty line, and only 20% of all PLHIV have access to ARVs. As of today's date, the countries of the Eastern Europe and Central Asia Region continue to struggle with such issues as low service coverage related to prevention and treatment for MARPs through stigma and discrimination, governments' limited policy commitments due to public and donor funding cuts and constraints, as well as high cost of ARVs.

The 2016 Political Declaration on HIV and AIDS adopted by the UN General Assembly High-Level Meeting is designed to lay a foundation as a new strategic document: *On the Fast-Track to Accelerate the Fight against HIV and to End the AIDS Epidemic by 2030*.

The primary goal of the 2016 Declaration is to support Heads of States' commitment within the UN framework to fast-tracking the end of the AIDS epidemic by 2030 through a set of specific, time-bound targets and actions, based on global solidarity and joint responsibility.

The key objectives of the 2016 Declaration on HIV/AIDS are directly aligned to support global efforts toward progress in achieving strategic HIV-related SDGs:

- Ensure access to HIV testing and treatment (SDG # 3 — Ensure healthy lives and promote well-being for all at all ages).
- Front-load and diversify resources that are critical to Fast-Track the AIDS response (SDG # 5 — Achieve gender equality and empower all women and girls).
- Ensure the rights of all people to access to high-quality HIV services (SDG # 10 — Reduce inequality within and among countries).
- Promote laws, policies and practices to enable access to services and end HIV-related stigma and discrimination (SDG # 16 — Promote just, peaceful and inclusive societies).

- Engage and support people living with, at risk of, and affected by HIV as well as other relevant stakeholders in the AIDS response (SDG # 17 — Revitalize the global partnership for sustainable development).

Efforts to legislate Ukraine's national response to the HIV epidemic date back to 1991, when the Verkhovna Rada of Ukraine passed its first law on HIV/AIDS, *"On Prevention of Acquired Immune Deficiency Syndrome (AIDS) and Legal and Social Protection of the Population."* This law was one of the first regulatory acts adopted by Ukraine as an independent country, becoming a regulatory breakthrough within the national-level legislative framework on HIV/AIDS.

As of today's date, Ukraine has in place an updated national strategy for ending the HIV epidemic. Approved legislatively, this strategy is mandatory for all government bodies and agencies, while its provisions apply to both society as a whole and its individual members. Activities in this area are conducted by the government in close collaboration with community-based and international organizations.

The main goal of the National Targeted Social Program on HIV/AIDS for 2014–2018 was to step up HIV prevention, ensure access to treatment for HIV-positive patients, ensure the protection of rights of people living with HIV, promote tolerance in society toward HIV-infected people, and, as a result, achieve a decline in HIV prevalence and AIDS-related mortality, thus eventually bringing the epidemic situation in the country under stable control.

Basic HIV treatment and prevention services continue to be provided in Ukraine. This helps to preserve the achievements made and positive dynamics gained in the fight against HIV/AIDS. Thus, over the period 2006–2015, the number of people on ART has increased nearly 20 times over, the percentage of ARVs purchased through government funding is now 13 times as high as compared to the baseline data, while the rate of mother-to-child transmission of HIV is now one-seventh the value reported 12 years ago. However, despite an overall stabilization in the number of AIDS-related deaths, more than 50% of new HIV infections are diagnosed as AIDS, which is associated with a delay in seeking medical care, and late delivery of HIV-related services. High HIV/AIDS-related stigma and discrimination is one of the factors that drives the spread of the HIV epidemic in the country.

The impacts of the socio-economic crisis and the military operations in Eastern Ukraine that broke out in late 2013 have led to a shift in Ukraine's political and economic priorities. The ongoing hostilities unfold in the areas with a population of 5.2 million, involving the territory of the Donetsk region, which is hit hardest by HIV and TB. Due to the ongoing armed conflict, 40% of all PLHIV who used to be registered with health care services for monitoring and follow-up, and up to 50% of PLHIV who used to be on ART are now living outside of the government-controlled areas.

With a view to reaching the goals of the UNAIDS Strategy by 2030, a review of existing strategies and policies in response to the HIV epidemic was initiated. At the current stage of the process, Ukraine is implementing a package of reforms in governance, budgeting, and public healthcare systems, as well as in other sectors, which have an effect on the model and quality of service delivery in HIV/AIDS. In March 2015, the law of Ukraine on policies and practices pertaining to purchasing and procurement through international organizations was adopted (No. 269-VIII). This helped to streamline the supply management process and ensure uninterrupted access to medical drugs and products in the face of public resource and funding constraints exacerbated by a humanitarian crisis and hostilities in Eastern Ukraine.

In a bid to preserve the achievements made, the Interdepartmental Working Group of the MoH of Ukraine was established for a sustainable response to the TB and HIV/AIDS epidemics at a time when the GF is winding down its funding programs. With technical support from the UN, donors and other partners, the group developed a draft strategy for a sustainable response to the epidemics of TB, including that of drug-resistant tuberculosis and HIV/AIDS for the period of up to 2020, and approval of the implementation action plan, which provides for improvement in the delivery of prevention, care, and support services with a view to putting a stop to AIDS as a public health threat by 2030.

In order to develop a general protocol for the provision of assistance to people infected with HIV/AIDS, upon the initiative of the MoH of Ukraine, UCDC, and with support from the WHO Office in Ukraine, an interdepartmental working group was specially established to deal with matters related to treatment for HIV/AIDS patients, as approved by order of the MoH of Ukraine as of November 11, 2015 (No. 74-Adm). The general protocol will cover all stages of engagement with different populations for HIV-related service delivery throughout different organizational levels of healthcare provision (primary, secondary, and tertiary) — from testing for HIV to palliative care programs for PLHIV. In addition, it envisages an improvement of the existing regulatory framework. In December 2015, WHO recommendations on early initiation of ART were adapted to suit the local conditions as appropriate. Also, based on the Order of the MoH of Ukraine as of December 22, 2015 (No. 887), amendments were made to the Clinical Protocol Guidelines for Antiretroviral Therapy for Adults and Adolescents, as approved by order of the MoH of Ukraine as of July 12, 2010 (No. 551).

As part of the High-Level Meeting of the UN General Assembly in New York (June 2016), an international conference on HIV/AIDS (*Fast-Track Cities: Ending The AIDS Epidemic*) was held. The event was attended by Kyiv's Mayor, Vitali Klitschko, who presented an overall implementation strategy for the Fast Track Cities Initiative in Kyiv.

Table 1. Key Statistical Data for HIV/AIDS in Ukraine

Ukrainian Nationals

Indicator	As of Jan. 1, 2014	As of Jan. 1, 2015³	As of Jan. 1, 2016³
Cumulative number of officially registered cases of HIV infection since 1987 ¹	245,216	264,489 ³	280,358 ³
Cumulative number of AIDS-related morbidity cases since 1987	65,733	75,577 ³	84,045 ³
Cumulative number of AIDS-related mortality cases since 1987	31,999	35,425 ³	38,457 ³
Total PLHIV under medical supervision through healthcare institutions ²	132,658	131,268 ³	120,921 ³
Including:			
<i>HIV-infected children aged 0 through 14 years</i>	2,975	2,764 ³	2,546 ³
<i>HIV-infected adolescents aged 15 through 17 years</i>	312	390 ³	380 ³
Total infants born to HIV-infected mothers who are under medical supervision through healthcare institutions ¹	10,044	9,738 ³	8,540 ³
Including:			
<i>Those with confirmed diagnosis of HIV infection</i>	3,129	3,036 ³	2,857 ³
<i>Those being tested for confirmation of the diagnosis of HIV infection</i>	6,915	6,702 ³	5,683 ³
Total PLHIV on ART	55,784	66,409	60,753
Including:			
<i>Those who receive ART through healthcare facilities affiliated with SPSU</i>	2,621	2,004	1,995
Total PLHIV with a newly diagnosed HIV infection ²	2013	2014³	2015³
	17,857	15,795	12,985
Including: <i>Those aged 15 through 24 years</i>	1,534	1,298	909
Total PLHIV with newly diagnosed AIDS	9,362	9,844	8,468
Total deaths among PLHIV ¹	6,374	5,893	4,990
Including: <i>Those who died from AIDS</i>	3,514	3,426	3,032

Foreign Nationals

Indicator	As of Jan. 1, 2014	As of Jan. 1, 2015 ³	As of Jan. 1, 2016 ³
Cumulative number of officially registered cases of HIV infection since 1987 ¹	509	542	565
Total PLHIV under medical supervision through healthcare facilities ¹	142	137	155
Total persons with a newly diagnosed HIV infection ¹	2013	2014	2015
	29	33	23

¹ Including infants born to HIV-infected mothers, whose HIV status is indeterminate

² Excluding infants born to HIV-infected mothers, whose HIV status is indeterminate

³ Without taking into account the data from AR Crimea and the city of Sevastopol starting from 2014, and a part of the area affected by ATO in 2015

Section 2. HIV Epidemic in the World and the WHO European Region

According to UNAIDS estimates, since the beginning of the HIV epidemic, nearly 78 million people have been infected and close to 35 million people have died from AIDS-related illnesses worldwide. As of the end of 2015, there were 36.7 million PLHIV living on our planet.

Compared to 2010, in 2015 the total number of new HIV infections worldwide declined by 6% to 2.1 million people, while the similar figure for children decreased by 50% to 150 thousand. In 85 countries, new HIV infections among children were brought down to the level below 50 cases a year. In 2015, Cuba became the first country in the world to receive a WHO certificate for its double achievement in eliminating mother-to-child transmission and syphilis.

The success of concerted efforts in response to HIV/AIDS was reflected in the early achievement of the global goal of ensuring access to treatment for 15 million PLHIV by the end of 2015. Thus, in 2010, 7.5 million HIV-positive people were accessing ART, while in June 2015 this number was 15.8 million, and 17 million in December 2015. Over this time frame, service coverage related to antiretroviral therapy among adults rose from 23% to 46%, and among children living with HIV — from 21% to 49%. As of the end of 2015, 77% of HIV-infected pregnant women worldwide were accessing ARVs.



UNAIDS

2016 GLOBAL FACT SHEET

■ *People living HIV*

As of the end of 2015, there were 36.7 [34.0–39.8] million people globally living with HIV. 70% of all HIV-positive people were living in African countries.

■ *New HIV Infections*

Worldwide, in 2015, 2.1 [1.8–2.4] million people became newly infected with HIV. New HIV infections have fallen by 6% since 2010. New HIV infections among children have declined by 50% since 2010.

■ *AIDS-Related Deaths*

In 2015, 1.1 million [940,000–1.3 million] people died from AIDS-related causes worldwide. AIDS-related deaths have fallen by 45% since the peak in 2005.

Tuberculosis remains the leading cause of death among people living with HIV. Tuberculosis-related deaths among people living with HIV have fallen by 32% since 2004.

■ *People Living with HIV Accessing Antiretroviral Therapy*

As of December 2015, 17 million people living with HIV were accessing antiretroviral therapy, i.e., 46% [43–50%] of all adults living with HIV.

Based on available estimates, worldwide, 40–50% of all adults who became infected with HIV in 2015 belong to key affected populations, such as people who inject drugs (PWIDs), sex workers (SWs), men having sex with men (MSM), and their sexual partners. Among 12.7 million people globally who inject drugs, 13% have an HIV-positive status. HIV prevalence among MSM is 19 times as high as that among the general population, while the same figure for SWs is 12 times as high as that among the general population.

People aged 15–24 years, who are only a quarter of the world’s population, account for 34% of all new HIV infections among adults. AIDS is the leading cause of death among persons aged 10–19 years in African countries and the second leading cause of death among adolescents worldwide.

As of today’s date, worldwide, there are close to 4.2 million people aged 50 years and older living with HIV, with 120 thousand people becoming newly infected with HIV yearly among this age group. It is indeed regrettable that not enough attention is still being paid to prevention among older persons.

As of the beginning of 2015, more than 70% of all HIV-positive people worldwide were living in Africa, with an estimated population of people living with HIV reaching 25.6 million. The Asia-Pacific region has the next largest estimated population of people living with HIV (5.1 million). Even though the estimated number of people who are infected with HIV in Eastern European and Central Asian countries is relatively low, the rate of increase in newly registered HIV infections in this region is one of the highest in the world — over the last 10 years, the number of such cases has seen a twenty-fold increase to reach 1.5 million (Table 2).

Table 2. Regional HIV/AIDS Data Based on UNAIDS Estimates

Region	Total PLHIV as of End-2015	New HIV Infections, 2015		Total New Cases of AIDS-Related Mortality, 2015	PLHIV Accessing ART as of End-2015
		Total Persons	Children Aged 0–14		
Eastern and Southern Africa	19.0 mln.	960,000	56,000	470,000	10.3 mln.
Western and Central Africa	6.5 mln.	410,000	66,200	330,000	1.8 mln.
Asia-Pacific Region	5.1 mln.	300,000	19,000	180,000	2.1 mln.
Latin America and Caribbean Basin	2.0 mln.	100,000	2,100	50,000	1.1 mln.
Eastern Europe and Central Asia	1.5 mln.	150,000	<1,000	47,000	320,000
Middle East and North Africa	230,000	21,000	2,100	12,000	38,000
Western and Central Europe, North America	2.4 mln.	91,000	<1,000	22,000	1.4 mln.

From 2010 to 2015, 84 out of 121 low- and middle-income countries increased domestic spending on HIV/AIDS response programs. Among them, 46 countries reported an increase in such spending exceeding 50%, while in the case of 35 countries, related spending levels exceeded 100%. According to the latest estimates from UNAIDS, the global measures in response to HIV/AIDS in 2020 will claim USD 26.2 billion in total funding levels and USD 23.9 billion in 2030.

HIV Epidemic in the WHO European Region

HIV infection remains the principal public health challenge in the WHO European Region (the 'Region')¹, while the eastern part of the Region is facing the fastest growing HIV epidemic in the world.

According to data from ECDC and the European Regional WHO Office, more than 142 new HIV infections were reported across the Region in 2014², 77% out of which were registered in the east of the Region (43.2 per 100,000 population), 19% — in the west (6.4 per 100,000 population), and only 3% — in the central part of the Region (2.6 per 100,000 population). Among the newly diagnosed HIV infections, 69% were male, 36% — individuals aged 30–39 years, and 10% — individuals aged 15–24 years.

Numbers of newly diagnosed HIV infections per 100,000 population widely vary within the Region. Among the reporting countries, the highest incidence was observed in Ukraine (36.9), Estonia (22.1), Moldova (20.4), Latvia (17.3), Belarus (16.4), Kazakhstan (13.5), Georgia (13.3), Luxembourg (12.6), Tajikistan (11.9), and Kyrgyzstan (10.9), whereas the lowest incidence was recorded in Macedonia (1.4), Serbia (1.4), Slovakia (1.6), Croatia (2.2), the Czech Republic (2.2), and Slovenia (2.4). In Russia, this figure was 58.4 cases per 100,000 population.

The Russian Federation, Ukraine, Uzbekistan, and Belarus are among the Eastern European and Central Asian countries where the HIV epidemic among PWIDs is the worst. The hardest-hit cities, which significantly contributed to the spread of the HIV virus in their respective countries, being areas with a high percentage of MARPs and PLHIV, are Moscow and Kazan (Russia), Kyiv (Ukraine), Almaty (Kazakhstan), Tashkent (Uzbekistan), Minsk (Belarus), and Chişinău (Moldova).

¹ Geographical zones of the WHO European Region (53 countries):

West: Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, United Kingdom.

Center: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Hungary, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey

East: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

² In 2014, HIV/AIDS data were collected from 48 countries of the WHO European Region, except for Bosnia and Herzegovina, Russia, San Marino, Turkmenistan, and Uzbekistan.

In terms of distribution by mode of HIV transmission, an analysis of trends in the WHO European Region shows a 25% increase in HIV infections due to heterosexual sex, a 28% increase due to sex between men, and a 22% decrease in HIV infections involving PWIDs, compared to the 2005 data. Ratios of HIV infections by mode of HIV transmission in three geographical areas of the Region vary (Fig. 1).

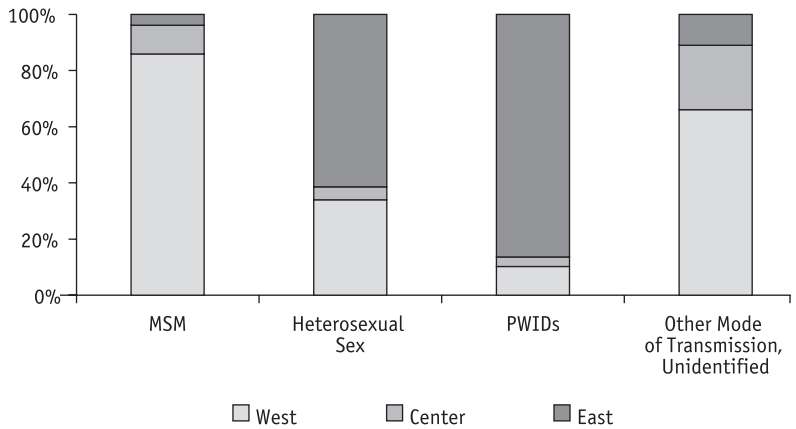


Figure 1. *Distribution of New HIV Infections by Mode of Transmission in Different Geographical Zones of the WHO European Region in 2014*

Based on available data, the major transmission modes of the virus in the eastern part of the Region were heterosexual intercourse and intravenous drug use (66% and 28% of all new infections, respectively), while the HIV prevalence among MSM continued to be extremely low (2% of all reported cases). In contrast, in the central and western parts of the Region, sexual intercourse between men remained the principal route of HIV transmission (28% and 44% of all new infections, respectively), while heterosexual intercourse accounted for 24% and 33% of all reported cases, respectively.

Overall, in the WHO European Region, 48% of all PLHIV are not commonly diagnosed with HIV until a later stage of the process, when the CD4 count is below 350 cells per cu. mm with 28% showing immunosuppression levels under 200 cells per cu. mm. Furthermore, 19% of all patients newly infected with HIV had CD4 cell counts within 350–500 cells per cu. mm, while the same figure for another 30% was at 500 cells per cu. mm or higher.

Some existing data provide a basis for the assumption that a significant percentage of migrants become infected with HIV after arriving in Europe. Also, some reports indicate that many HIV infections occur among European residents staying abroad. Displaced persons and individuals affected by humanitarian emergencies tend to encounter multiple problems, including those linked to high risk of HIV and limited access to high-quality medical care.

According to data from ECDC, in 2014, 31% of all new HIV infections in the Region were registered among migrants: 22% — among migrants with non-European backgrounds (people born outside the borders of Europe) and 9% — among migrants with European backgrounds (people born in Europe but outside the borders of the reporting country). It is important to point out that within the time frame between 2005 and 2014 new HIV infections among non-European migrants fell by 41%, whereas the same figure for European migrants rose by 48%.

Section 3. Evaluation of Epidemiological Surveillance Systems for HIV/AIDS in Ukraine

Ukraine is a priority partner country within the European Neighborhood Policy (ENP) and the Eastern Partnership (EaP).

The new Association Agreement (the 'Agreement') signed between Ukraine and the European Union in 2014 provided a regulatory framework and basis for this relationship. This ushered in a new stage in the development of the relationship between Ukraine and the EU designed to facilitate their political and economic integration. In addition, the Agreement calls on both parties to build collaboration in the public health sector, among other things, by progressively bridging the gap between Ukraine's legislation and policies and the EU's regulatory framework, standards, best practices and approaches in the field of public health.

As part of efforts to implement the Agreement, the Directorate-General for Health and Food Safety of the European Commission (EC DG SANTE) agreed with the MoH of Ukraine to make an assessment of Ukraine's infection prevention and control systems (the 'Assessment').

The country-level Assessment was conducted in the period of October 5 through 9, 2015 at the national level and in 6 regions of Ukraine, i.e., the Dnipropetrovsk, Zhytomyr, Lviv, Odesa, and Rivne oblasts, as well as the city of Kyiv, as approved and set forth in the Order of the MoH of Ukraine as of July 29, 2015 (No. 472).

The assessment mission was carried out with the participation of representatives from the European Commission and ECDC experts, and with technical support from ECDC. The assessment was based on the ECDC's methodology guidelines in accordance with applicable international regulations and EC standards in the area of infectious disease control.

The overall goals of the country Assessment are to identify achievements and gaps within Ukraine's existing systems of epidemiological surveillance as well as infection prevention and control with a view to providing appropriate development assistance and support; contribute to the planned reform of Ukraine's public health sector; provide support for implementation of the Association Agreement between Ukraine and the European Union.

These efforts led to identifying the strengths and advantages of the country's existing systems of epidemiological surveillance and infection prevention and control, highlighting the organizational and functional areas that need further improvement, as well as evaluating the development potential of the national action plan in the light of needs identified, based on the key system components as follows:

1. Healthcare management and administration (including institutional sustainability).
2. Human resource capacity building.
3. Epidemiological surveillance.
4. Public health emergency preparedness and response, including major outbreaks of infections.
5. The national system of public health microbiology laboratories.
6. Disease control programs.

Based Report "Technical Assessment. Report. Ukraine assessment of the capacity development, health governance, surveillance, preparedness and response in the field of communicable diseases, 2015" (Technical Assessment Report), it was established that the country's existing systems of epidemiological surveillance and infection control are fraught with serious deficiencies at regulatory and organizational levels, as well as at the level of technical implementation.

There are no clearly defined boundaries and roles in terms of national leadership in the public health sector, government funding is primarily used to cover infrastructure needs, including personnel-related expenditures, while key services, including those associated with vaccination, are funded by external resources on a non-sustainable basis. Also, the epidemiological services are outdated and ineffective. The key concepts underlying the country's systems of surveillance and infection control are different from those adopted in the EU.

However, some key elements available in Ukraine can be put to use as part of an upgraded infection prevention and control framework, notably surveillance systems for HIV and TB, a set of well-equipped laboratories, as well as a powerful national network of primary health care facilities.

The Technical Assessment Report pointed out that the surveillance system for HIV/AIDS in Ukraine is strong and powerful. It provides comprehensive activity-oriented information, and the key functions of the existing system can serve as a model for development of more integrated systems for other infections. It was also underscored that statistical reporting on HIV/AIDS is consistent with high operating standards in the public health sector, with no barriers that limit access. 'HIV Infection in Ukraine' Information Bulletins are prepared every six months at national and regional levels, and reports to international organizations are submitted on a regular basis.

Epidemiological surveillance for HIV/AIDS in Ukraine remains the principal tool used to establish key indicators within the uniform M&E system in response to the epidemic and refine government policies on HIV/AIDS. Based on epidemiological monitoring conducted as part of the Assessment, some positive trends were identified in the development of the HIV epidemic, notably a decline in HIV infections among young people, a reduction in mother-to-child transmissions, lower mortality rates among HIV-infected patients, as well as a drop in HIV prevalence among SWs and

PWIDs. As of the date of the Assessment, ART coverage among those who need it and patient retention in treatment and care programs were at sufficiently high levels. It is noteworthy that there are a number of community-based organizations operating in service delivery areas associated with prevention, care, and support for key affected populations, which are fully funded through donor support.

The fact that there is no electronic register of HIV-infected patients was cited as a significant shortcoming to the existing surveillance system for HIV/AIDS. This deficiency limits the data analysis capacity and the ability to report information to the TESSy database (ECDC).

Appropriate recommendations in the area of HIV surveillance were generated and offered on the basis of the findings of the Assessment (Table 3).

Table 3. Recommendations on Strengthening the HIV/AIDS Epidemiological Surveillance System in Ukraine Based on the Assessment Findings

Surveillance System Weaknesses	Improvement Recommendations
<p><i>Lack of Sustainable Standards for HIV Prevention</i></p> <p>In the public health sector, there are no consistent standards or strategy in place for prevention work or sustainable service delivery to inform the operations of a great number of NGOs currently engaged in projects funded through GF assistance.</p>	<p>Over the course of the next five years, the Government must identify ways to directly fund key HIV prevention programs after GF funding has come to a close; Otherwise, it is entirely possible that the progress made over the last few years is lost under the onslaught of a new epidemic among PWIDs. It is essential to address the lack of standards for prevention work in public health programs.</p>
<p><i>ART Program Expansion</i></p> <p>Plans to expand ART to the threshold point of CD4 500 signify that the number of patients on ART will double.</p>	<p>The Government must find ways to increase funding for treatment options in order to accommodate greater numbers of patients who need ART, while at the same time allocating sufficient resources for prevention activities.</p>
<p><i>Selection of Target Groups for HIV Testing</i></p> <p>The focus of the current policy on HIV testing is not the best solution as it leads to lost opportunities, and may also result in late diagnosis, which is consistent with the country's experiences when registering new infections.</p>	<p>It is necessary to reconsider approaches to HIV testing to better engage with people who are most at risk of HIV infection and make it possible to detect the disease in earlier stages.</p>

Surveillance System Weaknesses	Improvement Recommendations
<p><i>Legislative Support for Project Work Focusing on High-Risk Groups</i></p> <p>The Government's recent decision to increase the penalties for offenses associated with possession of drugs for personal use, at least in the case of people with addiction issues, achieves the opposite result to that intended.</p>	<p>The Government must explore the possibility of implementing intersectoral policies to address the problem of intravenous drug use in a more comprehensive manner. Restrictive laws have a negative effect on measures designed to curb the spread of HIV and viral hepatitis through harm reduction (including OST programs).</p>
<p><i>Blood Safety and Nosocomial [Hospital-Acquired] Infection</i></p> <p>Vulnerabilities associated with blood safety and nosocomial [hospital-acquired] infection remain unaddressed to date.</p>	<p>It is crucial to reconsider and consolidate strategies for ensuring blood safety and then closely monitor strict compliance with process requirements.</p>
<p><i>Integration of Infection Control Programs for STIs and Blood-Borne Infections</i></p> <p>The Government's efforts to establish infection control measures relating to chronic hepatitis B and C, STIs, HIV and TB are conducted as separate, parallel programs running essentially without much interaction, thus failing to achieve a synergistic effect.</p>	<p>Programs with a focus on establishing infection control measures relating to chronic hepatitis B and C, STIs, HIV and TB must be integrated together to ensure better cost management outcomes in a resource-limited environment, especially if they are no longer viewed as parallel-running programs.</p>

Section 4. Current Trends in the Development of the HIV Epidemic in Ukraine

The current status of the HIV epidemic in Ukraine still affords no basis for assertions about a major decline in the burden of the disease inside the country — the HIV epidemic in Ukraine continues to spread among the general population due to an increase in sexual transmission of the virus and most-at-risk populations playing a lead role in driving the spread of the epidemic, specifically people who inject drugs, sex workers, men having sex with men, and their sexual partners. The future trajectory of the epidemic nationwide is becoming increasingly difficult to predict in the short term due to the socio-economic crisis and the worsening situation in Eastern Ukraine.

Over the period 1987–2015, **479,358** positive HIV test results were recorded in Ukraine based on laboratory evidence, with **280,358** cases of HIV infection being officially registered among Ukrainian nationals, including **84,045** cases of AIDS, and **38,457** deaths due to AIDS-related illnesses.

As of January 1, 2016, there were **126,604** HIV-infected Ukrainian nationals registered with HCIs (297.2 persons per 100,000 population), including **34,016** persons infected with AIDS (79.8 persons per 100,000 population). The northern regions of Ukraine, such as the Dnipropetrovsk, Kyiv oblasts, and the city of Kyiv continue to show high HIV prevalence, while HIV prevalence in the western regions continues to remain low. More than half (55%) of all HIV-infected persons, who are officially registered for monitoring and follow-up, reside in the Dnipropetrovsk, Donetsk, Odesa oblasts, or the city of Kyiv (See Table 19 in Annex 1).

A decline in the values of key indicators that describe the current epidemiological situation in the country in the past two years is primarily linked to the lack of statistical data from the occupied AR Crimea and the city of Sevastopol (since 2014), as well as a part of the area affected by the ATO (since 2015).

The Findings of Sero-Epidemiological Monitoring of HIV Prevalence

Serological assays for HIV antibodies are employed as part of the multiple-step screening process (primary and confirmatory assays). They can be used not only for diagnosing HIV infection, but also for performing routine projections for HIV prevalence levels.

As part of the screening process, researchers determine the indicator that reflects the percentage of persons with HIV serological markers found during confirmatory testing among people who have been screened for HIV using serological diagnostic methods for designated contingents of test takers.

In 2015, 2,344,741 Ukrainian nationals were tested for HIV against 2,608,063 in 2014 and 2,758,309 in 2013. The number of positive test results in 2015 fell to 23,193

versus 27,236 in 2014 and 29,932 in 2013. HIV prevalence for Code 100 (Ukrainian Nationals) also declined in 2015 to 0.99% against 1.04% in 2014 and 1.09% in 2013 (See Fig. 2, Table 1 in Annex 1).

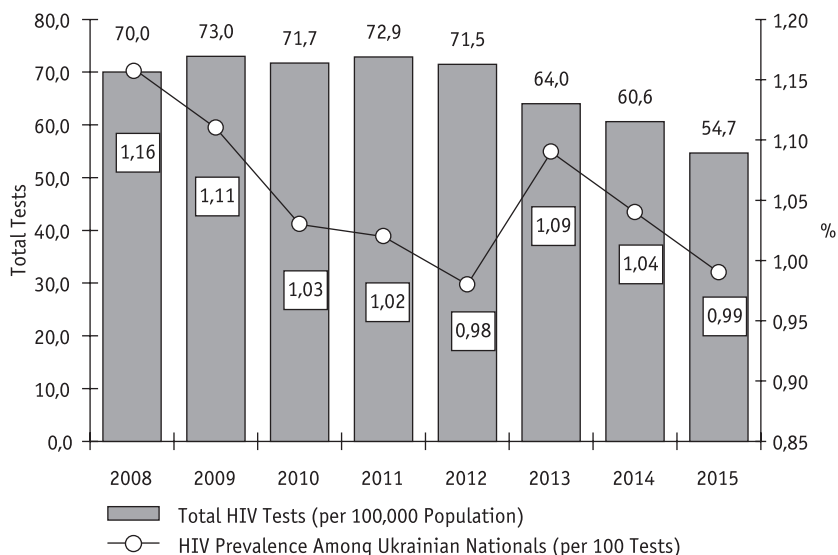


Figure 2. HIV Prevalence (Code 100) and Testing Dynamics (per 100,000 Population) in Ukraine

In 2015, HIV prevalence for most classification codes decreased or remained roughly the same as in the previous year. There was an insignificant increase in HIV prevalence among individuals who engaged in sexual intercourse with HIV-infected partners (code 101 — 14.6% in 2015, 13.1% in 2014, 14.5% in 2013), persons tested based on epidemiological evidence (code 107 — 1.4% in 2015, 1.36% in 2014, 1.15% in 2013), army conscripts (code 106 — 0.3% in 2015, 0.11% in 2014, 0.4% in 2013), and prisoners (code 112 — 5.6% in 2015, 4.53% in 2014, 5.6% in 2013).

Just as in prior years, in 2015, the highest HIV prevalence was recorded among persons who were assigned Code 101 (those who have had sexual intercourse with HIV-infected partners; 14.6%), Code 119 (deceased persons; 7.8%), and Code 112 (persons who are in jail or prison, including pre-trial detention facilities; 5.6%).

In the breakdown structure of the 2015 HIV-positive test results, just as in prior years, the highest percentage is recorded for the following codes (reasons for testing for HIV antibodies):

- Code 113 — Persons who have illnesses, symptoms and syndromes, on the basis of which they are advised to seek counseling and testing services when contacting HCIs for medical help (24.6%);
- Code 116 — Persons tested based on their own initiative (12.1%);
- Code 102 — People who use drugs (10.2%);
- Code 101 — Persons who have had sexual (heterosexual, homosexual) contact with HIV-infected partners (6.4%);
- Code 105 — Persons who engage in risky sexual behavior (6.1%).

Analysis of the test results for HIV antibodies based on rapid diagnostic tests showed that the highest percentage of the test takers with HIV markers belonged to the populations most at risk of HIV infection (See Table 2 in Annex 1).

In 2015, HIV prevalence among primary blood donors (Code 108.1) in Ukraine was estimated at 0.13% (as part of the lab testing process, HIV antibodies were found in 508 potential blood donors who had been provided with pre-test counseling). Just as in prior years, the highest HIV prevalence among primary blood donors was observed in the Donetsk (0.28%), Chernihiv (0.28%), Mykolaiv (0.25%), Zhytomyr (0.23%), Odesa (0.22%), Dnipropetrovsk (0.21%), Kherson (0.2%), Kirovohrad (0.18%), Cherkasy (0.15%), Ivano-Frankivsk (0.14%), City of Kyiv (0.14%), Ukraine (0.13%), Poltava (0.12%), Ternopil (0.12%), Chernivtsi (0.12%), Kyiv (0.09%), Zaporizhzhia (0.08%), Khmelnytskyi (0.08%), Luhansk (0.07%), Kharkiv (0.07%), Vinnytsia (0.06%), Sumy (0.06%), Lviv (0.05%), Rivne (0.05%), Volyn (0.04%), and Zakarpattia (0.01%).

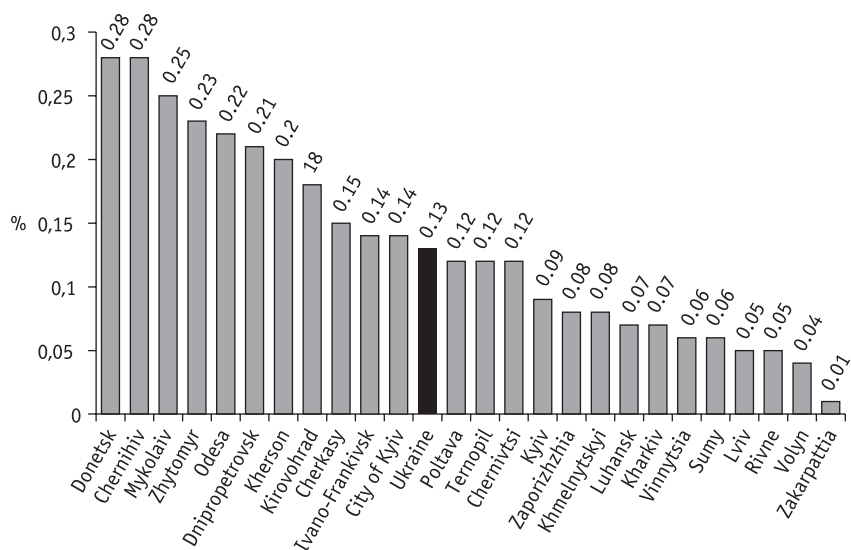


Figure 3. HIV Prevalence Among Primary Blood Donors (Code 108.1) in Different Regions of Ukraine in 2015.

Over the past few years (2009–2015), there has been a positive downward trend in Ukraine in the percentage of newly diagnosed HIV infections among pregnant women based on primary test results (Code 109.1) — a decline from 0.55% in 2009 to 0.33% in 2015. Among young pregnant women aged 15–24 years (Codes 109.1.1+109.1.2), this indicator was 0.33% in 2013, 0.32% in 2014, and 0.27% in 2015. In the last year, the highest levels were recorded in the Donetsk (0.9%), Odesa (0.71%), Chernihiv (0.67%), Dnipropetrovsk (0.57%) oblasts, and the city of Kyiv (0.48%) (See Fig. 4, Table.4 in Annex 1).

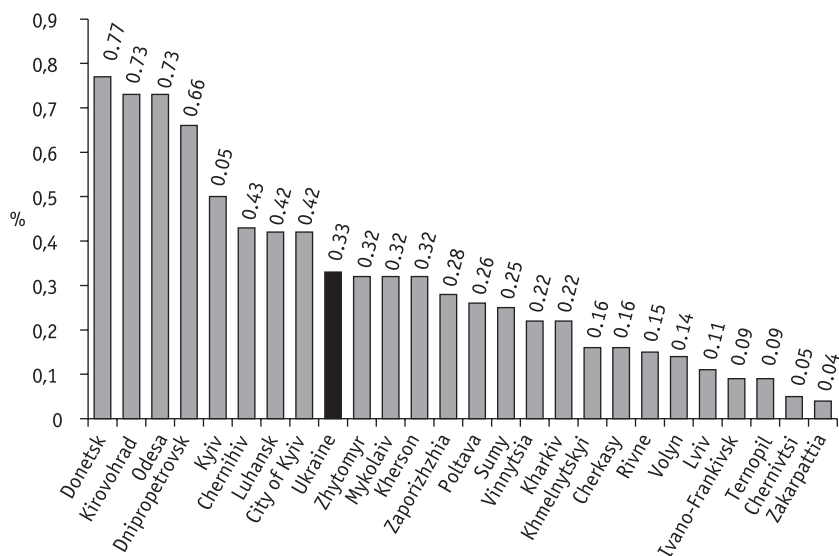


Figure 4. HIV Prevalence Among Pregnant Women Based on Primary Test Results (Code 109.1) in Different Regions of Ukraine in 2015.

The provision of unlimited access to free HIV counseling and testing, first and foremost for MARPs, remains today one of the priority objectives on the HIV/AIDS agenda. A portion of the test takers from MARPs (Codes 101.2, 103 (*persons who have had homosexual sexual contact with HIV-infected partners*), 102 (*persons who inject drugs*), 104 (*persons diagnosed with sexually transmitted diseases*), and 105.2 (*sex workers*) within the general group of all people being tested (except for blood donors and pregnant women) increased in 2015 to 17.4%, predominantly due to the scale-up of rapid testing. For comparison, in 2013 and 2014 this figure was 11.2% and 11.3%, respectively. In different regions of the country, in 2015, this figure varied between 3.9% in the Zakarpattia oblast and 36.1% in the city of Kyiv (See Tables 5, 6 in Annex 1).

The lowest percentage of the test takers from MARPs within the general group of all people being tested (except for blood donors and pregnant women) was recorded in the Zakarpattia, Ivano-Frankivsk, Volyn, Rivne, Ternopil, Poltava, Chernihiv, Kirovohrad, Vinnytsia, and Kyiv oblasts. On the one hand, this may be accounted for by limited access to HIV testing for MARPs. On the other hand, this might be linked to relatively low numbers of these populations in the said regions.

The importance of efforts to improve SEM in the context of WHO's international guidelines for HIV diagnosis still remains high on today's agenda. The experience of many countries shows that this issue can be successfully addressed through registering cases of HIV infection upon confirmation of positive test results.

Medical Records of HIV-Infected Patients (Officially Registered Cases of HIV/AIDS)

In 2015, there was a decrease in the number of registered HIV cases in Ukraine — **15,869 persons** were registered with health care services for monitoring and follow-up against 19,273 in 2014 and 21,631 in 2013; the rate of HIV incidence was 37.0 per 100,000 population versus 44.8 and 47.6 in respective years. The significant decline in the reported HIV incidence (5% in 2014, 17.7% in 2015) is believed to be largely accounted for by the lack of data on HIV-infected persons getting linked up with health care services for monitoring and follow-up in the occupied AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the ATO (since 2015) (Fig. 5, Table 7 in Annex 1).

In the meantime, there is a rise in HIV incidence in six regions of the country, i.e., the Volyn, Zhytomyr, Kirovohrad, Poltava, Sumy, and Ternopil oblasts.

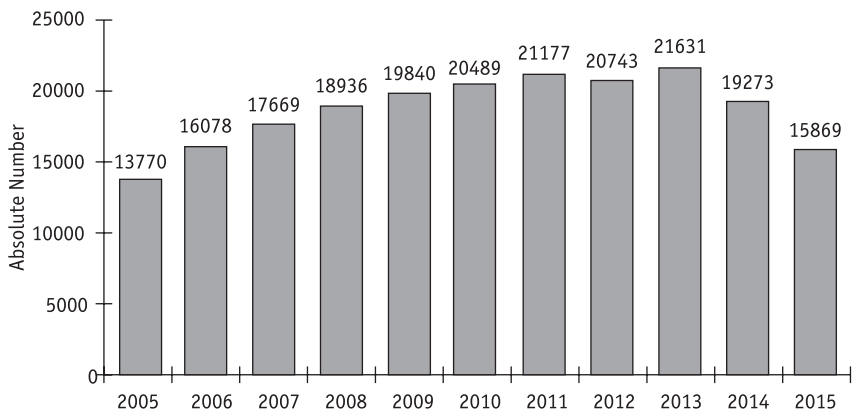


Figure 5. Dynamics of Officially Registered New HIV Infections Among Ukrainian Nationals, Disaggregated by Year, in 2005–2015.

It is fairly difficult to identify the status of the HIV epidemic in Ukraine based on official data on new HIV infections, as in recent years there has been an upward trend toward the increased numbers of new HIV cases being diagnosed and reported in advanced stages of the disease. In view of this circumstance, such cases can be categorized as ‘new infections’ only on a conditional basis.

In 2013–2015, among newly reported HIV infections in Ukraine, there was a progressively increasing percentage of men, rising from 55.3% in 2013 to 56.9% in 2015, whereas the percentage of women was declining from 44.7% in 2013 to 43.1% in 2015. Urban residents were more likely to be reported as infected than rural residents (more than 70%). However, over the past few years, there has been an increasing percentage of rural residents among newly registered HIV infections (Table 4).

In terms of age distribution among new HIV infections in Ukraine, in 2013–2015, the highest percentage was reported for individuals aged 25–49 years (67–68%).

Table 4. New HIV Infections in Ukraine Disaggregated by Sex and Place of Residence

Year	Men		Women		City		Village	
	Absolute Number	%	Absolute Number	%	Absolute Number	%	Absolute Number	%
2013	11,966	55.3	9,665	44.7	16,643	76.9	4,988	23.1
2014	10,765	55.9	8,508	44.1	14,563	75.6	4,710	24.4
2015	9,023	56.9	6,846	43.1	11,652	73.4	4,217	26.6

In 2015, 3,011 children aged 0–18 years, including children with indeterminate HIV status, were registered with AIDS-service HCIs for monitoring and follow-up; 52 new cases of AIDS were reported, 57 children died due to AIDS-related illnesses. As of January 1, 2016, there were 8,609 children aged 0–18 years, including children with indeterminate HIV status, registered with health care services, including 809 diagnosed with AIDS (Table 20 in the Annex).

The majority of children registered with health care services are those born to HIV-infected women. As of January 1, 2016, there were 2,857 HIV-infected children, born to HIV-infected women, registered with health care services for monitoring and follow-up, including 74 children diagnosed with AIDS; another 5,683 children were having their diagnosis checked for confirmation; 2,932 children were taken off the books due to lack of HIV diagnosis (See Table 21 in the Annex).

Despite the increased coverage with medical monitoring and follow-up for HIV-positive persons by AIDS-service HCIs, rising from 54.5% to 68.4%, a third of HIV-

positive persons diagnosed based on laboratory test results do not turn to health care facilities to become registered as HIV-infected patients. In 2015, in terms of medical supervision levels for HIV-positive patients, the lowest coverage was observed in the city of Kyiv (46.1%), as well as the Ivano-Frankivsk (57.7%), Khmelnytskyi (60.1%), Chernivtsi (61.3%), Donetsk (62.8%), and Dnipropetrovsk (67.7%) oblasts.

Active medical follow-up and monitoring remained at the 2014 level — 77.7%, and varied from 65.8% in the Chernivtsi oblast to 90.5% in the Ternopil oblast (See Table 13 in Annex 1).

The analysis of gender and age distribution among new HIV infections shows that women in Ukraine are more likely than men to be affected by the epidemic at an earlier age. Thus, the percentage of persons aged 15–29 years within the population of HIV-positive women of childbearing age (aged 15–49) was estimated at 33.7%, while the same figure for HIV-positive men aged 15–49 years was 18.6%. Overall, in Ukraine, there is a rising trend in the percentage of persons older than 30 among the HIV-infected patients aged 15 years and older — from 50.5% in 2005 to 77.9% in 2015.

In accordance with UNAIDS and WHO guidelines, HIV prevalence estimates among younger demographics (aged 15–19, 20–24) are essential for a realistic and nuanced understanding of the epidemic's trends. Thus, in 2015, the share of individuals aged 15–24 years among new HIV infections was 5.7% against 6.7% and 7.1% in the preceding years, and reveals a consistent downward trend Fig. 6, Table. 9 in Annex 1).

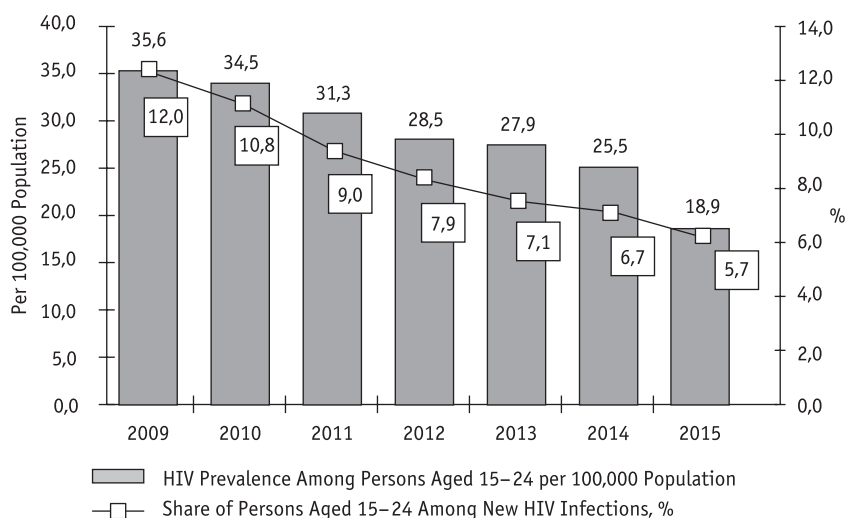


Figure 6. Share of Persons Aged 15–24 Among New HIV Infections and HIV Prevalence in This Age Group.

There has been a shift in the predominant mode of HIV transmission in Ukraine since 2008, from parenteral (artificial) transmission during intravenous drug use to sexual transmission, primarily during heterosexual contact, which continues to gain in significance as a driver of the epidemic. Within the structure of HIV transmission routes (with allowance for the rate of HIV transmission from mother to child), the percentage of sexual transmissions steadily continues to rise reaching 72.5% in 2015 (Fig. 7, Table 10 in Annex 1).

Despite the downward trends observed for many years, parenteral transmission of the virus during intravenous drug use remains high (26.6% with allowance for the rate of HIV transmission from mother to child, and 21.7% — excluding children born to HIV-infected mothers). The share of this particular route of HIV transmission in 2015 showed an increase in seven regions (Zhytomyr, Zakarpattia, Zaporizhzhia, Ivano-Frankivsk, Kirovohrad, Poltava, Chernihiv oblasts) (See Table 11 in Annex 1).

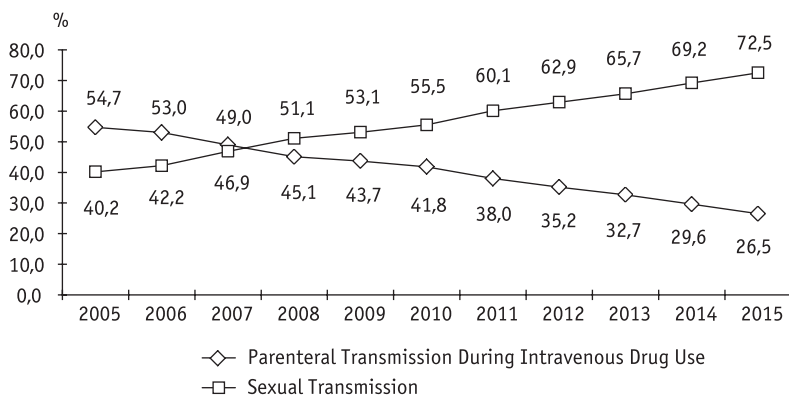


Figure 7. Structure of HIV Transmission Routes Among New HIV Infections with Allowance for HIV Transmissions from Mother to Child, in Ukraine, %

Among the MARPs, men having sex with men increasingly gain in importance as a driver of the epidemic. The number of officially registered HIV cases in the country among this target group is growing every year — from 20 in 2005 to 262 in 2013. This number was 277 in 2014, and 368 in 2015 (See Fig. 8). We believe that at this point in time, HIV incidence resulting from sexual transmission between men is heavily underreported, as MSM tend to hide their sexual orientation. MSM stigma continues to act as the main barrier to HIV prevention, treatment, care and support for PLHIV.

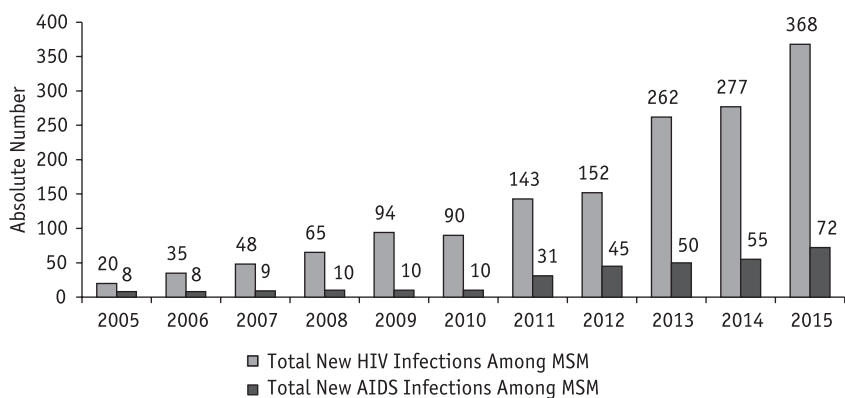


Figure 8. Dynamics of New HIV and AIDS Infections Among MSM in Ukraine

In 2015, 76.8% of all patients newly diagnosed with HIV, aged 15 years and above, were tested for HBV markers, and 75.4% — for HCV markers. Based on the test results, HBV markers were detected in 8.4% of all test subjects, and HCV markers in 36.3%. 80.1% were tested for sexually transmitted infections, with 18.8% receiving positive test results, and syphilis markers being found in the case of 89 test subjects (Table 13 in the Annex).

Based on the 2015 statistical data, the percentage of newly registered HIV patients aged 15 years and above, diagnosed with HIV Infection Stage I, based on clinical evidence, was 33.3%, Stage II — 11.6%, Stage III — 18.2%, Stage IV — 36.9% (N = 12,893).

In 2015, CD4 testing coverage among newly registered patients aged 15 years and older was 86.9% (N = 11,198). The share of test takers with CD4 cell counts above 500 cells per mcL at the time of getting registered as infected with HIV was 24.7%, 350–499 cells per mcL — 17.8%, 200–349 cells per mcL — 24.0%, below 200 cells per mcL — 33.5%.

According to the clinical stage of the disease, the distribution of 118,375 PLHIV, aged 15 years and older and registered with health care services as of the end of 2015 was as follows: Stage I — 40.6%, Stage II — 10.0%, Stage III — 21.2%, Stage IV — 28.2%; According to the immune suppression status of the patients: more than 500 CD4 cells per mcL — 34.0%, 350–499 CD4 cells per mcL — 21.3%, 200–349 CD4 cells per mcL — 24.9%, <200 CD4 cells per mcL — 19.8%. CD4 testing coverage for persons aged 15 years and above among those registered with health care services for monitoring and follow-up was 73.5% (N = 87,046).

In 2015, 92 HIV-infected children aged 0–14 years were registered with health care services, including 52 children diagnosed with HIV Infection Stages III–IV. As of January 1, 2015, there were 2,546 children aged 0–14 registered with health care services for monitoring and follow-up, including 1,352 diagnosed with HIV Infection Stages III–IV.

In 2015, 8,468 cases of AIDS were diagnosed versus 9,844 in 2014 and 9,362 in 2013, the incidence rate of AIDS standing at 19.8 persons per 100,000 population against 22.9 in 2014 and 20.9 in 2013 (See Fig. 9, Table 14 in Annex 1).

The decline in the incidence rate of AIDS across the country in 2015 was 14%, even though an increase in incidence rates was reported in eleven regions (Zhytomyr, Zakarpattia, Kyiv, Kirovohrad, Lviv, Poltava, Rivne, Sumy, Kherson, Chernivtsi, Chernihiv oblasts).

Just as previously reported, TB still remains as the most common AIDS-indicative disease in Ukraine. According to available statistics, in 2015, TB was found in 4,470 persons out of 8,468 diagnosed with AIDS, and in 12,566 cases among 34,016 AIDS patients registered with AIDS-service HCIs as of January 1, 2016. In 2015, the share of patients diagnosed with TB among new AIDS infections increased to 52.8% versus 49.3% in 2014. Over the course of the last year, a decline was recorded in the percentage share of TB patients among persons infected with AIDS and registered with health care services for monitoring and follow-up as of year-end — from 44.1% (2014) to 36.9% (2015) (See Tables 15, 16 in Annex 1).

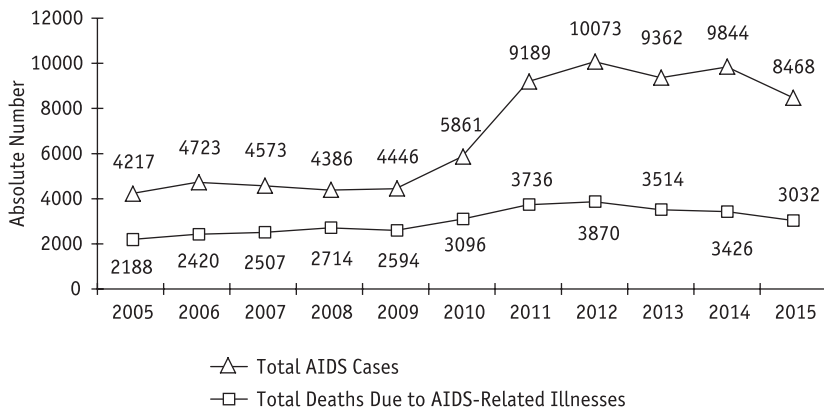


Figure 9. Total New AIDS Cases and Deaths Due to AIDS-Related Illnesses Among Ukrainian Nationals

In 2015, **3,032** persons died from AIDS against 3,426 in 2014 and 3,514 in 2013; The rate of mortality caused by AIDS was showing a downward trend (7.1 deaths per 100,000 population (2015) against 8.0 (2014) and 7.8 (2013)). Even though these mortality rates generally tended to decline across the country in 2015 and averaged 11.5%, an increase in AIDS-related mortality was recorded in 13 regions, with the highest rates being reported in the Dnipropetrovsk, Donetsk, Zaporizhzhia, Kirovohrad, Mykolaiv, and Odesa oblasts (See Fig. 10, Table 17 in Annex 1).

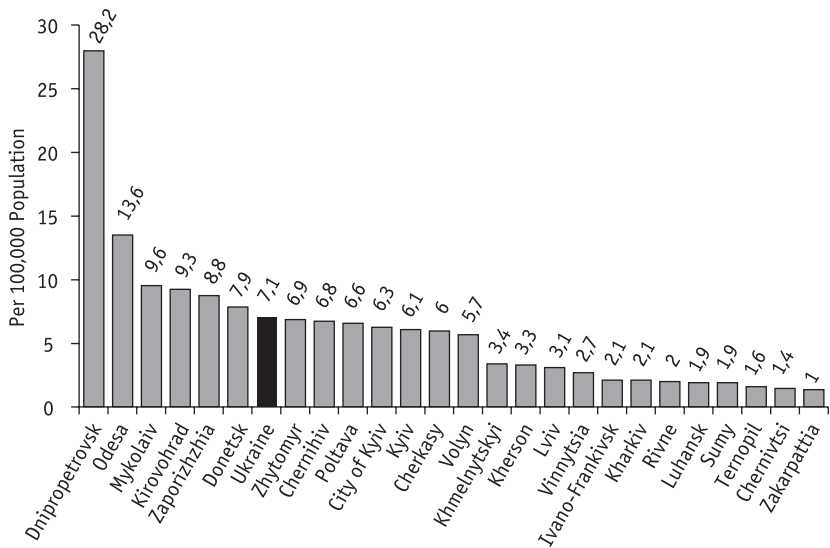


Figure 10. *Geographical Distribution of AIDS-Related Mortality Rates in Different Regions of Ukraine in 2015.*

The rate of AIDS-related mortality remains an important indicator that reflects access to diagnostic testing, treatment, care, and support for PWLH, as well as the efficacy of measures to alleviate the effects of the epidemic, performance assessment with a focus on effectiveness outcomes, preparation of forecasts and projections, and evaluation of the socio-economic impacts of the HIV epidemic on society. Trends in mortality from AIDS repeat the trends and patterns associated with the numbers of AIDS-related illnesses. Also, they are primarily correlated with the reach of HIV-focused medical services, first and foremost, antiretroviral therapy, adherence to treatment, and access to high-quality case management.

It has been established that the cause structure of mortality among HIV-infected individuals in 2015 is nearly identical to that of the previous years. In 63.2% of all cases, the cause of death was directly linked to HIV infection, and in 36.8% — it was not linked to HIV infection or remained unknown. In cases directly linked to HIV infection, TB remains the leading cause of death in Ukraine (55% among AIDS-related deaths). Late detection, untimely treatment, and the slow pace of implementation of ART coverage programs for HIV-positive persons will continue to contribute to AIDS-related morbidity and mortality in Ukraine (Table 18 in Annex 1).

Official Record of HIV-Infected Persons Who Have Been Displaced From AR Crimea, the Donetsk and Luhansk Oblasts to Other Regions of Ukraine

Today, Ukraine is faced with a fast deteriorating situation with HIV/AIDS due to a humanitarian crisis, combat operations in the east of the country, and increasing numbers of forced migrants from the Donetsk and Luhansk oblasts, as these regions are among the most affected by the epidemic.

Overall, medical assistance to PLHIV from Eastern Ukraine or AR Crimea is provided across the country in accordance with standard established guidelines. According to the Order of Ukraine's MoH as of February 18, 2015 (No. 75), "On Taking Additional Steps to Ensure the Operation of Healthcare Institutions During a Special-Regime Period and Address the Impacts of the National-Level Emergency Situation From a Social and Military Perspective," heads of organizational units and divisions in the public health sector within regional and Kyiv city government administrations have been tasked with taking appropriate action.

Based on UCDC statistics, in 2013–2015, there was a decline in newly registered HIV infections in the Donetsk (3,648, 3,043, and 1,023 persons, respectively) and Luhansk oblasts (910, 518, 183 persons, respectively). This is primarily due to the political and economic crisis amid military operations, which limits local people's access to HIV services and patient visits to healthcare providers.

As a consequence of the situation in the east of the country, there has been a rise in the number of HIV-infected persons being taken off the books of AIDS-service HCIs due to 'relocation'. In 2015 compared to 2014, the size of the target population registered for medical monitoring and follow-up was down 56% in the Donetsk oblast (falling from 28,776 to 12,656 persons), and 44% in the Luhansk oblast (from 4,459 to 1,971 persons) (Table 5).

Table 5. Official Record of HIV-Infected Persons Residing in the Donetsk and Luhansk Oblasts in 2013–2015

No.	Key Criteria for HIV-Infected Patients (Including Infants Born to HIV-Infected Mothers, Whose HIV Status is Indeterminate)	Donetsk Oblast			Luhansk Oblast		
		2013	2014	2015 ¹	2013	2014	2015 ¹
1	Those registered with health care services for monitoring and follow-up as of the beginning of the reporting year	26,492	27,933	12,520	4,148	4,569	2,000
2	Those registered with health care services for monitoring and follow-up during the reporting year	3,740	3,069	1,521	992	538	267
	<i>Including: Those newly diagnosed</i>	3,648	3,043	1,023	910	518	183
3	Struck off the register of patients during the reporting year	2,299	2,226	1,385	571	648	296
	<i>Including those removed from the register: Because the child is free from HIV infection</i>	652	508	284	102	92	54
	Due to relocation	194	486	406²	232	358	141
	<i>Due to death</i>	1,451	1,231	531	237	198	99
	<i>Due to other reasons</i>	2	1	164	0	0	2
4	Those registered with health care services for monitoring and follow-up as of the end of the reporting year	27,933	28,776	12,656	4,569	4,459	1,971
	<i>Including: Those actively monitored</i>	20,949	21,582	8,872	3,785	3,434	1,604

¹ Without taking into account the data from a part of the area affected by ATO

² Including persons who relocated within the region

Record Forms No. 502-1/o and 502-2/o are used to record details of patients who were registered with AIDS-service HCIs in the Donetsk and Luhansk oblasts for monitoring and follow-up, while seeking medical help in other regions of Ukraine. Some HIV-infected residents of the Donetsk and Luhansk oblasts may contact several HCIs in different regions for assistance in accessing ARVs, prevention and treatment associated with OIs, clinical laboratory testing, etc., while actually remaining on the books of healthcare providers in their home region.

According to data from regional AIDS centers located in other regions, in 2015, there were 572 PLHIV from the Donetsk oblast placed on the appropriate register, as well as 127 PLHIV from the Luhansk oblast, and 32 PLHIV from AR Crimea (Table 8 in Annex 1).

As of January 1, 2016, AIDS-service HCIs in other regions had 1,153 HIV-infected patients on their books from areas outside the control of the central government, including 824 persons (71.4%) displaced from the Donetsk oblast, 236 persons (20.5%) from the Luhansk oblast, and 93 persons (8.0%) from AR Crimea and the city of Sevastopol (Table 6).

Table 6. Number of HIV-Infected Persons Arriving From the Donetsk and Luhansk Oblasts, AR Crimea and Registered with AIDS-Service HCIs in Other Regions for Monitoring and Follow-Up, As of January 1, 2016

Region	Total Persons	Including Those from Areas Affected by ATO		AR Crimea and the City of Sevastopol
		Donetsk Oblast	Luhansk Oblast	
Ukraine	1,153	824	236	93
Vinnytsia	31	26	2	3
Volyn	4	1	0	3
Dnipropetrovsk	205	161	31	13
Zhytomyr	15	10	3	2
Zakarpattia	11	9	1	1
Zaporizhzhia	145	124	13	8
Ivano-Frankivsk	8	7	–	1
Kyiv	61	47	13	1
Kirovohrad	22	14	5	3
Luhansk*	40	4	36	–
Lviv	27	15	5	7
Mykolaiv	27	12	7	8

Region	Total Persons	Including Those from Areas Affected by ATO		AR Crimea and the City of Sevastopol
		Donetsk Oblast	Luhansk Oblast	
Odesa	96	73	18	5
Poltava	50	41	7	2
Rivne	3	2	1	–
Sumy	26	20	6	–
Ternopil	7	7	–	–
Kharkiv	70	43	20	7
Kherson	18	14	2	2
Khmelnytskyi	19	16	3	–
Cherkasy	3	2	1	–
Chernivtsi	20	15	4	1
Chernihiv	13	10	2	1
City of Kyiv	232	151	56	25

** Areas controlled by the central government*

Among 1,153 HIV-infected persons, there were 575 women (49.9%) and 578 men (50.1%). The age distribution for this group is as follows: 92 children aged up to 14 years (inclusive) (8.0%), 19 adolescents aged 15–17 years (inclusive) (1.6%), 28 persons aged 18–24 years (inclusive) (2.4%), 1,014 persons aged 25 years and older (88.0%).

The number of those infected with HIV was 370 persons (32.1% of the general population of HIV-infected individuals displaced from the occupied territories), including 238 PWIDs from the Donetsk oblast, 86 PWIDs from the Luhansk oblast, and 46 PWIDs from AR Crimea and the city of Sevastopol.

As of January 1, 2016, there were 26 HIV-infected pregnant women registered for monitoring and follow-up with AIDS-service HCIs located in other regions, as well as 110 children born to HIV-infected mothers, including 58 children diagnosed with HIV infection, arriving from the areas outside the control of the central government.

Bio-Behavioral Survey Findings for the Populations Most At Risk of HIV Infection

In 2015, commissioned by ICF Alliance for Public Health and UCDC, another round of bio-behavioral surveys was held among PWIDs, SWs, and MSM, i.e., the groups at highest risk of HIV infection. HIV prevention and prevalence reduction within these groups is one of the key objectives of the country's epidemic response plan.

The survey among PWIDs was conducted by *Alliance Ukraine Consultancy (Ltd.)*, among SWs — by the *O. Yaremenko Ukrainian Institute for Social Research (CBO)*, and among MSM — by *SI “Center of Social Expertise” of the Institute of Sociology of the National Academy of Sciences of Ukraine*.

PWIDs. The rate of HIV prevalence among PWIDs was determined using RDTs among 9,405 survey participants from across different regions of the country. In 2015, it rose to 21.9% against 19.7% in 2013, bucking the downward trend of the previous few years (2008/2009 — 22.9%, 2011 — 21.5 %).

Based on the survey findings, Dnipropetrovsk (39.7%), Cherkasy (36.3%), Donetsk (33.5%), Chernihiv (32.4%), Simferopol (32.3%), Bila Tserkva (29.9%), Poltava (29.7%), Mykolaiv (28.8%), Odesa (27.5%) (Table 7) were identified as the cities with high HIV prevalence rates among PWIDs.

Table 7. HIV Prevalence Among People Who Inject Drugs in Different Regions of Ukraine, 2013–2015

City	2013, %	2015, %	City	2013, %	2015, %
Simferopol	22.5	32.3	Mykolaiv	31.8	27.8
Vinnytsia	12.7	9.7	Odesa	30.2	27.5
Lutsk	20.3	20.1	Poltava	2.6	29.7
Dnipropetrovsk	34.7	39.7	Rivne	24.5	6.6
Donetsk	26.5	33.5	Sumy	5.1	10.2
Zhytomyr	18.9	15.9	Ternopil	18.0	6.3
Uzhgorod	1.8	1.4	Kharkiv	10.3	13.1
Zaporizhzhia	2.2	8.7	Kherson	22.6	21.2
Ivano-Frankivsk	17.0	17.8	Khmelnyskyi	28.2	20.8
Bila Tserkva	19.7	29.9	Cherkasy	19.8	36.3
Vasylkiv	5.7	8.2	Chernivtsi	2.2	16.2
Fastiv	21.7	25.5	Chernihiv	18.6	32.4
Kirovohrad	15.0	19.4	Kyiv	20.1	20.4
Luhansk	3.2	7.5	Sevastopol	21.3	11.9
Lviv	23.5	21.4			

Just as in prior years, the older age group continues to be the most affected by HIV: among PWIDs aged 25 and older, the rate of prevalence was 24%, showing an increase against the 2013 level (21.7%). Among the younger age group, this rate was 4.1%, showing a decrease against the 2013 level (6.4%).

Women continue to be more vulnerable to HIV infection than men, with the HIV prevalence rate among them being 27.6% against 20.5% among men. Based on the 2015 bio-behavioral survey data, there is an increase in HIV prevalence among PWIDs of both sexes (the HIV prevalence rates in 2013 were 22.4% among women and 18.8% among men, respectively).

In order to identify HIV prevalence trends among PWIDs, it is also recommended to determine this indicator for people who had been injecting drugs for less than three years. Based on the 2015 data, HIV prevalence among PWIDs within this population was 3.7%, which is nearly identical to that of the 2013 level (3.5%).

SWs. The rate of HIV prevalence among SWs in 2015 was determined using the results of RDTs among a total of 4,300 persons from 27 geographic areas of the country. The findings of the survey confirmed a progressive downward trend in overall HIV prevalence — from 12.9% in 2009 to 7.0% in 2015. Still though, a rise in HIV prevalence was recorded in 11 regions. The highest HIV prevalence among SWs was reported in Cherkasy, Donetsk, Ivano-Frankivsk, Bila Tserkva, Odesa, Poltava, Vinnytsia, whereas the lowest prevalence rates were found in Zhytomyr, Kharkiv, Lviv, and Chernivtsi (See Table 8).

Table 8. HIV Prevalence Among Sex Workers in Different Regions of Ukraine, 2013–2015

City	2013, %	2015, %	City	2013, %	2015, %
Simferopol	6.6	3.4	Odesa	10.3	9.5
Vinnytsia	8	7.6	Poltava	13.4	8.9
Lutsk	4.7	3.8	Rivne	0.9	6.1
Dnipropetrovsk	6.7	2.2	Sumy	1	1.7
Donetsk	10.5	17	Ternopil	4	4.3
Zhytomyr	3.1	0.7	Kharkiv	1.2	0.9
Uzhgorod	0	2.1	Kherson	7.8	7.2
Zaporizhzhia	7.2	7.1	Khmelnyskyi	8.7	6.1
Ivano-Frankivsk	13.8	16.2	Cherkasy	–*	18.6
Bila Tserkva	9.7	11.7	Chernivtsi	0	1.5
Kirovohrad	6	6.5	Chernihiv	–*	2.9
Luhansk	0	2.7	Kyiv	2	1.9
Lviv	2.5	1.4	Sevastopol	4.2	4.3
Mykolaiv	3.9	5.8			

* Not covered by the survey

Just as in prior years, the older age group continues to be the most affected by HIV: among SWs aged 25 and older, the rate of prevalence was 9.9%, among younger SWs — 0.7% (in 2013, these figures were 9.5% and 2.3%, respectively). SWs who inject drugs continue to be the most vulnerable, with the traditionally highest HIV prevalence rate standing at 30.3%. In previous years, this figure was: 27.6% in 2013, 45.5% in 2011, and 42.2% in 2008/2009. Among those SWs who reported not using intravenous drugs, this figure was 4.2%, showing a two-fold decrease since 2008 (50%) (8.5% in 2008/2009, 5.8% in 2013).

MSM. The rate of HIV prevalence among MSM was determined using the results of RDTs among a total of 4,550 survey participants from 26 cities of the country. Based on the 2015 bio-behavioral survey data, the rate of HIV prevalence among MSM was 8.5%, showing a rise against the 2013 level (5.9%). In accordance with the previous survey findings, these figures were 6.4% (2011) and 8.6% (2009), respectively.

Based on the survey data, Donetsk, Sevastopol, Cherkasy, Kyiv, Odesa, Kherson, and Dnipropetrovsk were among the cities with the highest HIV prevalence rates among MSM, whereas the lowest HIV prevalence was found in Ternopil, Poltava, Chernihiv, and Uzhgorod (Table 9).

Table 9. HIV Prevalence Among Men Having Sex with Men in Different Regions of Ukraine, 2013–2015

City	2013, %	2015, %	City	2013, %	2015, %
Simferopol	5.9	8.5	Odesa	7.6	12.3
Vinnytsia	1.8	5.3	Poltava	3.5	0.6
Lutsk	4.2	3.3	Rivne	7.3	3.2
Dnipropetrovsk	1	3.8	Sumy	3.4	2.3
Donetsk	7.8	8.9	Ternopil	0.9	0.5
Zhytomyr	14.6	18.8	Kharkiv	1.4	2.3
Uzhgorod	5.2	4.8	Kherson	6.1	9
Zaporizhzhia	2.6	1.4	Khmelnitskyi	3.8	2.9
Ivano-Frankivsk	4.6	4.6	Cherkasy	10.9	15.6
Bila Tserkva	7.3	4.2	Chernivtsi	1.6	6
Kirovohrad	2.4	4.5	Chernihiv	0.5	1
Luhansk	8.6	3.3	Kyiv	16.9	15.3
Lviv	2.3	—*	Sevastopol	16.6	17.7
Mykolaiv	2.6	5.1			

* Not covered by the survey

Just as in prior years, the older age group was found to be more affected by HIV: among MSM aged 25 years and older, the rate of HIV prevalence in 2015 was 10.4% against 7.7% in 2013. Among the younger age group, HIV prevalence also showed an increase (4.8% in 2015 against 3.0% in 2013).

Hence, on the strength of the foregoing, the current status of the HIV epidemic in Ukraine is as follows:

- Based on the SEM data, Ukraine’s HIV epidemic is slowing down, with HIV prevalence rates declining in 2015 for most classification codes. In 2009–2015, there was a decline in overall HIV prevalence among blood donors (from 0.14% to 0.09%) and pregnant women (from 0.55% to 0.33%), in 2013–2015 — among pregnant women aged 15–24 years (from 0.33% to 0.27%).
- Based on the 2015 routine epidemiological surveillance data, new HIV infections predominantly occur among men (56.8%) and persons aged 15–49 years (71.1%). There is a clear downward trend in the number of younger people aged 15–24 years — from 12.0% in 2009 to 5.7% in 2015.
- There is a shift in age distribution among HIV epidemic victims toward older-aged patients. In 2005–2015, an increase was recorded in the number of HIV infections among the age group of 30–39-year-olds — from 28.8% to 34.5%, among the age group of 40–49-year-olds — from 10.5% to 19.6%, among the age group of 50-year-olds and older — from 1.9% to 9.2%.
- The HIV epidemic is slowly spreading among the country’s rural population. Among the total of new HIV infections, the percentage of people living in rural areas grew from 17.1% to 26.6% over the period of 2005–2015.
- The HIV epidemic continues to spread among the general population due to an increase in sexual transmission of HIV, now standing at 72.5% of all HIV transmissions in 2015.
- HIV transmission within the MSM community increasingly gains in significance as a driver of the HIV epidemic. In 2015, among those registered with health care services for monitoring and follow-up, MSM were responsible for 27.0% (368 persons) of all HIV-infected MSM recorded on the official register as of January 1, 2016 (1,368 persons).
- Based on the bio-behavioral survey findings, PWIDs are the most vulnerable to the HIV epidemic. HIV prevalence among PWIDs in 2015 remains high, rising to 21.9% against 19.7% in 2013. HIV prevalence among MSM is on the rise (5.9% in 2013, 8.5% in 2015), including that among the younger age group, i.e., 15–24-year-olds (3.0% and 4.8%, respectively).

- The impacts of the socio-economic crisis in the country and military operations in Eastern Ukraine are bound to have a negative effect on the response to the HIV epidemic in the areas temporarily outside the control of the central government and Ukraine as a whole. Among the general population of PWLH displaced from the occupied territories to other regions of Ukraine, PWIDs account for 32.1%.
- The features that define the current status of the HIV epidemic in Ukraine include high activity driven by a hidden component of the epidemic process due to undiagnosed HIV infections. More than 30% of all HIV-positive persons, diagnosed based on lab test results, across the country as a whole, and up to 50% in some regions still have no access to monitoring and follow-up services due to various reasons.
- There is an upward trend in the number of persons diagnosed as having Stages III–IV of HIV infection — from 31.9% in 2005 to 45.1% in 2015 (all age groups).
- Analysis of the epidemic situation shows that appropriate epidemic control measures are still not being implemented in full. Late diagnosis of AIDS-induced illnesses and HIV/TB co-infections is still responsible for high incidence of AIDS (in 2015 — 19.8, in 2014 — 22.9 cases per 100,000 population) and AIDS-related mortality (in 2015 — 7.1, in 2014 — 8.0 cases per 100,000 population) in Ukraine.

Section 5. Cascade of Services for People Living with HIV, As of January 1, 2016

In accordance with the country's international commitments as well as WHO and UNAIDS guidelines, the cascade of services for people living with HIV is part of the mandatory outputs of integrated epidemiological surveillance and the continuum of medical care. The HIV service cascade plays a key role in assessing progress made in achieving the objectives related to morbidity and mortality reduction consistent with the UNAIDS strategy for reaching 90/90/90 targets and timelines.

A cascade analysis reflects the sequence of HIV services provided and a gradual reduction in the number of people accessing these services. Drawing the cascade chart helps to identify reductions in the number of PLHIV and highlight key barriers to achieving universal access to ART on a scale required for HIV epidemic control.

A cross-sectional cascade in Ukraine, which shows the implementation status of prevention and treatment programs as of January 1, 2016, taking into account all adults and children registered with AIDS-service HCIs for monitoring and follow-up, is based on monitoring data for testing, treatment, laboratory support, as well as estimates, statistical data, and calculations (Fig. 11).

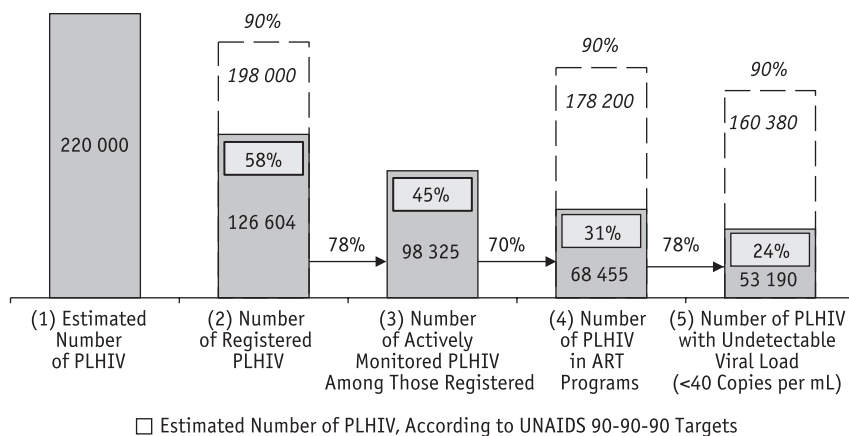


Figure 11. The Cascade of Services for People Living with HIV in Ukraine As of January 1, 2016.

HIV Service Cascade for PLHIV. Key Data:

(1) **220,000 PLHIV** — Estimated number of PLHIV in Ukraine as of the beginning of 2016 (all age groups).

Estimates based on Spectrum/EPP include data related to AR Crimea, the city of Sevastopol, and the areas affected by the anti-terrorist operation.

(2) **126,604 PLHIV** (58% of the estimated number of PLHIV) — Number of people who know their HIV status and are registered with AIDS-service HCIs in Ukraine as of January 1, 2016.

In order to reach the first 90% target of the Fast-Track strategy by 2020, it is necessary that another 198,000 people living with HIV be identified and registered with health care services.

The estimated numbers of PLHIV registered with health care services for monitoring and follow-up as of January 1, 2016 were collected and summarized based on official statistical reports for 25 regions of Ukraine, excluding the areas of the Donetsk and Luhansk oblasts outside the central government's control, and excluding the cumulative number of HIV-related deaths.

(3) **98,325 PLHIV** (45% of the estimated number of PLHIV) — Actively monitored PLHIV, notably the number of HIV-infected patients with at least one medical checkup in 2015.

As of the end of 2015, the number of actively monitored PLHIV was 78.6% of all HIV-infected people registered with health care services as of January 1, 2016.

The data were collected based on official statistical reports for 25 regions of Ukraine, excluding the areas of the Donetsk and Luhansk oblasts outside the central government's control, and excluding the cumulative number of HIV-related deaths.

(4) **68,455 PLHIV** (31% of the estimated number of PLHIV) — Number of PLHIV in ART Programs as of January 1, 2016.

In order to reach the second 90% target of the Fast-Track strategy by 2020, it is necessary that another 178,200 people living with HIV be enrolled in antiretroviral therapy.

The data were collected based on official statistical reports for 25 regions of Ukraine, including available data on the areas affected by the anti-terrorist operation.

(5) **53,190 PLHIV** (24% of the estimated number of PLHIV) — Calculated number of PLHIV who were in ART programs and had undetectable viral loads as of January 1, 2016.

In order to reach the third 90% target of the Fast-Track strategy by 2020, it is necessary that another 160,380 people living with HIV and enrolled in ART programs have undetectable viral loads.

The calculated data were based on the findings of the 2015 research on the virological effectiveness of ART. Specifically, based on this research evidence, VL levels <40 RNA copies per mL were found in 78% of all test takers who had been in ART for six months or more.

Section 6. Early 2016 HIV/AIDS Estimates

It is a generally recognized fact that official statistics do not reflect the real extent of the HIV epidemic in Ukraine, specifically the actual number of people living with HIV/AIDS. The estimated number of PLHIV is an important strategic tool for planning appropriate measures against HIV/AIDS, notably such as analysis of trends and projections of the epidemic process; evaluation of impacts for prevention and treatment programs; assessments to measure the reach of prevention interventions focusing on target populations, etc.

Developers of assessments and forecasts recommend that the estimates should be treated with extreme caution and stress the fact that no meaningful comparisons can be made between different sets of HIV/AIDS data collected during previous rounds due to major discrepancies between different calculation methods and the use of different software versions. It is also incorrect to compare HIV/AIDS data collected in prior years against similar data obtained in early 2016. Also, the calculated data provided MUST NOT be interpreted as changes in numerical or percentage values in comparison to the previous estimates.

According to the updated estimates, in early 2016, there were 220,000 PLHIV living in Ukraine (all age groups). The HIV prevalence among PLHIV aged 15–49 years is estimated at 0.9%. Based on official statistics, as of January 1, 2016, there were 126,604 Ukrainian nationals registered with AIDS-service healthcare institutions. The ratio between the estimated and actual numbers of PLHIV is 1.74:1, i.e., essentially every other person from among PLHIV in Ukraine has sought assistance from a healthcare provider and is registered with the service responsible for monitoring HIV-positive patients. Based on data from Spectrum/EPP 5.4, which is a policy modeling system, the results obtained are presented below. They provide an up-to-date status of the HIV/AIDS epidemic in Ukraine (Table 10).

Table 10. Assessment of the HIV/AIDS Situation in Ukraine As of the Beginning of 2016

Assessment Criteria	As of the Beginning of 2016
Total people living with HIV, in absolute numbers (all age groups)	220,000
HIV prevalence rate, % (adults aged 15–49 years)	0.9 %
Estimated number of new HIV infections, in absolute numbers (all age groups)	16,000
Estimated number of AIDS-related deaths, in absolute numbers (adults aged 15 years and older)	7,900
Estimated number of PLHIV in ART programs, % (all age groups)	27%

The estimated numbers of PLHIV as of the beginning of 2016 include data related to AR Crimea and the areas affected by the anti-terrorist operation.

Section 7. HIV Testing and Linkage to HIV Services

Scaling up and increasing access to HIV testing for clients whose HIV status remains unknown, especially among populations at high risk of HIV infection is a high-priority objective on the HIV prevention agenda intended to address the fallout from the epidemic worldwide.

Consistent with UNAIDS' new global targets, 90–90–90, in the period leading up to 2020, it is necessary to meet the first '90' target, i.e., make sure that 90% living with HIV know their diagnosis. This first '90' target is critically important for reaching the second '90' target, i.e., of having people diagnosed with HIV on antiretroviral treatment, and, as a result, achieving the third '90' target, i.e., of having people in treatment with fully suppressed viral load.

In the course of the WHO's global meetings and consultations held in 2015, participants inquired into the advisability of shifting from the use of the term *'HIV Testing and Counseling'* in favor of another term, which is more aligned with the concept of offering a full spectrum of medical and social services, i.e., *'HIV Testing Services'*.

Based on the WHO's definition, the term *'HIV Testing Services'* (HTS) is used to refer to the entirety of services offered along with HIV testing, such as counseling (pre-test guidance and post-test counseling); linkage of clients to appropriate resources related to HIV prevention, treatment, and care, as well as to other clinical and support services; coordination with laboratory personnel for testing quality assurance, as HIV testing is the key to meeting HIV prevention, treatment, care, and other support needs.

The national framework of HTS is one of the most advanced components of the national HIV/AIDS response in Ukraine. The existing legal framework regulates all stages of HTS, and is based upon the principles of freedom of choice, confidentiality, free service, anonymity, testing accuracy and reliability, linkage to prevention, treatment, and care services.

At the same time, as is seen from statistical reports, it is difficult to assess the continuum of medical care services for PLHIV at national and regional levels, since the monitoring of patient flow stages is governed by different regulations, which are not mutually aligned and consistent:

- 1) Completion of the 'counseling' component is recorded on Form No. 3-HIV/AIDS (quarterly), *"Report on the Provision of Counseling Services Associated with HIV Testing,"* as approved by the Order of Ukraine's MoH as of May 11, 2010 (No. 388), *"On Improving HIV Diagnostic Testing,"* and is based on the disaggregation of data on counseling services related to HIV testing in different HCIs, facilities, i.e., the patient's points of entry into the service system.

- 2) The 'testing' component within the framework of sero-epidemiological monitoring is sufficiently powerful and potentially capable of meeting high information levels of HIV epidemic assessments based on research data on *different population contingents*; appropriate entries are made in Form No. 1-HIV/AIDS (quarterly) and No. 2-HIV/AIDS (annual), *"Report on Patients Suffering from Conditions and Diseases Related to the Human Immunodeficiency Virus (HIV),"* as approved by the Order of Ukraine's MoH as of March 5, 2013 (No. 180), *"On Approval of Primary Records and Reports Pertaining to HIV Epidemic Monitoring and Related Completion Guidelines."*

These directives of Ukraine's MoH regulate processes that are different from each other in substance and nature, i.e., 1) Counseling provided in HCIs of different subordination levels with a focus on different specialist fields, community-based organizations, follows different scenarios (individual or group settings), and 2) HIV testing with coded classifications of records assigned to different key populations (PWIDs, SWs, MSM, prisoners, etc.) or health care facilities (those specialized in TB treatment and control, drug addictions, infections, dermatology and venereal diseases, obstetrics and gynecology, postmortem diagnosis, departments of corrections, blood supply services) or types of testing (anonymous, confidential).

Therefore, it is incorrect to compare and contrast different sets of test results for different classification codes against the number of consults provided on HIV issues.

In 2015, the number of recipients of pre-test counseling in Ukraine totaled 2,579,720 (2,473,828 — individual sessions and 105,892 group sessions); the number of persons tested for HIV was 2,347,915 (Ukrainian nationals, foreign nationals); the number of recipients of post-test counseling was 2,055,491 (79.7% of those who received pre-test counseling).

A total of 524.2 thousand patients were "lost" during counseling and testing, notably: *231.8 thousand persons (9.0%)* were lost between pre-test counseling and laboratory testing, and *292.4 thousand persons (12.5%)* — between laboratory testing and post-test counseling. Thus, in the past year, said persons failed to take advantage of the opportunity to gain full access to HTS, find out their HIV status, and, if tested HIV-positive, receive antiretroviral therapy and other HIV services.

The total number of counseling sessions provided is down 16% against 2014 due to the inability to obtain data according to Form No. 3-HIV/AIDS from the Donetsk oblast, and the availability of data according to Form No. 3 from the Luhansk oblast only for the second half of 2015. SEM data in Form No. 2-HIV/AIDS contain no details for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation.

It was established that in four regions of Ukraine the number of pre-test counseling sessions is much lower than the number of persons tested for antibodies

to HIV and reflected in SEM data: in the Luhansk oblast — by 9,819, in the Mykolaiv oblast — by 2,681, in the Odesa oblast — by 5,296 and in the city of Kyiv — by 28,293 (See Table 11).

The identified discrepancies in data representation may be indicative of the inaccuracy of the number of pre-test consults or the fact that a large percentage of HIV test takers are not provided with mandatory pre-test counseling, or that patients are tested anonymously. This leads to the conclusion that specialists of HCIs from said regions, who are involved in HIV counseling and testing, require additional training. There is a need for implementing large-scale regional-level supervisory efforts with a focus on HTS.

Table 11. Number of Pre-Test Counseling Sessions, People Tested for HIV, and Post-Test Counseling Sessions by Regions of Ukraine in 2015*

Region	Number of pre-test (individual and group) counseling sessions	Number of people tested for HIV antibodies	Difference between the number of pre-test counseling sessions and number of people tested	Number of post-test counseling sessions (total)
Vinnitsia	86,877	65,726	21,151	70,220
Volyn	120,118	108,258	11,860	113,498
Dnipropetrovsk	307,284	246,416	60,868	255,545
Zhytomyr	75,326	65,056	10,270	69,482
Zakarpattia	93,393	78,382	15,011	71,689
Zaporizhia	161,966	127,226	34,740	90,502
Ivano-Frankivsk	73,713	68,697	5,016	67,755
Kyiv	91,786	78,735	13,051	59,510
Kirovohrad	47,677	38,403	9,274	43,098
Lviv	138,932	106,468	32,464	94,047
Luhansk	21,902	31,721	-9,819	8,431
Mykolaiv	97,282	99,963	-2,681	77,983
Odesa	148,595	153,891	-5,296	137,591

Region	Number of pre-test (individual and group) counseling sessions	Number of people tested for HIV antibodies	Difference between the number of pre-test counseling sessions and number of people tested	Number of post-test counseling sessions (total)
Poltava	84,623	63,203	21,420	58,181
Rivne	99,895	84,680	15,215	74,431
Sumy	86,604	72,031	14,573	73,198
Ternopil	61,864	44,780	17,084	52,343
Kharkiv	190,553	153,432	37,121	131,919
Kherson	61,637	60,759	878	61,404
Khmelnytskyi	101,778	90,868	10,910	81,033
Cherkasy	94,571	89,654	4,917	80,280
Chernivtsi	70,588	61,246	9,342	64,512
Chernihiv	93,965	75,719	18,246	70,940
City of Kyiv	168,791	197,084	-28,293	147,899

** There is no data available on the number of counseling sessions delivered in the Donetsk oblast in 2015, in the Luhansk oblast — in the first 6 months of 2015; 2015 data on the number of people tested for HIV do not include data for Crimea, the city of Sevastopol, and areas of the military conflict in Eastern Ukraine.*

Testing and being informed about one's positive HIV status with no linkage to care and treatment have limited value. According to WHO, linkage is a set of measures to support people who get tested for HIV and test positive to engage them into prevention, care and support services; it includes the period from the moment of HIV diagnosis to the moment of registration in the HIV care system.

The procedure of registration of people living with HIV, medical monitoring and follow-up of such people in Ukraine are regulated by the Order of the Ministry of Health of Ukraine as of July 10, 2013 (no. 585) "On Approval of Regulations to Improve Medical Care for People Living with HIV." Registration of PLHIV is carried out with the purpose of epidemiological surveillance over HIV and medical supervision of such people. Medical follow-up starts from the date of establishing HIV diagnosis, is delivered on a regular basis and is life-long.

Within the statistical reporting, medical follow-up of PLHIV includes cumulative collection of data from various “points”, through which patients come to AIDS-service HCIs. That is why it is not possible to track the scale of “losses” when HIV-positive patients are referred by HCIs of different services to AIDS-service HCIs.

In the recent years, in Ukraine there has been a trend toward an increase in the share of people with positive results of HIV tests, who seek care in AIDS-services HCIs for further follow-up — in 2015 the indicator of coverage with medical checkups was 68.4%. However, official statistics show that over 30% of HIV-positive people identified as a result of laboratory tests in Ukraine in general and up to 55% in separate regions are not covered with medical follow-up. Thus, the efficiency and the quality of HTS in Ukraine are still not sufficient to ensure timely involvement of people who test positive for HIV into medical supervision.

The monitoring of uninterrupted and high-quality provision of HTS is crucial to define the key factors in achieving universal access to ART and countering the HIV epidemic, and that is why it requires improvement of the component of elaborating measures to enhance control over people who test positive for HIV seeking care in AIDS-service HCIs.

Taking into account healthcare reforms in the country, another important component is development of a model of the effective system of surveillance over HIV-positive patients and using the capacity of HCIs of various profiles in the delivery of HIV-related services at different levels of health care — from primary to highly specialized health care. In this context, the key to reform and improvement of the healthcare system is detailed understanding of the “entry points” of patients.

Section 8. Provision of Health Care to People Living with HIV and AIDS

Antiretroviral Therapy

In Ukraine, ART is delivered in accordance with the Clinical Protocol for Antiretroviral Therapy of HIV Infection in Adults and Adolescents approved by the Order of the Ministry of Health of Ukraine as of July 12, 2010 (no. 551) and the Unified Clinical Protocol for Primary, Secondary (Specialized) and Tertiary (Highly Specialized) Medical Care to Children “HIV Infection” approved with the Order of the Ministry of Health of Ukraine as of February 24, 2015 (no. 92).

As of January 01, 2016, ART is provided in 235 healthcare facilities of the country (table 24 Annex 1), including:

- 2 national-level facilities;
- 24 regional AIDS centers;
- 12 city AIDS centers;
- 177 ART sites located in central district clinics, city clinics, polyclinics, TMAs, including six sites of the Odesa city AIDS center and two sites of the Kyiv city AIDS center;
- 15 ART sites located in TB treatment clinics;
- 5 ART sites located in STI treatment, drug treatment and psychoneurological clinics.

In 2015, 45 new ART sites were launched.

The 2015 report does not take into account ART sites in the Crimea, the city of Sevastopol, and military conflict areas in eastern Ukraine.

As of January 01, 2016, 60,753 patients received ART in Ukraine (42,458 with government funds, 18,295 with GF funds). In the total number of people above, 1,995 persons received ART in penitentiary institution of Ukraine as of January 01, 2016 with financial support of the GF (table 25 Annex 1).

Children (aged 0 — 17 years inclusive) received ART with state budget funds. As of the end of 2015, their number was 2,761 people or 4.5% of the total number of people receiving ART.

In 2015, the number of people who received ART in HCIs of the MoH of Ukraine and the National Academy of Medical Sciences of Ukraine increased by 6,816 people (13%). This indicator in absolute numbers was varying from 27 people (increase by 3.2%) in the Volyn oblast to 1,195 people (increase by 13.7%) in the Dnipropetrovsk

oblast and 1,174 people (17.4%) in the Odesa oblast. In terms of percentage, the highest increase was in the Zakarpattia oblast — 32 (35.6%) (table 26 Annex 1).

Among people receiving ART, adults (18 years of age and above) made up 95.2% (57,992), including 30,891 men (53.3%) and 27,101 women (46.7%). As for the total need in ART, the percentage of men was 53.3% (33,306 people), women — 46.7% (29,080 people), which demonstrates equal access of male and female patients to ART (table 27 Annex 1).

Among adults aged 18 and above, first-line ART regimens were received by 93.8% patients, second-line — 5.7%, third-line — 0.4%. Among children aged below 17 years of age inclusive, first-line ART regimens were received by 85.5% patients, second-line — 13.9%, third-line — 0.5%.

Treatment efficacy was assessed through cohort analysis 6, 12, 24, 36 months, and so on after treatment initiation (using form no. 57). A cohort is a group of people living with HIV and AIDS patients who were initiated on ART in one month (e.g., in January 2006, June 2012, etc.).

Retention on ART for 12 months after initiation of treatment among people who started their therapy in 2014 (2014 cohort) was 85.52%. This indicator was less than 75% in the Kirovohrad, Zaporizhia, and Chernivtsi oblasts. From among all patients who were initiated on ART in 2014, 12 months after the start of therapy 6.22% died and 8.26% terminated ART due to various reasons (table 28 Annex 1).

Retention on ART for 24 months after initiation of treatment among people who started their therapy in 2013 (2013 cohort) was 78.31%.

Retention on ART for 60 months after initiation of treatment among people who started their therapy in 2010 (2010 cohort) was 73.51%.

The highest rate of ART interruption was observed in the first 12 months after initiation of treatment (15% of all people who were initiated on ART in the period from *August 2004 to December 2014*). The main reasons for interruption were late initiation of ART and low adherence to treatment. Further, the increase of this indicator slows down significantly. In 10 years after treatment initiation, 64% of people who were initiated on ART in 2004–2005 stay alive and continue receiving ART (Figure 12).

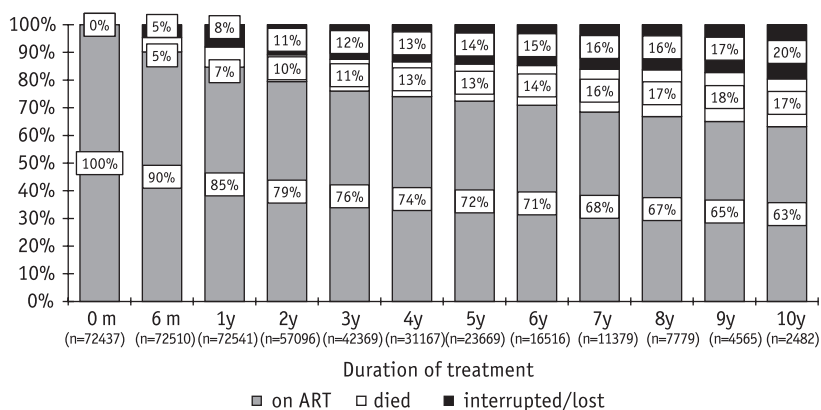


Figure 12. Structure of retention on ART (aggregated from all cohorts for the period of August 2004 — December 2014) (not including data from the Crimea, city of Sevastopol and military conflict areas in eastern Ukraine)

According to the results of summarized cohort analysis data for the period from August 2004 to December 2014, 12 months after treatment initiation, 98% of patients continued receiving first-line ART regimens, among those who continued ART in the cohort after 12 months, second-line ART regimens — 2%, rescue regimens — 0.04%. The dynamics of ART regimens distribution by lines of drugs is presented in Figure 13.

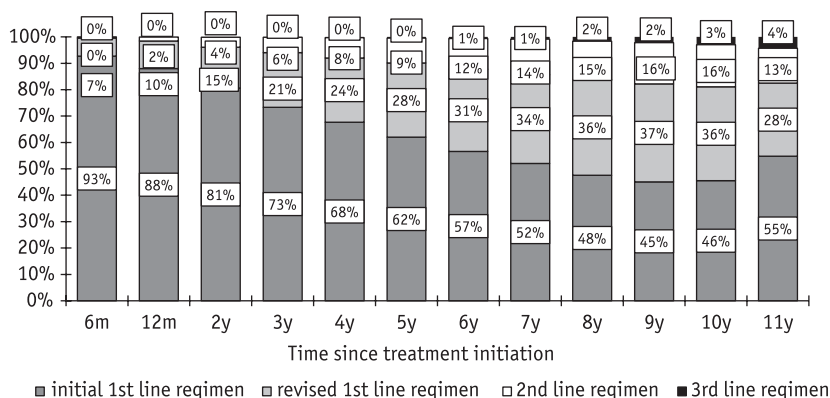


Figure 13. Distribution of ART regimens by lines among patients from the cohort who receive the therapy (aggregated data of all cohorts for August 2004 — December 2014) (not including data from Crimea, the city of Sevastopol, and military conflict areas in eastern Ukraine)

Information about the operation of inpatient u Figure 13. Distribution of ART regimens by lines among patients from the cohort who receive the therapy (aggregated data of all cohorts for August 2004 — December 2014) (not including data from Crimea, the city of Sevastopol, and military conflict areas in eastern Ukraine) nits of AIDS Centers in 2015 is presented in Table 29 Annex 1.

Treatment of OIs, Concomitant Conditions and Diseases

According to the Regional AIDS Center and National Children's Specialized Hospital "OKHMATDYT," in 2015 HIV-positive patients received 34,239 prevention courses and 27,245 treatment courses for OIs, among them 53.45% OI prevention and treatment courses were provided with financial support from the GF; 19.17% were covered by local budgets, 20.17% — at the expense of patients, 5.26% — covered by AHF (AIDS Healthcare Foundation), and 1.95% — covered by other charitable organizations.

Among all cases of OIs treated in 2015, 44.59% were associated with oropharyngeal candidiasis; 31.65% — bacterial infections (including 10.97% — bacterial pneumonias); 7.27% — local infections caused by HSV-1 and HSV-2; 3.17% — systemic candidiasis; 2.81% — pneumocystic pneumonia; 2.94% — toxoplasmosis. OI prevention was delivered to patients for pneumocystic pneumonia — 64.4% cases; toxoplasmosis — 12.8%; oropharyngeal candidiasis — 9.26%; nontuberculous mycobacteria infection — 4.41%.

Besides, in 2015 HIV-positive patients received 2,424 prevention courses and 12,904 treatment courses for concomitant conditions and diseases, including 61.12% at the expense of patients, 32.11% — covered from local budgets, 4.23% — covered by AHF, 0.77% — covered by GF and 1.77% — covered by other charitable organizations.

In 2015, among all cases of treatment of other concomitant conditions and diseases, 43,08% were associated with liver damage, 16.20% — anemia, 14.58% — gastrointestinal disorders and 10.31% — allergic reactions. Prevention of side effects was delivered to 48,51% of patients for liver damage, 21.29% — for gastrointestinal disorders, and 11.67% — for hepatitis C.

The number of HIV-positive patients with active hepatitis C, who were in need of treatment as of the end of 2015, was 4,755 people and those who receive/received HCV treatment during the year — 352 people. The total number of HIV-positive patients who were known to be infected with hepatitis C virus as of the end of 2015 was 30,535 people.

Starting from June 2015, within the project "Scaling up accessible and effective HCV treatment through community-based treatment model for most vulnerable populations in the resource-constrained Ukraine," in partnership with the Alliance for Public Health, UCDC started treatment of patients with HIV/HCV co-infection with

sofosbuvir in combination with pegylated interferon and ribavirin in the Vinnytsia, Dnipropetrovsk, Mykolaiv, Poltava, Ivano-Frankivsk, and Kharkiv Oblast AIDS Centers, Kyiv City AIDS Center, and L.V. Gromashevsky Institute of Epidemiology and Infectious Diseases; and in December 2015 the Kyiv Oblast AIDS Center and the Sumy Oblast Infectious Disease Hospital joined the project. This is an innovative project in the area of HCV treatment in key populations as it allows using the resources of the National Targeted Social Program of Viral Hepatitis Prevention, Diagnostics and Treatment for the period up to 2016 as approved by the Regulation of the Cabinet of Ministers as of April 29, 2013 (no. 637), through reducing the duration of HCV treatment to 12 weeks, instead of 24–48 weeks.

Since June to December 2015, 320 patients with HIV/HCV co-infection registered with the Regional AIDS Center were initiated on treatment; patients with HCV mono-infection representing risk groups were also enrolled to the program (Table 5).

Since June to December 2015, treatment was received by 303 (94.7%) HIV-positive patients with HIV/HCV co-infection, including 292 (96.4%) persons receiving ART and 12 (3.8%) patients who had HCV mono-infection. Treatment was interrupted before the set term due to severe adverse reactions to medications in 3 (0.9%) patients, with 2 (0.6%) refusing treatment.

As of the end of 2015, 154 patients (48.1%) with HIV/HCV co-infection completed treatment. In three cases HCV treatment proved to be ineffective, which was confirmed with the levels of HCV viral load in the course of treatment.

As for gender, 72% of patients with co-infection who received treatment were male and 28% were female.

Most patients who were prescribed with treatment, i.e., 80.8%, had a history of injecting drug use, with 7.5% being active injecting drug users. In the reporting period, 20 people (6.4%) of those who received combined HCV therapy were on OST.

Since February 2016, the second wave of treatment started for 500 patients from among MARPs (PWID, SW, MSM) with HIV/HCV co-infection or HCV mono-infection (Table 12).

Table 12. Situation with hepatitis C treatment in regional AIDS centers

No	Healthcare institution	Total number of patients initiated on treatment, June–December	Total number of patients with HIV/HCV co-infection who receive ART	Patients of with HIV/HCV co-infection treated
1.	Kyiv City Clinic No. 5	49	42	20
2.	L.V. Gromashevsky Institute of Epidemiology and Infectious Diseases	114	108	58
3.	Vinnitsia Oblast AIDS Center	35	31	20
4.	Dnipropetrovsk Oblast AIDS Center	28	27	16
5.	Ivano-Frankivsk Oblast Clinical Infectious Hospital — Oblast AIDS Center	40	32	24
6.	Mykolaiv Oblast AIDS Center	7	7	2
7.	Poltava Oblast AIDS Center	22	20	9
8.	Kyiv Oblast AIDS Center	5	5	
9.	Sumy Oblast Infectious Hospital	2	2	
10.	Kharkiv Oblast AIDS Center	18	18	5
11.	Total	320	292 (91.2%)	154 (48.1%)

Section 9. The Situation with Opioid Substitution Treatment Implementation

Mental and behavior disorders associated with the use of opioids as of January 01, 2016 are most frequently observed in the Mykolaiv (207.0 per 100 thousand people), Odesa (186.5), Zaporizhia (166.9), Donetsk (150), Dnipropetrovsk (144.8), Chernihiv (125.6), Cherkasy (124.3), Kherson (121.3), Poltava (117.8), Khmelnytskyi (112) oblasts, and in the city of Kyiv (208.6). Based on the data available, the stated oblasts are high priority in terms of scale-up of OST as one of the most effective methods for opioid dependence treatment, HIV prevention and involvement of HIV-positive PWIDs into the system of healthcare services, in particular, for the formation of adherence to ART.

The lowest levels of mental and behavior disorders associated with the use of opioids are registered in the Zakarpattia (14 per 100 thousand people), Lviv (39.4), Ternopil (43.1), Vinnytsia (50), and Chernivtsi (48.4) oblasts.

As of January 01, 2016 there were a total of 58,319 officially registered patients with mental and behavior disorders associated with the use of psychoactive substances, including 68% (39,664 people) — with the use of opioids. The share of patients who use opioids among all registered drug dependent patients differs depending on the region. The highest share of people with opioid dependence is observed in the Volyn (95.7%), Zhytomyr (85.4%), Ivano-Frankivsk (89.4%), Rivne (81.4%), Ternopil (89%), Khmelnytskyi (85.2%), and Cherkasy (86.8%) oblasts. The lowest — in Donetsk (51%), Zaporizhia (45.6%), Kyiv (45.2%), and Kharkiv (47.2%) oblasts. Such differences in the share of people with opioid dependence in the total number of drug dependent people may be explained by the regional peculiarities of the drug scene and require further study to develop and implement effective HIV and drug abuse prevention, treatment, care and support programs.

As compared to the January 01, 2015, the number of people who are registered as patients with opioid dependence, reduced by 7,804 persons (from 47,468 to 39,664 persons), which is first of all associated with lack of statistics from the areas of military conflict in eastern Ukraine and not to the general improvement of the epidemiologic situation.

As of January 01, 2016, OST services were delivered to 8,512 people, with 7,306 patients receiving methadone tablets, 298 — liquid methadone, and 908 — buprenorphine (Table 13).

Totally, in 2015 there were 3,648 people newly registered as patients abusing psychoactive substances in Ukraine, including 2,279 people — as patients with opioid dependence (62%). The stated group of newly diagnosed patients with opioid dependence is a priority group to be involved into OST programs, prevention programs, diagnostics and treatment of concomitant conditions.

Table 13. Number of OST patients as of January 01, 2016

No	Region	OST drugs	Number of patients	Number of patients with HIV	Number of patients with HBV	Number of patients with HCV	Number of patients on ART
1	2	3	4	5	6	7	8
1	Vinnytsia	Buprenorphine	61	25	3	54	24
		Methadone	301	77	16	199	56
		Total	362	102	19	253	80
2	Volyn	Buprenorphine	22	4	3	9	2
		Methadone	129	46	12	67	17
		Total	151	50	15	76	19
3	Dnipropetrovsk	Buprenorphine	71	34	14	23	20
		Methadone (liquid)	92	49	14	15	18
		Methadone	1,260	728	265	777	440
		Total	1,423	811	293	815	478
4	Donetsk	Buprenorphine	29	11	4	10	5
		Methadone	349	192	84	141	81
		Total	378	203	88	151	86
5	Zhytomyr	Buprenorphine	45	18	25	40	17
		Methadone	283	102	90	172	53
		Total	328	120	115	212	70
6	Zakarpattia	Buprenorphine	11	1	1	11	1
		Methadone	27	1	3	24	0
		Total	38	2	4	35	1
7	Zaporizhia	Buprenorphine	49	25	8	40	23
		Methadone	277	93	57	192	64
		Total	326	118	65	232	87
8	Ivano-Frankivsk	Buprenorphine	46	21	18	19	20
		Methadone	214	86	83	111	66
		Total	260	107	101	130	86

1	2	3	4	5	6	7	8
9	City of Kyiv	Buprenorphine	214	97	26	115	74
		Methadone (liquid)	206	75	34	140	43
		Methadone	409	153	61	263	97
		Total	829	325	121	518	214
10	Kyiv	Buprenorphine	14	8	1	4	6
		Methadone	152	61	37	71	43
		Total	166	69	38	75	49
11	Kirovohrad	Buprenorphine	21	6	2	14	2
		Methadone	266	84	34	116	18
		Total	287	90	36	130	20
12	Luhansk	Buprenorphine	x	x	x	x	x
		Methadone	183	61	14	122	40
		Total	183	61	14	122	40
13	Lviv	Buprenorphine	19	5	0	9	2
		Methadone	240	117	44	96	52
		Total	259	122	44	105	54
14	Mykolaiv	Buprenorphine	57	39	31	30	31
		Methadone	646	282	156	288	197
		Total	703	321	187	318	228
15	Odesa	Buprenorphine	53	35	8	43	32
		Methadone	250	129	62	178	102
		Total	303	164	70	221	134
16	Poltava	Buprenorphine	35	14	0	26	13
		Methadone	568	162	18	315	105
		Total	603	176	18	341	118
17	Rivne	Buprenorphine	16	8	0	6	4
		Methadone	137	55	10	75	28
		Total	153	63	10	81	32
18	Sumy	Buprenorphine	36	17	5	29	10
		Methadone	311	68	29	176	35
		Total	347	85	34	205	45

1	2	3	4	5	6	7	8
19	Ternopil	Buprenorphine	18	3	1	9	3
		Methadone	99	35	6	79	13
		Total	117	38	7	88	16
20	Kharkiv	Buprenorphine	8	2	0	3	2
		Methadone	283	72	25	138	47
		Total	291	74	25	141	49
21	Kherson	Buprenorphine	30	11	22	22	9
		Methadone	218	89	98	101	52
		Total	248	100	120	123	61
22	Khmelnyskyi	Buprenorphine	x	x	x	x	x
		Methadone	319	113	58	99	57
		Total	319	113	58	99	57
23	Cherkasy	Buprenorphine	21	10	0	14	5
		Methadone	168	99	21	126	54
		Total	189	109	21	140	59
24	Chernivtsi	Buprenorphine	19	8	4	15	7
		Methadone	57	13	4	41	9
		Total	76	21	8	56	16
25	Chernihiv	Buprenorphine	13	9	2	9	8
		Methadone	160	103	19	51	51
		Total	173	112	21	60	59
Total		Buprenorphine	908	411	178	554	320
		Methadone (liquid)	298	124	48	155	61
		Methadone	7,306	3,021	1,306	4,018	1,777
		Total	8,512	3,556	1,532	4,727	2,158

Access to the OST program differs greatly in various regions and in general is insufficient. Thus, in Ukraine the average share of people with opioid dependence covered with OST services in the total number of registered patients is 21.5%, as compared to the recommended level of 35%, and varies depending on the region from 44.1% in the Vinnytsia oblast to 6.8% in the Odesa oblast.

The highest share of people with opioid dependence covered with OST services is registered in the following oblasts: Zhytomyr (43.3%), Sumy (41.5%), Poltava (35.5%),

Vinnytsia (44.1%), and Mykolaiv (37.4%). In those oblasts the level of coverage with OST services is at the recommended level or close to it.

The lowest coverage with OST services is registered in the Zaporizhia (11.1%), Volyn (11.2%), Cherkasy (12.2%), Chernihiv (13.2%), and Odesa (6.8%) oblasts. Those oblasts require special attention in terms of OST program scale-up to draw closer to the recommended level of PWID coverage with OST services. Unfortunately, today the need in OST, which is articulated at the regional level, is often not objective and depends on the political will of decision-makers.

Analysis of social and demographic characteristics of OST patients showed that 81% of program participants are male and 19% are female. In the reporting period, the number of births among women from among female project participants was 53.

The question of access of female injecting drug users to OST is still crucial. A wide range of barriers of systematic (lack of understanding of gender peculiarities, limited access of women to policy development and making decisions on the distribution of resources), structural (service delivery approaches and practices), social, cultural, and personal nature restrict the access of females to drug treatment.

When implementing the OST program, there is a need to take into account the special needs of drug dependent women with regard to pregnancy and delivery, child care, reproductive health, etc.

Today, an important component of program development is reinforcement of interaction with obstetric and gynecologic service to inform pregnant women with drug dependence on OST, its advantages in terms of reducing numerous risks for infant health as compared to abuse of illicit drugs, and awareness-raising campaigns for local obstetrician-gynecologists on the basics of the program and on working with drug dependent women. Special attention should be paid to providing unrestricted access of PWID living with HIV to the OST services.

The average age of OST program participants is 37–38 years. The average duration of drug abuse is 16 years. Thus, most program clients are middle-aged individuals who, before their enrolment to the program, had a long history of drug abuse and numerous failed treatment attempts.

Among OST patients, 3,556 (41.7%) have confirmed HIV positive status, 60.6% of them are on ART (2,158 from among the total number of OST patients living with HIV). The data on the coverage of OST patients living with AIDS with ART services (71.1%) raise special concerns. The lowest coverage of OST patients living with AIDS with ART services is registered in the following oblasts: Volyn (42.3%), Dnipropetrovsk (50.2%), Zhytomyr (57.1%), Sumy (45.1%), and Kharkiv (68.8%).

In 2015, 2,158 people dropped out of the program, including those who:

- successfully completed the program — 245 (11.3% of all people who dropped out of the program),

- left the program at their own discretion — 799 (37%),
- were on administrative discharge — 520 (24%),
- died — 368 (17%),
- were brought to criminal responsibility — 226 (10.5%).

As shown by the data obtained, patients most often leave the program at their own discretion, which requires further studies.

As of January 01, 2016, OST services were provided in 172 healthcare institutions, with 10 OST services opened in the current year. Nine Regional AIDS Centers provide OST services: in the Vinnytsia, Zaporizhia, Ivano-Frankivsk, Lviv, Odesa, Rivne, Ternopil, Kharkiv oblasts and Kyiv city. In 2015, an OST site was opened in the Odesa City AIDS Center.

In total, 748 patients receive OST services in Regional AIDS Centers, which is 8.7% of the total number of OST patients. The overwhelming majority of patients (over 40%) receive OST services in drug treatment clinics, which are overloaded and in most cases are not capable of extending their operation. Thus, there is a burning need to open new OST sites, in particular through extending the network of primary health care institutions, providing OST.

In the reporting period, a significant progress was achieved in implemented prescription-based form of OST delivery, organizing home care for patients, who are not able to visit healthcare institutions on a daily basis. As of January 01, 2016, 334 patients in 14 oblasts of the country receive drugs based on prescriptions. In the reporting period, home care was arranged for 155 patients.

In 5 regions of Ukraine (Vinnytsia, Zhytomyr, Lviv, Sumy oblasts,

Kyiv city), patients have an opportunity to buy OST drugs at their own expense. As of January 01, 2016, the total of 93 patients (in 5 oblasts) use the above-mentioned opportunity.

For the purpose of further scale-up of access to the OST program, improvement of service quality, UCDC together with the Department of Pharmaceutical Activities and Quality of Pharmaceutical Products, initiated introduction of amendments to the Order of the Ministry of Health of Ukraine as of July 19, 2005 (no. 360) "On Approval of the Rules of Writing Out Prescriptions and Requests for Medicines and Healthcare Products," Regulations on Dispensing Medicines and Healthcare Products in Pharmacies and Their Structural Units, Instruction on the Procedure of Storage, Registration and Disposal of Prescription Forms and Requests in terms of permission of prescription-based delivery of methadone in tablets, determining the maximum permissible quantity per one prescription. Such amendments were introduced in line with the Order of the Ministry of Health of Ukraine as of August 07, 2015 (no. 496) "On

Introduction of Amendments to the Rules of Writing Out Prescriptions and Requests for Medicines and Healthcare Products.”

Besides, the Order of the Ministry of Health of Ukraine as of December 17, 2015 (no. 863) “On Introduction of Amendments to the Order of the Ministry of Health of Ukraine as of March 27, 2012 (no. 200)” was developed and approved. The Order was registered with the Ministry of Justice of Ukraine as of January 13, 2016 (no. 45/28175, 46/28176, 47/28177, 48/28178).

The following key amendments were introduced by the above-mentioned Order:

- commission to determine the grounds for prescription of the OST drugs eliminated with provision of the right to prescribe OST drugs to drug treatment doctors;
- opportunity granted to procure OST drugs with funds from different sources, i.e. GF, government budget, patients’ funds, donations, etc.;
- opportunity provided to distribute OST drugs for independent administration outside HCI either using prescriptions or from the HCI directly for stable patients and patients whose health state does not allow them to attend the OST site on a daily basis;
- set forth methods of control over the intended use of OST drugs for patients who receive drugs for unobserved administration;
- eliminated the humiliating method of control of OST drugs administration through examination of the patient’s oral cavity by healthcare workers;
- improved mechanism to ensure uninterrupted treatment of program clients in case of planned (emergency) hospital admission, business travel, vacation, etc.;
- duties of doctors complemented with the task to carry out regular urine tests among patients to determine the use of any other psychoactive substances apart from those prescribed by the doctor, with revision of the treatment approach (instead of exclusion from the program as in the previous version of the Order) in case of positive test results;
- use of other psychoactive substances excluded from the reasons for patients’ exclusion from the program;
- should a patient be excluded from the program, he/she should be provided with a detoxification course on a mandatory basis.

Approval of such Orders is in line with modern international approaches and WHO recommendations on ensuring balanced monitoring over the controlled drugs and their accessibility for medical purposes, to improve access to treatment and ensure high level of adherence to drugs among patients.

Section 10. Prevention of Mother-to-Child Transmission of HIV in Ukraine

The Global Plan Towards the Elimination of New HIV Infections among Children by 2015 became one of the priorities of public health systems of all countries of the world. In the recent decade, progress in reducing the rate of mother-to-child transmission of HIV (MTCT) to 2–1% was observed in many countries of Europe and Central Asia.

Within achievement of the global targets in fighting HIV/AIDS, WHO continues supporting the countries of WHO European region in their efforts to eliminate mother-to-child transmission of HIV till 2030. The elimination targets are set forth as less than 2% of HIV transmission in infants without breastfeeding and less than 5% — in infants with breastfeeding.

In June 2016, Belarus, Armenia, Moldova and Thailand following Cuba (in 2015) received official WHO certificates to confirm their success in preventing new HIV infections among children. Thailand became the first country with most intensive epidemic (450,000 PLHIV) to obtain such a certificate, showing that HIV elimination is possible only upon condition of general access to HIV prevention, treatment and care services to all people and protection of their rights.

Today in Ukraine there are also big achievements in the prevention of mother-to-child transmission of HIV thanks to implementation of the relevant program interventions. At the legislative level, the state guarantees provision of unrestricted access to prevention of mother-to-child transmission of HIV from HIV-positive mothers to their newborn babies. Starting from 2003, coverage with voluntary HIV testing among pregnant women constantly exceeds 97%. Coverage with preventive antiretroviral treatment among women who were diagnosed with HIV during their pregnancy increased from 9% in 1999 to 95% in 2015. ***Such activities resulted in significant — almost 6-fold — reduction in the rate of mother-to-child transmission: from 27.8% in 2001 to 3.91% in 2013.***

However, target MTCT value within the National Targeted Social Program for Countering HIV/AIDS in 2014–2018 is 1%. To achieve this target, a number of obstacles at all level of healthcare system, community and personality are to be overcome, such as lack of the effective public health program; issues related to government procedures to procure medicines and healthcare products; budget deficit on the background of humanitarian crisis and military conflict in eastern Ukraine; insufficient coverage of women of reproductive age, including those living with HIV, with family planning services; stigmatization from the side of healthcare workers towards women living with HIV and socially marginalized women as well as weak cross-cutting integration of services in the areas of health care, education, social policy, justice and migration.

An important step in achievement of international and national targets in the area of prevention of mother-to-child transmission of HIV (PMTCT) was approval of medical

and technological documents with the Order of the Ministry of Health of Ukraine as of May 16, 2016 (no. 449):

- Adapted evidence-based clinical guidelines “Prevention of Mother-to-Child Transmission of HIV” (GST2016-449-1a);
- Unified Clinical Protocol of Primary, Secondary (Specialized) and Tertiary (Highly Specialized) Medical Care “Prevention of Mother-to-Child Transmission of HIV” (GST2016-449-1u).

Updated PMTCT regulations take into account today’s context of the development of the HIV epidemic in Ukraine and is based on the cutting-edge knowledge, evidence-based data, modern recommendations on improvement of the clinical mechanisms and implementation of the effective methods to eliminate new HIV infections in infants born to HIV-positive women. In Ukraine, the main PMTCT strategy is defined as B+ option. This approach stipulates that all pregnant women living with HIV, irrespective of their CD4 count or clinical stage of HIV, receive three-component ART as preventive measure not only during pregnancy but also throughout life as an additional method used to prevent further transmission of HIV as well as ART.

According to the recent data, in Ukraine the number of children with confirmed HIV diagnoses was 111 persons from among the total amount of children born to HIV-positive women (cohort of 2013 reporting year and those who went through the complete cycle of diagnostic procedures in line with regulations of the Ministry of Health of Ukraine, i.e. 2,837 children with the exception of those, whose status after 18 months of follow-up was at the stage of confirmation, those who died with unknown HIV status and who were born dead). The greatest number of such children were born in the Dnipropetrovsk (28), Odesa (18), Donetsk (10), Mykolaiv (7) oblasts and in the city of Kyiv (6), i.e., areas with high levels of HIV prevalence in key populations.

In 2013, the rate of mother-to-child transmission was higher than the national average (3,91%) in the Kirovohrad (8.9%), Dnipropetrovsk (5.9%), Kyiv (5.8%), Luhansk (5.1%), Odesa (4.9%), Cherkasy (4.3%), Chernihiv (4.1%), Donetsk (4.0%), and Ivano-Frankivsk (4.0%) oblasts. Such situation requires additional arrangements to ensure prevention of vertical HIV transmission using comprehensive approach (Figure 14, table 22 Annex 1).

Generally, it should be noted that the rate of vertical HIV transmission considerably depends on the use of various combinations of the PMTCT program. With provision of full course of ARV prevention to HIV-positive pregnant women and their children and exclusion of breastfeeding, in 2013 MTCT in Ukraine was reduced to 1.5%. If an HIV-positive pregnant woman receives ARV prevention only during childbirth, MTCT is 16.0%, with no such prevention — 23.8%.

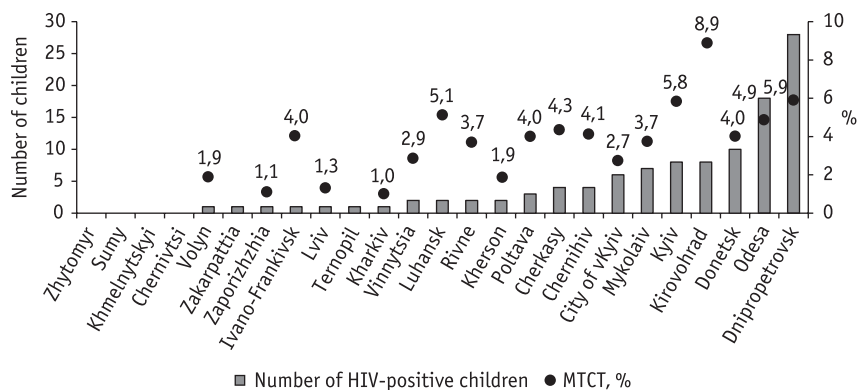


Figure 14. Number of HIV-infected children born to HIV-positive women and MTCT in 2013 in regions of Ukraine

As before, the PWID group continues playing an important role in preventing mother-to-child transmission of HIV. Current analysis of the state of PMTCT shows that in the group of drug dependent pregnant women the level of HIV transmission to newborns is much higher than the average national level: in 2013 it was as high as 6.9% as compared to the national rate of 3.9%. It defines the need to apply an integrated approach to implementation of prevention programs among pregnant women from among this risk group, which includes, apart from targeted medical interventions, improvement of social support and harm reduction interventions, first of all opioid substitution treatment programs.

To identify and refer drug dependent pregnant women to relevant service facilities, where they will be provided with healthcare and social services, within the new UCPMC of PMTCT into the practice of healthcare institutions, who ensure antenatal care, the ASSIST tool was introduced, which is a questionnaire for screening of pregnant women for narcotic drugs abuse. Introduction of the ASSIST tool will facilitate improvement of PMTCT measures among pregnant women with dependencies, including PWID, and, as a result, achievement of the international targets in elimination of mother-to-child transmission of HIV on a national scale.

An average MTCT rate was calculated to get a more accurate estimate of the level of mother-to-child transmission, especially in regions with low levels of observation, where a clear trend may not be tracked in the long period. There is a downward trend in the average MTCT rate in Ukraine — 4.44% (2009–2011), 4.36% (2010–2012), 4.11% (2011–2013). However, in 2013 the MTCT rate remained high in the Vinnitsia (6.8%), Kirovohrad (6.7%), Dnipropetrovsk (5.6%), Donetsk (5.5%), Odesa (5.0%), Sumy (4.6%), Chernihiv (4.3%) and Kyiv (4.3%) oblasts.

Situation with PMTCT program implementation in Ukraine in 2015

In 2015, PMTCT program monitoring and evaluation indicators remained rather high both in Ukraine in general and in its regions (Figure 15, Table 23 in Annex 1). However, there was a downward trend in some indicators in 2015 as compared to the previous years. It may be explained, first of all, by the lack of possibility for conducting and obtaining results for laboratory studies due to the delay in government financing to supply test kits and consumable materials to provide planned serum diagnostics of HIV in pregnant women as well as early and serum diagnostics of HIV in children born to HIV-positive mothers. Besides, the national-level 2015 statistics did not include data of AR Crimea, the city of Sevastopol, and areas of military conflict in eastern Ukraine, which are the areas with high levels of HIV prevalence among pregnant women.

Provision of obstetric facilities with rapid tests allows covering almost 100% of pregnant women in Ukraine with HIV testing. In 2015, HIV counseling and testing services were provided to 97.6% of pregnant women (*99.3% in 2014, 99.2% in 2013*).

In 2015, 2,962 HIV-positive women gave birth to children (*3,573 in 2014, 3,886 in 2013*), which is 0.7% of the total number of births in Ukraine. 218 HIV-positive women had their pregnancies interrupted (*284 in 2014, 435 in 2013*).

In 2015, ARV prevention services in Ukraine were provided to 95.0% of HIV-positive pregnant women (*95.6% in 2014, 96.2% in 2013*) and 97.3% of children born to HIV-positive women (*97.2% in 2014, 98.7% in 2013*). Almost all babies were on formula feeding.

In 2015, the share of HIV-positive pregnant women who used injecting drugs and received ARVs to reduce the risk of mother-to-child transmission of HIV was 92.3% (*89.3% in 2014, 90.7% in 2013*).

The use of triple ARV prevention in pregnant women is growing in Ukraine. The share of HIV-positive pregnant women, who received prevention with three ARVs in 2015 was 96% (*94.6% in 2014, 90.4% in 2013*), including 46.8% women who received ART for health reasons (*47.3% in 2014, 40.8% in 2013*) and 53% women who continued their ART after childbirth (*52% in 2014, 47% in 2013*).

In 2015, almost half of HIV-positive pregnant women (48.2%) were aware of their status before pregnancy. From among women, who learned about their HIV-positive status during their visits to maternity clinics, HIV diagnosis was established to 32.1% women at less than 12 weeks of pregnancy, to 45.5% — at 12–26 weeks, to 16.0% — after 26 weeks, to 6.4% — during or after delivery.

Thus, 22.4% (*18.1% in 2014, 16.2% in 2013*) women with newly diagnosed HIV learned about their status only in the third trimester of pregnancy or did not know about it during pregnancy, so did not receive a package of healthcare services to prevent vertical HIV transmission and had a high risk of transmitting HIV to their babies.

In line with current strategy of preventing vertical HIV transmission, elective Caesarean section is one of the effective PMTCT methods. In 2013, 32.9% HIV-positive women gave birth to children using elective Caesarean section (*31% in 2014 and in 2013*).

Due to the shortage of consumable materials used for HIV diagnostics, the rate of coverage with early DNA PCR diagnostics of children born to HIV-positive women in the recent two years remains at the level of 82–84% as compared to 94% in 2013.

Within the updated strategy to prevent mother-to-child transmission of HIV, WHO considers the wide use of the dried blood spot (DBS) method to diagnose HIV in children born to HIV-positive women as one of the main techniques to prevent vertical HIV transmission. Currently, the use of the DBS method is justified and allows detecting HIV in newborns in the first 48 hours during their stay in obstetric facilities, which ensures timely prescription of ART to the babies and their further medical supervision.

Today, the DBS method is part of the standard health care plan in Ukraine, which is supported by appropriate regulatory provisions. At the stage of the DBS technology being introduced in Ukraine, the Order of the Ministry of Health of Ukraine as of August 07, 2015 (no. 497) defined pilot regions, where the greatest number of HIV-positive children born to HIV-positive women are registered — the Dnipropetrovsk, Mykolaiv, Odesa oblasts, and the city of Kyiv. The results of this project will give an opportunity to gather and analyze the experience, which will allow scaling up the use of DBS technology all over Ukraine. The pilot project is implemented with support from the United Nations Children's Fund (UNICEF).

The urgency of implementing the method of DBS-based HIV diagnostics in newborns is reinforced by the current humanitarian crisis in the country. Displacement of people, including pregnant women, from the military conflict areas in the Donetsk and Luhansk oblasts and weakened linkages of displaced women with healthcare institutions lead to untimely detection of HIV in pregnant women and an increased risk of virus transmission to newborns.

There is much to be done to reduce the level of vertical HIV transmission in Ukraine to the level of European countries — 2–1%. Achievement of the international targets requires solving a number of urgent problems both at the national and regional levels, which will ensure universal access to PMTCT for all HIV-positive pregnant women, first of all for women from vulnerable and socially isolated populations.

Besides, today it is not possible to effectively impact the problem of complete elimination of mother-to-child transmission of HIV in Ukraine without new alternative PMTCT interventions, i.e., integrated support to women with HIV and other STIs within the comprehensive package of services aimed at protection of reproductive health

and human rights-based family planning, improvement of the level of training of maternity and childcare HCI staff in PMTCT and feasible system for monitoring and evaluation of PMTCT interventions.

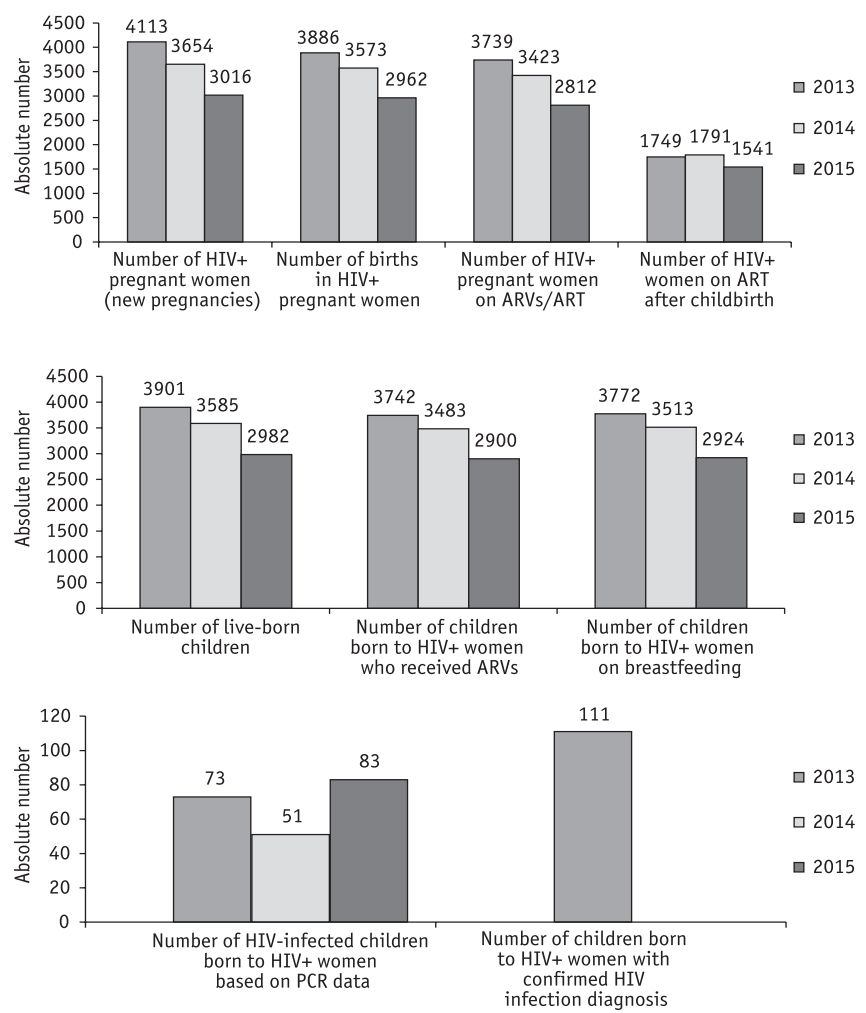


Figure 15. Key indicators of the PMTCT program in 2013, 2014, 2015 (not including data from temporarily occupied territories of AR Crimea, Sevastopol since 2014 and the military conflict areas in eastern Ukraine since 2015)

Section 11. Analysis of the Activities of Regional AIDS Centers' Laboratory Service

Based on the passport forms provided by chief doctors of regional AIDS centers, in 2015 in Ukraine there were 112 laboratories, which were doing screening surveys to detect serum markers of HIV, including:

- 26 laboratories of oblast and city AIDS centers;
- 34 laboratories of oblast and city blood centers and blood donor facilities;
- 6 laboratories of laboratory centers of the State Sanitary and Epidemiological Service of Ukraine;
- 3 laboratories of STI treatment clinics;
- 17 laboratories of departmental institutions;
- 5 laboratories of the institutes of the National Academy of Medical Sciences of Ukraine;
- 20 laboratories of oblast, district, and city hospitals;
- 1 private INVITRO laboratory, Dnipropetrovsk.

Changes in screening laboratories in 2015:

- 14 laboratories (6 in Donetsk oblast and 8 in Luhansk oblast) are located in the areas not controlled by the Ukrainian Government;
- 2 new laboratories joined: clinical immunology laboratory of the National Institute of Phthysiology and Pulmonology named after F.H. Yanovsky of the NAMS of Ukraine, private INVITRO laboratory, Dnipropetrovsk.

Among 112 laboratories, 111 are certified and have a right to perform measurements to detect serum HIV markers; the laboratory of AIDS and AIDS-associated diseases prevention in the blood service — Institute of Hematology and Transfusion Medicine — failed to obtain a certificate.

In 2015, a unified phase of the fourth round of interlaboratory comparison program “Antibodies to HIV” (external assessment of the quality of HIV diagnostics) was conducted with participation of 108 laboratories. All 26 laboratories of oblast and city AIDS centers as well as 34 laboratories of the blood service facilities got satisfactory results (100%).

Material and Logistics Support of Laboratories

The list of laboratory equipment which should be supplied for laboratories of the AIDS centers is approved with the Order of the Ministry of Health of Ukraine as of July

19, 2010 (no. 590) “On Approval of Recommended Lists of Equipment with Medical Goods of Specialized Healthcare Institutions and Structural Units of Healthcare Institutions Performing Clinical and Diagnostic Assays and Providing Treatment and Prevention Support to Patients with HIV/AIDS”.

It should be noted that since 2008 no funding was allocated to procure laboratory equipment for the laboratories of regional AIDS centers to perform the activities stipulated in the National HIV/AIDS Programs (2009–2013, 2014–2018), which resulted in technical wear and tear of machines and devices, lack of possibility to renew the stock of equipment and procure new types of devices to extend the range of laboratory assays in order to scale up access of people living with HIV and AIDS to high-quality health care. Despite this fact, within the international technical support project 2692-02, Support of Monitoring and Evaluation System of the Ministry of Health of Ukraine in 2014, laboratory equipment was procured for 21 laboratories of regional AIDS centers — biochemical analyzers (13 devices), ELISA kits (9 pieces), flow laser cytometers (3 devices). As of January 01, 2016 there is an urgent need to procure new measuring devices and auxiliary equipment for HIV diagnostics in laboratories of healthcare institutions in the following oblasts:

- *Vinnysia oblast* — oblast blood transfusion center (reader, year of manufacture (hereinafter — YOM) 1996 and 2004), oblast laboratory center of Sanitary and Epidemiologic Station (thermoshaker not available), Military Clinical Center of the Central Region (ELISA reader YOM 2003);
- *Volyn oblast* — Volodymyr-Volynskyi blood transfusion station (spectrophotometer YOM 2002, dosing devices YOM 2000);
- *Dnipropetrovsk oblast* — Dnipropetrovsk City AIDS Center (reader, thermostat YOM 2000), Kryvyi Rih STI treatment clinic (ELISA kit YOM 2004), Dnipropetrovsk railway clinical hospital (ELISA kit YOM 1991–1998), Specialized Multi-Field Hospital No. 1 of the Ministry of Health of Ukraine (ELISA kit YOM 2002, thermoshaker not available), Novomoskovsk Central District Hospital (reader YOM 2002, thermoshaker not available), Nikopol City Hospital No. 4 (thermoshaker not available);
- *Zhytomyr oblast* — Novohrad-Volynskyi TMA (ELISA equipment YOM 1997);
- *Zakarpattia oblast* — department for prevention and laboratory diagnostics of AIDS and infections transmitted through blood transfusion of the oblast blood transfusion center (reader-spectrophotometer YOM 2004, thermoshakers YOM 1997–1999);
- *Zaporizhia oblast* — Melitopol blood transfusion center (reader YOM 2005), Berdiansk blood transfusion center (thermoshaker YOM 1995 p.b.), Tokmak blood transfusion center (thermoshaker not available);

- *Ivano-Frankivsk oblast* — Kolomyia central district hospital (reader-spectrophotometer YOM 2001, thermoshaker and washer not available);
- *Kyiv oblast* — Slavutych medical sanitary station no. 5 (ELISA reader YOM 1987, dosing devices YOM 1992, thermoshaker and washer not available);
- *Mykolaiv oblast* — Pervomaysk central city hospital (washer in the ELISA kit not available);
- *Lviv oblast* — Military and medical clinical center of the Western region (spectrophotometer YOM 2005), Lviv unit of the railway laboratory center of the State Sanitary Epidemiological Service of Ukraine (spectrophotometer YOM 1993);
- *Odesa oblast* — Odesa oblast laboratory center of the State Sanitary Epidemiological Service of Ukraine (thermoshaker, washer, dosing devices YOM 2000–2005), Izmail Inter-District Laboratory (reader YOM 1997, thermoshaker not available), Liubashivka Inter-District Laboratory (ELISA kit YOM 1995), Sarata Inter-District Laboratory (reader YOM 1997), Bilhorod Dnistrovskiy Inter-District Laboratory (thermoshaker not available);
- *Poltava oblast* — AIDS and Hepatitis Diagnostics Unit of Lubny Blood Transfusion Station (reader YOM 1998), Lohvytsia Central District Hospital (washer, thermoshaker not available), Komsomolsk City Hospital (thermoshaker not available);
- *Kharkiv oblast* — Polyclinic of Military Healthcare Institution of the Main Department of the Ministry of Internal Affairs of Ukraine (ELISA equipment YOM 1993), Railway Clinical Hospital (ELISA equipment YOM 2000, thermoshaker not available);
- *Chernivtsi oblast* — Oblast Center of Blood Transfusion Service (ELISA equipment YOM 2004);
- *Kyiv* — Kyiv City Clinical STI Treatment Hospital (ELISA equipment YOM 1999, washer not available), Southwestern Railway Blood Transfusion Station (ELISA equipment YOM 2003, thermoshaker not available).

Thus, 33 laboratories providing screening examinations for HIV in the country are to be renovated (which is 29.5% of their total number).

It should be noted that this list also includes 9 laboratories of healthcare institutions of the blood transfusion service, which is a source of serious concerns as hemotransmissible infections in blood donors have to be diagnosed either with incomplete kits of equipment or with equipment operating for over 10 years.

Such situation is unacceptable, taking into account the fact that the safety of donor blood and its components is an important aspect of the national security, but considering

improper financial and technical support of blood transfusion centers it is almost not possible to guarantee the quality and the accuracy of the results obtained.

Human Resources

Based on the passport forms provided by the regions, the human capacity of the laboratories of oblast and city AIDS centers was analyzed. In general, as compared to 2014, the number of specialists working in those healthcare facilities was reduced by 65 persons as 4 laboratories remained in the areas not controlled by the Government of Ukraine (including 2 laboratories in Donetsk oblast and 2 laboratories in Luhansk oblast).

In 2015, 128 officers with higher education were employed with laboratories of oblast and city AIDS centers in line with their functional duties (Table 14).

Table 14. Human Capacity of Oblast and City AIDS Centers' Laboratories as of January 01, 2016

Profile	Number of people	Percentage of the total number
Doctors — laboratory scientists — immunologists (biologists)	10	7.8
Doctors — laboratory scientists — virologists (microbiologists)	33	25.8
Doctors — laboratory scientists (biologists) (clinical laboratory diagnostics)	72	56.3
Doctors — laboratory scientists (biologists) (clinical chemistry)	3	2.3
Biologists (no specialization)	4	3.1
Bacteriologists	6	4.7
Total	128	100

The data presented show that most (56.3%) of the officers with higher education are specialists in clinical laboratory diagnostics. Comparison of data on the specialists working in AIDS centers demonstrates significant disproportion in staff specialization. Taking into account that in the nearest years there will be a rapidly growing need in serum, immunology, molecular and genetic assays, there should be a focus on training laboratory specialists in those areas.

Analysis of human resources of the laboratories performing molecular and genetic assays showed that four AIDS centers (Dnipropetrovsk and Rivne Oblast AIDS Centers,

Kyiv and Mariupol City AIDS Centers) violate requirements of the Order of the Ministry of Health of Ukraine as of January 24, 2008 (no. 26) "On Approval of Health and Safety Rules and Regulations "Organizing Operation of Laboratories when Testing Materials Containing Biological Pathogenic Agents of I–IV Risk Groups with Molecular and Genetic Methods", i.e. the above-mentioned institutions are not adequately staffed with specialists of proper qualification to perform such assays.

In 2015, there were 180 laboratory specialists trained in professional vocational schools working in oblast and city AIDS centers (laboratory scientists and medical laboratory assistants), including 136 officers who were assigned professional grades (75.6%) and 44 officers who were not assigned professional grades (24.4%).

Among laboratory doctors having received training in such subjects as Laboratory Immunology, Virology, Bacteriology, Clinical Laboratory Diagnostics, 87 specialists were assigned qualification grades (68%):

- higher qualification grade — 44 specialists,
- first qualification grade — 15 specialists,
- second qualification grade — 28 specialists.

Laboratory Assays

Confirmatory assays to verify the presence of HIV antibodies should be performed in all oblasts. Thus, laboratories of 23 administrative centers of Ukraine, apart from Khmelnytskyi and Kyiv oblasts, already offer HIV infection verification services. In January 2016, a request was filed with the Ministry of Health of Ukraine on including Kyiv and Khmelnytskyi Oblast AIDS Centers to the list of institutions performing HIV confirmatory assays.

Apart from HIV diagnostics, to ensure laboratory follow-up of HIV infection and monitoring of ART effectiveness, the laboratories of AIDS centers perform other types of assays, including the following main assays:

- diagnostics of opportunistic infections, viral hepatitis and STIs
- general clinical, hematological, biochemical assays
- bacteriological assays
- immunological assays (CD4 count)
- virological assays (defining VL, proviral DNA)

To perform immunological assays, 24 laboratories of HCIs are equipped with flow cytometers, in particular in AIDS centers; to perform virological assays, 16 laboratories of AIDS centers are properly equipped; 6 laboratories of AIDS centers are equipped to

perform assays to detect proviral DNA of HIV-1 for early diagnostics of HIV in children born to HIV-positive women.

Besides, UCDC reference laboratory is equipped with devices to detect mutations of HIV resistance to ARVs in patients with virological failures.

To bring CD4 count services closer to the members of MARPs, ensure their early registration with healthcare services, scale up access to ART in line with decentralization of healthcare services, in January 2015 healthcare institutions and institutions of the penitentiary system of Ukraine were provided with 30 portable Alere PIMA analyzers procured with financial support of the Global Fund. Out of them, 18 devices were distributed among oblast, city AIDS centers and UCDC reference laboratory, 8 — among other HCIs (specialized clinics, confidential counseling rooms), 4 — among institutions of the penitentiary system.

UCDC assessed the effectiveness of using portable Alere PIMA analyzers in 2015. During this time, 11,125 individuals were tested, including:

- 2,770 individuals who were not under MMFU at the time of testing (24.9%);
- 8,355 individuals who were under MMFU at the time of testing (75.1%);
- 2,450 individuals who received ART (29.3% of the total number of tested individuals under MMFU).

After CD4 count, only 62.3% of the individuals tested were registered for MMFU. Based on the data for Quarters 3–4, 2015, 60% of HIV-positive individuals tested in AIDS centers were registered for MMFU, while after testing in other HCIs using portable analyzers — 74% of such patients.

Based on the 2015 results, among the tested individuals who were not under MMFU at the time of testing 59% of patients had their CD4 counts at less than 350 cells/mcl, which demonstrates late diagnostics of HIV infection (3–4 phase of the disease) and the need to initiate the patient of ART. However, only 23% of all individuals tested in Quarters 3–4, 2015 started receiving ART (data for Quarters 1–2 were not collected).

In 2015, UCDC reference laboratory with support of Alliance for Public Health, American Society for Microbiology, and US CDC implemented a program aimed at external evaluation of the quality of CD4 count assays using laser flow cytometry technique and portable Alere PIMA analyzers, with participation of 44 laboratories (in 29 oblast and city AIDS centers, 11 other HCIs, 4 institutions of the penitentiary service). The level of satisfactory results was 90.6%, in particular in laboratories of AIDS centers — 94.1% of correct results, other HCIs — 100%, penitentiary service — 50%.

Information on HIV diagnostics and laboratory support of the patients registered with HCIs providing medical monitoring and follow-up of people with HIV is presented in tables 30–36 in Annex 1.

Section 12. Recommendations on Strengthening the AIDS Service Based on the Annual Reports Results

To comply with statutory provisions and objectives of UCDC on providing methodological guidance and general monitoring over the activities of the Regional AIDS Center, approved with the Order of the Ministry of Health of Ukraine as of December 12, 2012 (no. 277-o) and to meet the requirements of the Order of the Ministry of Health of Ukraine as of October 21, 2015 (no. 689) "On Submission of 2015 Statistics Reports by Health Care Institutions and Facilities of Ukraine and Formation of Working Groups to Accept the Reports", UCDC officers on January 19–29, 2015 organized acceptance of reports and restricted information based on the results of activities in 2015 from 25 Regional AIDS Centers (*with no data received from the Crimea, city of Sevastopol and the military conflict areas in eastern Ukraine*).

Based on the work performed, the factors affecting HIV prevention measures in each of the regions were identified; overall recommendations were generated to scale up the development of AIDS services at the national and regional levels.

National Level

The Ukrainian Center for Socially Dangerous Disease Control of the Ministry of Health of Ukraine recommended to:

- Develop a single legal document regulating the reporting and feedback procedure between NGOs/MC/MOS, providing VCT services with the help of RDTs and institutions of the AIDS service, to form a clear system of referral for people with positive results of HIV testing and their timely registration for MMFU.
- Develop a draft Order of the Ministry of Health of Ukraine "On Monitoring of the HIV Epidemic Situation" in line with the requirements of international standards and national needs.
- Review the Order of the Ministry of Health of Ukraine as of March 12, 2012 (no. 182) "On Approval of the Forms of Primary Accounting Records, Reports to Monitor Treatment of HIV Patients and Guidelines to Fill Them In" in order to improve reporting on provision of health care to HIV patients and submit it for approval to the Ministry of Health of Ukraine.
- Consider revision of the Order of the Ministry of Health of Ukraine as of May 11, 2010 (no. 388) due to its complexity and low level of data presentation.
- Facilitate development of a single electronic system of epidemiological and clinical monitoring of HIV prevalence, an electronic system to account for positive and negative results of SEM to ensure the rational use of resources.

- Continue working with the heads of TBCS, SPSU in order to develop cooperation among the services to improve the system of verification and exchange of data in the area of ES over HIV/AIDS, referral of HIV-positive patients in healthcare institutions.
- Continue provision of organizational and methodological support in monitoring of the HIV epidemic through monitoring visits to the Regional AIDS Centers.
- Organize training of the specialists of Regional AIDS Centers on the issues of improving ES over HIV/AIDS in accordance with international standards and national needs.
- Make efforts to ensure sustainable coverage of the country needs to procure laboratory equipment and medical goods required for quality and reliable performance of HIV assays.
- Develop training programs and workshops for specialists working in the area of HIV/AIDS to improve cooperation between governmental agencies and NGOs on referral of patients to HCIs in order to register them for MMFU and on ensuring biological safety when working with potentially infected biological materials.
- Improve the mechanisms of interagency and cross-sectoral coordination in management of the quality of laboratory assays in the area of HIV/AIDS.

Regional Level:

I. Health Care Departments of Regional (Municipal) Government Administrations

- Facilitate smooth and improved interaction between regional-level AIDS services and other services focusing on different fields (TB and lung disease, drug addictions, dermatology and venereal diseases, transfusion medicine, postmortem examination, etc.), the non-government sector, the penitentiary system by developing appropriate regional-level regulatory documentation, holding conferences and project meetings on quality improvement and completeness of regional data on HIV/AIDS, timeliness of linkage to monitoring and follow-up services for HIV-infected persons in the region.
- Monitor accuracy and objective assessment of data on the HIV epidemic in the region.
- Ensure appropriate funding to cover costs related to the purchase of test systems for MARPs (PWIDs, SWs, MSM, sexual partners of individuals from high-risk populations, patients with STIs).

- Facilitate the integration of effective blood-donor selection techniques into blood donor programs with a view to screening out blood donors who are at risk of HIV infection due to their behaviors.
- Urgently report all incidents related to transmission of HIV through donated blood components or products to Ukraine's MoH, as required by applicable regulations.
- Strengthen the performance of regional M&E groups. Provide appropriate training for specialists involved in developing regional M&E systems.
- Implement large-scale regional-level supervision programs on monitoring and evaluation. Provide additional education on C&T topics for HCI specialists involved in HIV C&T.
- Ensure coordination and interdepartmental interaction between HCIs, AIDS centers, TB treatment and control facilities and other government offices and agencies responsible for medical and psychosocial support for OST clients. Establish collaboration with regional-level NGOs, facilitate integration of OST client services with a view to further developing OST programs in the oblasts, scale up effective OST programs for patients with opiate dependence.
- Facilitate further decentralization of ART efforts at the secondary health care level and their integration into appropriate services focusing on TB and drug addiction problems.
- Exercise continuous control to ensure that supplies of ARVs are well managed and dispensed only for the purposes intended. Make timely arrangements (at least 4–6 months in advance, for the transfer of ARVs when it is impossible to ensure that they are used before expiration, or if their available supplies are not sufficient to cover existing needs) and inform UCDC in good time of ARV re-distribution requirements accordingly.
- With the purpose of improving access to ART for MARPs, given the shift to a decentralized approach to medical care services, establish effective communications and organizational linkages between HCIs, in cases where CD4 cell count tests are performed using Alere Pima™ portable analyzers, and NGOs, including MCs.
- Ensure consistent improvement in professional training for specialists involved in HIV/AIDS programs by arranging their participation in training workshops and seminars and in-house apprenticeship programs. Develop effective models of collaboration with institutions that deliver pre- and post-graduate education for physicians and nursing personnel.

II. Regional Centers for Prevention and Control of AIDS

Epidemiological Surveillance

- Step up efforts to verify data reported to the national level and improve data quality (*all regional AIDS centers*);
- Ensure compliance with regulatory policies and requirements on data protection regarding HIV test results, maintain strict standards for data confidentiality and storage, and meet appropriate medical confidentiality standards to prevent disclosure of sensitive data (*all regional AIDS centers*);
- Increase the share of HIV test takers from MARPs (PWIDs, SWs, MSM, persons who engage in risky sexual behavior, and those with STIs) in the overall number of tests being funded through local governments, as said populations are playing the definitive role in shaping the future development of the HIV epidemic (*regional AIDS centers in the Vinnytsia, Volyn, Zakarpattia, Kyiv, Kirovohrad, Poltava, Rivne, Ternopil, Chernivtsi oblasts*);
- Undertake efforts to engage with individuals who have had sexual intercourse with HIV-infected partners and have them tested for HIV for preventive purposes (*all regional AIDS centers*). Pay close attention to high HIV prevalence among patients classified as Code 101, compared to the average HIV prevalence rate across the country (over 14.6%). Conduct analysis of subregional-level data and step up efforts to prevent sexual transmission of HIV (*regional AIDS centers in the Dnipropetrovsk, Donetsk, Zakarpattia, Kirovohrad, Lviv, Odesa, Rivne, Ternopil, Chernihiv oblasts, and the city of Kyiv*);
- Facilitate the integration of effective blood-donor selection techniques into blood donor programs with a view to screening out blood donors who are at risk of HIV infection due to their behaviors (*all regional AIDS centers*). Conduct an analysis of high regional HIV prevalence among primary blood donors and related contributing components (Code 108.1), as well as possible reasons that account for appropriate prevalence rates being above average across the country (over 0.14%) (*regional AIDS centers in the Dnipropetrovsk, Donetsk, Zhytomyr, Kirovohrad, Mykolaiv, Odesa, Kherson, Cherkasy, and Chernihiv oblasts*);
- In the case of HIV infection through donated blood components or products, forward to UCDC a copy of the emergency incident report submitted to Ukraine's MoH. Investigate all cases involving blood donors from among regional staff members being tested positive for HIV, strengthen control over the disposal of quarantined and potentially HIV-contaminated blood plasma (*all regional AIDS centers*);
- Examine into and investigate all cases of pregnant women being found HIV-positive after a re-test (Code 109.2) and strengthen preventive measures

in collaboration with the Obstetrics and Gynecology Service to prevent HIV infection among women during pregnancy (*all regional AIDS centers*);

- Initiate arrangements for the conduct of HIV tests for medical personnel involved in reported incidents of occupational exposure to HIV infection. Ensure that all such incidents are duly recorded and reported, and monitor healthcare workers who have been in contact with potentially contaminated substances in the course of their professional duties, as required by the provisions set forth in the Order of Ukraine's MoH as of May 22, 2013 (no. № 410) (*all regional AIDS centers*);
- Improve operational performance and ensure that all new HIV infections are duly recorded and reported in full. Take steps to increase coverage of HIV-positive persons and linkage to health care services (at least 70%) through high-quality HIV C&T, effective referral of HIV-positive clients from NGOs/MCs/MOSs to AIDS-service facilities (*regional AIDS centers located in the Dnipropetrovsk, Donetsk, Ivano-Frankivsk, Kirovohrad, Lviv, Kharkiv, Khmelnytskyi, Chernivtsi oblasts, and the city of Kyiv*);
- Take steps to ensure that HIV-infected persons are registered with health care services for monitoring and follow-up in a timely manner, and prevent late diagnosis of HIV infection. Focus attention on the high percentage of persons diagnosed with Stages III–IV of HIV infection among new HIV infections (over 50%) (*regional AIDS centers located in the Dnipropetrovsk, Ivano-Frankivsk, Kyiv, and Odesa oblasts*);
- Step up efforts related to and improve the quality of medical monitoring and follow-up with a focus on HIV-infected persons; focus attention on the low percentage of actively monitored patients in the total number of those infected with HIV and registered for monitoring and follow-up (under 80%) (*regional AIDS centers located in the Dnipropetrovsk, Donetsk, Zaporizhzhia, Kyiv, Kirovohrad, Lviv, Mykolaiv, Odesa, Poltava, Sumy, Cherkasy, and Chernivtsi oblasts*);
- Focus attention on the high percentage of persons aged 15–24 years among new HIV infections, compared to the average level recorded across the country (over 6.0%), and step up primary prevention measures to change HIV risky behavior among adolescents and youth (*regional AIDS centers located in the Vinnytsia, Volyn, Zhytomyr, Zaporizhzhia, Lviv, Odesa, Rivne, Sumy, Kharkiv, and Chernivtsi oblasts*);
- Step up primary prevention activities among rural populations at the subregional level. Focus attention on the increase in the percentage of rural residents among new HIV infections (*regional AIDS centers located in the Vinnytsia, Dnipropetrovsk, Luhansk, Lviv, Mykolaiv, Rivne, Kharkiv, Kherson, Khmelnytskyi oblasts, and the city of Kyiv*);

- Minimize the number of HIV infections reported with an unidentified mode of transmission through improvement in the quality of post-test counseling and the efficacy of epidemiological investigations, including those related to officially registered cases of HIV infection and conducted on a post-mortem basis (*regional AIDS centers located in the Dnipropetrovsk, Donetsk, Zhytomyr, Zakarpattia, Zaporizhzhia, Sumy, Khmelnytskyi oblasts, and the city of Kyiv*);
- Conduct a systematic analysis of conditions and illnesses reported by HIV-infected persons registered with health care services for monitoring and follow-up, and ensure reporting of accurate and reliable data from the region level to national-level authorities (*all regional AIDS centers*);
- Undertake systematic efforts throughout the year to ensure the verification and exchange of data between AIDS and TB Control Services. Focus attention on the justification of discrepancies identified in data contained in said services' region-level reports on newly registered cases of HIV/TB co-infection and newly diagnosed TB (*all regional AIDS centers*);
- Focus the efforts of both said services on early detection of HIV and TB, ensure timely prescription of treatments for HIV and TB, reduce TB/HIV-related mortality, and implement effective strategies to prevent the spread of said infections across the general population.
- Conduct extensive awareness-raising and motivation activities to encourage patients to be tested for antibodies to HIV and screened for TB in HCIs of both said services. These efforts should be implemented in conjunction with high-quality counseling services (*all regional AIDS centers*);
- Provide testing for HIV-infected persons aged 15 years and older, among those newly registered with health care services for monitoring and follow-up, to measure absolute and relative CD4 counts (at least 90%), detect viral hepatitis markers (at least 80%), and ensure data accuracy and reliability (*all regional AIDS centers*);
- Submit explanatory reports to UCDC on HIV-infected children diagnosed based on epidemiological and clinical evidence, as well as mortality cases involving children (*all regional AIDS centers*);
- Prevent incidents and situations where babies born to HIV-infected mothers are placed on or removed from the appropriate register in an untimely manner. Investigate each case involving a negative HIV test result obtained for a baby born to an HIV-infected mother immediately after birth (*all regional AIDS centers*);
- Ensure that all children aged below 14 years and registered for HIV-related reasons with health care services for monitoring and follow-up have at least one medical check-up during the reporting year and are included in the actively

monitored group in reports pertaining to HIV-related routine epidemiological surveillance (*regional AIDS centers located in the Vinnytsia, Volyn, Zhytomyr, Ivano-Frankivsk, Kyiv, Kirovohrad, Luhansk, Mykolaiv, Kherson, Khmelnytskyi, Chernihiv oblasts, and the city of Kyiv*);

- Match and compare appropriate HIV/AIDS official records and reporting data items against those held by the local offices of the State Penitentiary Service of Ukraine on a consistent basis throughout the year, and ensure compliance with the requirements set forth in the Order of Ukraine's MoH as of March 5, 2013 (no. 180) in regards to SPSU's reporting data management policies (*all regional AIDS centers*);
- Strengthen the coordinating role of regional AIDS centers in making sure that HIV-positive persons are registered and recorded within SPSU's offices and divisions in timely fashion, as well as ensuring timely exchange of information with other regions regarding such HIV-infected persons when they are released from SPSU's facilities or relocate to another place of residence, as required by applicable regulations, to avoid duplication of records relating to HIV-infected persons (*all regional AIDS centers*);
- Monitor compliance with the provisions set out in the Order of Ukraine's MoH as of March 5, 2013 (no. 180), "On Approval of Primary Records and Reports Pertaining to HIV Epidemic Monitoring and Related Completion Guidelines," the Order of Ukraine's MoH as of December 3, 2015 (no. 816), "On Amendments to the Order of the Ministry of Health of Ukraine as of March 5, 2013 (no. 180)," and conduct systematic analysis of the reasons for removals from the appropriate register at the regional (local) level (*all regional AIDS centers*);
- Curb the practice of HIV-infected persons being removed from the register without a sufficient justification with a view to ensuring complete coverage of such patients with monitoring and follow-up and arriving at a more accurate estimation of HIV and AIDS prevalence rates based on epidemiological surveillance data (*all regional AIDS centers*);
- Improve the quality of medical monitoring and epidemiological surveillance related to individuals infected with HIV, develop appropriate measures at the subregional-level to prevent removal of HIV-infected persons from the register citing as the reason that their whereabouts are unknown (*regional AIDS centers located in the Donetsk, Zakarpattia, Ivano-Frankivsk, Kyiv, Kirovohrad, Kherson, Cherkasy oblasts, and the city of Kyiv*);
- Enter data on individuals arriving from other regions, countries, or those leaving the region into the reporting form, as required under the provisions of the Order of Ukraine's MoH as of March 5, 2013 (no. 180). Exclude data on HIV-infected persons migrating within the region (oblast) from regional reports. Provide additional details and indicate precisely the number of persons with

prison records migrating within the region during the reporting year and those included in the regional report (Column 6 of Tables 2000 and 2001 on Form No. 2-HIV/AIDS) (*all regional AIDS centers*);

- Ensure compliance with the guidelines for transfer of HIV-infected patients between AIDS centers located in different regions and the guidelines for registration of persons with previously diagnosed HIV infection based upon the patient's personal application to the AIDS-service HCI located in another region, as set forth in the letter of UCDC dated July 6, 2015 (no. 1331) (See Annexes 3, 4 to the letter) (*all regional AIDS centers*);
- Strengthen cooperation with services specialized in TB treatment and control, postmortem diagnosis, and forensic medical examination to jointly verify and exchange data on the causes of HIV-related deaths, specifically by establishing the cause of deaths related to HIV/TB co-infections or TB alone through coordinated decisions (*all regional AIDS centers*);
- Take steps to minimize the number of HIV-related deaths due to unidentified causes, make sure that appropriate arrangements are in place to ensure the availability of copies of medical records (final certificates of death (Forms No. 106/0, No. 106-1/0, No. 106-2/0) and/or autopsy reports (Form No. 013/o), extracts from expert reports, forensic (medical) examination reports (Form No. 171/o)) that serve as proof of the illness (condition) causing the death and specified on Form No. 502-2/o (*all regional AIDS centers*).

Counseling Related to HIV Testing

- Ensure that specialists from regional AIDS centers participate in implementing extensive supervision programs on C&T and providing additional education on C&T topics for HCI specialists involved in HIV C&T.

Medical Assistance and Treatment Monitoring

- Facilitate questionnaire-based surveys related to TB screening in all health care facilities serving HIV-infected patients, as required under the provisions of the Unified Clinical Protocol for Primary, Secondary (Specialized) and Tertiary (Highly Specialized) Medical Care for Tuberculosis (*all regional AIDS centers*);
- Facilitate coordination and interaction with the TB Treatment and Control Service with a view to delivering timely medical care to HIV-infected patients with HIV/TB co-infections, and improving related record management (*all regional AIDS centers*);
- Strengthen performance on early HIV detection and prompt linkage to health care services and ART for persons diagnosed with TB (*all regional AIDS centers*);

- Place a greater focus on tracking and monitoring activities for continuously monitored patients who are not accessing ART, and reporting (Reporting Form No. 56) up-to-date information on the number of persons in need of ART who are not receiving it, taking into consideration the amendments to the Clinical Protocol for ART, as approved by the Order of Ukraine's MoH as of December 22, 2015 (no. 887) (*all regional AIDS centers*);
- Ensure continuous monitoring of ART regimens offered within the region, and evaluate the advisability of prescribing and using ART regimens with potentially low virological efficacy, as well as adherence to criteria for using ART plans as second- and third-line regimens (*all regional AIDS centers*);
- Continue collaboration with NGOs to develop adherence to ART in and ensure case management for HIV-infected patients, including local-level efforts (*all regional AIDS centers*);
- Provide support and follow-up for HIV-infected mothers and their babies (*regional AIDS center in the Kherson oblast*).

Laboratory Monitoring

- Heads of the Dnipropetrovsk and Rivne Oblasts AIDS Centers, Kryvyi Rih and Mariupol City AIDS Centers should urgently address the situation with staffing needs and equip the HCIs' laboratories with specialists of appropriate background and training for molecular genetic testing;
- Heads of the HCIs, whose laboratories have not met accreditation and certification requirements for diagnostic measurements related to serological markers of HIV, should address this issue on a top-priority basis;
- Step up the functional capabilities of the laboratories of regional AIDS centers in the area of methodology, education, control, and analysis.

Developing the Regional M&E System

- Implement effective strategies for dissemination of M&E information through posting it on the regional AIDS centers' websites on a regular basis, as well as making available to the public the reports, data, presentations, and analytical insights for managerial decision-making on scaling up the regional response to the HIV epidemic.

Section 13. Using the Clinical Assessment for Systems Strengthening (CLASS) Methodology for Monitoring the Performance of Health Care Facilities

At this point in time, effective management policies and procedures, developed based on (wherever possible) capacity and performance pre-assessments of health care facilities, are key to providing quality services for people living with HIV (PLHIV).

The Clinical Assessment for Systems Strengthening (CLASS) is used to measure organizational performance. Its key objective is to identify best practices, achievements and existing capabilities of a facility, as well as to make an assessment of its capacity building needs, and identify ways and resources to ensure sustainable and continuous quality service delivery (<http://www.classtoolkit.org>). As opposed to traditional approaches, CLASS is not a control tool, as it envisages the participation of both external experts and facility representatives in the assessment process.

The CLASS methodology is designed in collaboration with the Health Resources and Services Administration (HRSA), the International Training and Education Center for Health, Department of Global Health, University of Washington (I-TECH/UW) to promote long-term sustainability and country ownership of high quality HIV/AIDS programming.

I-TECH played the key role in adapting this methodology to suit the local context of Ukraine with financial support from the U.S. Centers for Disease Control and Prevention (CDC), a federal U.S. agency, and the Health Resources and Services Administration (HRSA) (HRSA) as part of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) in Ukraine.

The CLASS tools follow a modular format where each module serves as a guide for a specific subcomponent to assess organizational systems based on in-depth group and individual interviews, reviews of documentation, and verification of information. Since 2009, CLASS modules have been actively used in the USA, some Asian and African countries, East Europe, and Ukraine (since 2012).

UCDC acts as the national coordinator for CLASS in Ukraine, while at the regional level these efforts are coordinated by the Oblast AIDS Centers and Kyiv City AIDS Center.

Organizational capacity assessment using the CLASS methodology incorporates:

- Detailed and in-depth analysis of administrative, financial, HR, and technical capacities of facilities involved in delivering PLHIV-focused prevention, testing, treatment, care, and support programs through central/local government funding or support from international technical assistance projects;

- Identification of organizational areas that need strengthening and/or technical assistance to ensure sustainable and continuous quality service delivery;
- Development of recommendations for strengthening organizational capacity;
- Action planning for strengthening organizational practices and systems associated with PLHIV-oriented medical and social services by facility personnel, and development of action steps to ensure their implementation;
- Informing all stakeholders of needs and areas for technical assistance, identifying local resources to meet existing needs, and planning for technical assistance to strengthen capacity and improve service quality;
- Informing organizational actions to develop and implement a continuous quality improvement system to drive service delivery.

Only CLASS-trained and certified reviewers are brought in to perform CLASS assessments. As of today's date, there are eleven CLASS-certified national-level reviewers in Ukraine.

The list of modules for capacity assessments adapted in Ukraine is provided below:

1. CLASS Administrative Module: This module of the CLASS Toolkit is a guide for assessing administrative capacity and program or resource management quality at treatment facility and organizational levels.

2. CLASS Financial Module: This module of the CLASS Toolkit is a guide for assessing financial stability, program management, and financial management systems at treatment facility and organizational levels.

3. CLASS HIV Counseling and Testing Module: This module of the CLASS Toolkit is a guide for reviewers conducting assessments of quality control and assurance systems related to HIV testing and counseling (HTC) services for the general public and MARPs.

4. CLASS Medical Module: This module of the CLASS Toolkit is a guide for assessing HR capacity, as well as the range, quality, completeness, sustainability, and continuity of medical services associated with HIV prevention, testing, and treatment.

Once the assessment for each particular module is complete, an action plan for the next phase is developed to identify sources of capacity building assistance. Based on the results obtained during the assessment, managers of the project facility or institution are offered the opportunity to design and develop procedures needed to improve medical care quality on a permanent basis. Information collected through a CLASS assessment is a sufficient basis for the facility or institution to justify their needs for capacity building, technical assistance or other support to ensure sustainable development and effective implementation of appropriate HIV/AIDS programs.

Significantly, the CLASS toolkit is versatile and universal, which is of particular importance at a time when the health care system is being reformed, and a special focus is placed on finding effective economic solutions, raising accreditation and certification standards for healthcare facilities, as well as improving the quality of medical and social services. Consistent with the guidelines of the Clinical Assessment for Systems Strengthening (CLASS) for monitoring the organizational performance of Ukraine's health care institutions in regard to HIV/AIDS, as approved by Ukraine's MoH on January 28, 2016 (Reg. No. 177.15/04/16), *"It is desirable that a CLASS pre-award assessment be conducted prior to a healthcare facility being accredited and awarded the highest qualification categories, especially in the case of healthcare facilities engaged in delivering secondary and tertiary care. Also, mandatory certification is required for ensuring compliance with the requirements of the National Standards of Ukraine (DSTU) ISO Series 9000, as well as DSTU ISO Series 9001 on the Integration and Efficiency of Quality Management Systems."*

From 2012 through May 2016, the following steps were taken toward adopting and implementing the guidelines on Clinical Assessment for Systems Strengthening (CLASS) in Ukraine:

- Four CLASS modules were adapted to suit the Ukrainian context of the HIV epidemic and local regulations. Two new modules designed: 'Laboratory' and 'Integrated Services for PLHIV with TB/AIDS-Co-Infections'.
- A series of CLASS-focused training workshops prepared and provided for review team representatives.
- Qualitative assessments of organizational systems using the CLASS methodology conducted in seven regions of Ukraine, i.e., the Dnipropetrovsk (cities of Dnipropetrovsk and Kryvyi Rih), Zaporizhzhia, Kyiv, Lviv, Odesa, Cherkasy, and Chernivtsi oblasts. CLASS assessments were conducted in a total of 14 facilities, including 8 regional AIDS centers, 4 anonymous service sites, 2 NGOs.
- The guidelines of the Clinical Assessment for Systems Strengthening (CLASS) for monitoring the organizational performance of Ukraine's health care institutions in regard to HIV/AIDS developed and approved by order of Ukraine's MoH.
- Ukraine's CLASS development and implementation plan for 2016 prepared.

As of today's date, thanks to the close collaboration between UCDC and I-TECH, Ukraine became the first country partnering with I-TECH where a government-sponsored institution independently implements and promotes the experience based on the integration of qualitative assessment systems into the practices and processes of healthcare institutions and facilities.

Annex 1

Table 1. Sero-Epidemiological Monitoring Data on HIV Prevalence in Ukraine Based on Serological Diagnostic Tests in 2015¹

Code	Contingents Tested for HIV	Total Persons Tested ²	HIV-Positive Persons Identified ³	%
100	Total Ukrainian nationals — Including those classified by code:	2,344,741	23,193	0.99
101	Persons who have had sexual contact with HIV-infected partners	10,111	1,477	14.6
102	People who use drugs	129,278	2,162	1.7
103	Persons who have had homosexual contact with partners whose HIV-status is unknown	25,416	255	1.0
104	Persons who have sexually transmitted infections or related symptoms	43,413	438	1.0
105	Persons who engage in risky sexual behavior	119,301	1,602	1.3
106	Army conscripts, military academy or school enrollees (applicants)	100,052	268	0.3
107	Persons from other most-at-risk populations tested based on epidemiological evidence	43,817	598	1.4
108	Blood donors	617,815	531	0.1

Code	Contingents Tested for HIV	Total Persons Tested ²	HIV-Positive Persons Identified ³	%
109.1	Pregnant women	442,766	1,482	0.3
111	Infants born to HIV-infected mothers after confirmatory testing for HIV, aged 18 months and older	3,048	30	1.0
112	Persons who are in jail or prison	17,099	957	5.6
113	Persons who have illnesses, symptoms and syndromes, on the basis of which they are advised to seek counseling and testing services when contacting HCIs for medical help	271,324	6,080	2.2
114	Persons tested anonymously	31,000	1,227	4.0
115	Persons at risk of HIV infection due to medical procedures based on epidemiological evidence	1,149	1	0.1
116	Persons tested based on their own initiative	485,346	3,063	0.6
119	Deceased persons	882	69	7.8

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

² Total persons screened for antibodies to HIV in the course of the reporting year using serological diagnostic methods (ELISA, RDTs)

³ Total persons with HIV serological markers found during confirmatory testing using serological diagnostic methods (ELISA, RDTs), including verification tests using two rapid test kits in designated cases as provided for in the Order of Ukraine's MoH as of December 21, 2010 (No. 1141), i.e., in health care institutions that provide HIV counseling and testing services; in maternity clinics and hospitals when testing women whose HIV status is unknown with a view to prescribing ARVs for preventive purposes; when testing persons who are in jail or prison to determine their HIV status

Table 2. Sero-Epidemiological Monitoring Data on HIV Prevalence in Ukraine Based on Rapid Diagnostic Tests (RDTs) in 2015¹

Code	Contingents Tested for HIV	Total Persons Tested ²	Distribution of Test Takers by Contingent, %	Percentage of Total Persons Tested, Disaggregated by Code Classification, %
100	Total Ukrainian nationals — Including those classified by code	293,822 ³	100	12.5
101	Persons who have had sexual contact with HIV-infected partners	3,398	1.2	33.6
102	People who use drugs	112,552	38.3	87.1
103	Persons who have had homosexual contact with partners whose HIV-status is unknown	24,822	8.4	97.7
104	Persons who have sexually transmitted infections or related symptoms	6,576	2.2	15.1
105	Persons who engage in risky sexual behavior	46,503	15.8	39.0
107	Persons from other most-at-risk populations tested based on epidemiological evidence	7,528	2.6	17.2
109.1	Pregnant women receiving their first HIV test during pregnancy, at any stage of pregnancy	8,305	2.8	1.9
109.2	Pregnant women retaking their HIV test during pregnancy, if tested negative according to Code 109.1	5,732	2.0	1.6
112	Persons who are in jail or prison	8,749	3.0	51.2
113	Total persons who have illnesses, symptoms and syndromes, on the basis of which they are advised to seek counseling and testing services when contacting HCIs for professional help	29,772	10.1	11.0
113/tbts	Including those tested by: HCIs that provide assistance to TB patients	10,376	3.5	24.2

Code	Contingents Tested for HIV	Total Persons Tested ²	Distribution of Test Takers by Contingent, %	Percentage of Total Persons Tested, Disaggregated by Code Classification, %
113/inf	HCIs that focus on infectious diseases	4,259	1.4	16.4
113/in	HCIs focusing on other specialist fields	15,137	5.2	7.5
114	Persons tested anonymously	4,154	1.4	13.4
116	Persons tested based on their own initiative	33,794	11.5	7.0

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

² Total persons tested using rapid diagnostic tests in community-based organizations, health care institutions, jails and prisons as part of bio-behavioral surveys

³ According to the SEM full list

Table 2 (Continued)

Code	Contingents Tested for HIV	Total HIV-Positive Persons Found ⁴	Distribution of HIV-Positive Test Results, Disaggregated by Contingent Classification, %	Percentage of Total Persons Tested Positive, Disaggregated by Code Classification, %
100	Total Ukrainian nationals — Including those classified by code	2,665 ⁵	100	11.5
101	Persons who have had sexual contact with HIV-infected partners	323	12.1	21.9
102	People who use drugs	534	20.0	24.7
103	Persons who have had homosexual contact with partners whose HIV-status is unknown	82	3.1	32.2
104	Persons who have sexually transmitted infections or related symptoms	46	1.7	10.5

Code	Contingents Tested for HIV	Total HIV-Positive Persons Found ⁴	Distribution of HIV-Positive Test Results, Disaggregated by Contingent Classification, %	Percentage of Total Persons Tested Positive, Disaggregated by Code Classification, %
105	Persons who engage in risky sexual behavior	324	12.2	20.2
107	Persons from other most-at-risk populations tested based on epidemiological evidence	52	2.0	8.7
109.1	Pregnant women receiving their first HIV test during pregnancy, at any stage of pregnancy	84	3.2	5.7
109.2	Pregnant women retaking their HIV test during pregnancy, if tested negative according to Code 109.1	1	0.04	3.4
112	Persons who are in jail or prison	96	3.6	10.0
113	Total persons who have illnesses, symptoms and syndromes, on the basis of which they are advised to seek counseling and testing services when contacting HCIs for professional help Including those tested by:	865	32.5	14.2
113/tsts	HCIs that provide assistance to TB patients	240	9.0	16.9
113/inf	HCIs that focus on infectious diseases	156	5.9	18.2
113/in	HCIs focusing on other specialist fields	469	17.6	12.3
114	Persons tested anonymously	51	1.9	4.2
116	Persons tested based on their own initiative	183	6.9	6.0

⁴ Total persons with HIV serological markers found during confirmatory testing using two rapid test kits as provided for in the Order of Ukraine's MoH as of December 21, 2010 (No. 1141)

⁵ According to the SEM full list

Table 3. Sero-Epidemiological Monitoring Data on HIV Prevalence Among Blood Donors in 2015¹

Region	Total Blood Donors, Code 108			Primary (One-Time) Blood Donors, Code 108.1		
	Those Tested	Those Found Positive	%	Those Tested	Those Found Positive	%
Ukraine	617,815	531	0.09	397,529	508	0.13
Vinnysia	17,889	9	0.05	15,506	9	0.06
Volyn	26,364	10	0.04	24,169	10	0.04
Dnipropetrovsk	64,630	84	0.13	38,757	81	0.21
Donetsk	27,808	43	0.15	15,042	42	0.28
Zhytomyr	15,541	23	0.15	9,710	22	0.23
Zakarpattia	13,929	2	0.01	13,422	2	0.01
Zaporizhzhia	43,184	17	0.04	20,466	16	0.08
Ivano-Frankivsk	18,151	20	0.11	13,812	20	0.14
Kyiv	23,266	16	0.07	17,189	16	0.09
Kirovohrad	11,174	14	0.13	7,968	14	0.18
Luhansk	12,572	6	0.05	7,178	5	0.07
Lviv	27,483	13	0.05	26,472	13	0.05
Mykolaiv	25,701	40	0.16	14,646	37	0.25
Odesa	32,249	50	0.16	23,159	50	0.22
Poltava	20,365	12	0.06	10,419	12	0.12
Rivne	14,072	4	0.03	7,402	4	0.05
Sumy	38,872	8	0.02	10,230	6	0.06
Ternopil	13,970	12	0.09	5,785	7	0.12
Kharkiv	31,143	20	0.06	28,987	20	0.07
Kherson	11,506	11	0.10	5,567	11	0.20
Khmelnyskyi	34,131	19	0.06	24,711	19	0.08
Cherkasy	15,763	17	0.11	10,330	16	0.15
Chernivtsi	10,892	5	0.05	4,136	5	0.12
Chernihiv	16,010	23	0.14	8,319	23	0.28
City of Kyiv	51,150	53	0.10	34,147	48	0.14

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 4. Sero-Epidemiological Monitoring Data on HIV Prevalence Among Pregnant Women in 2015¹

Region	Pregnant Women (First HIV Test), Code 109.1			Pregnant Women Aged 15-24 Years, Codes 109.1.1 + 109.1.2			Pregnant Women (Second HIV Test), Code 109.2		
	Those Tested	Those Found Positive	%	Those Tested	Those Found Positive	%	Those Tested	Those Found Positive	%
Ukraine	442,766	1,482	0.33	135,587	363	0.27	366,226	29	0.01
Vinnytsia	17,494	38	0.22	5,640	14	0.25	14,821	0	0.00
Volyn	14,452	20	0.14	5,592	4	0.07	12,027	0	0.00
Dnipropetrovsk	38,896	257	0.66	13,083	75	0.57	29,625	13	0.04
Donetsk	16,182	124	0.77	2,889	26	0.90	12,784	4	0.03
Zhytomyr	14,206	45	0.32	4,822	11	0.23	12,125	1	0.01
Zakarpattia	18,813	7	0.04	4,976	3	0.06	11,934	0	0.00
Zaporizhzhia	18,403	51	0.28	4,706	8	0.17	15,517	0	0.00
Ivano-Frankivsk	17,206	16	0.09	7,191	1	0.01	4,837	0	0.00
Kyiv	19,048	95	0.50	7,428	22	0.30	19,071	2	0.01
Kirovohrad	8,120	59	0.73	2,995	1	0.03	6,243	0	0.00
Luhansk	4,744	20	0.42	2,696	1	0.04	3,956	0	0.00
Lviv	29,076	32	0.11	10,307	10	0.10	26,112	0	0.00

Region	Pregnant Women (First HIV Test), Code 109.1			Pregnant Women Aged 15-24 Years, Codes 109.1.1 + 109.1.2			Pregnant Women (Second HIV Test), Code 109.2		
	Those Tested	Those Found Positive	%	Those Tested	Those Found Positive	%	Those Tested	Those Found Positive	%
Mykolaiv	12,701	41	0.32	3,769	10	0.27	10,693	0	0.00
Odesa	30,516	222	0.73	9,815	70	0.71	25,660	4	0.02
Poltava	14,865	38	0.26	4,619	11	0.24	13,695	1	0.01
Rivne	17,096	25	0.15	3,529	8	0.23	15,865	1	0.01
Sumy	10,903	27	0.25	3,497	9	0.26	9,290	1	0.01
Ternopil	11,016	10	0.09	5,116	1	0.02	9,929	0	0.00
Kharkiv	28,823	63	0.22	8,787	13	0.15	22,356	0	0.00
Kherson	12,749	41	0.32	4,477	12	0.27	10,637	0	0.00
Khmelnyskyi	14,773	24	0.16	5,304	5	0.09	12,754	0	0.00
Cherkasy	12,975	21	0.16	3,888	6	0.15	9,949	2	0.02
Chernivtsi	11,959	6	0.05	2,564	0	0.00	10,464	0	0.00
Chernihiv	9,779	42	0.43	2,236	15	0.67	8,161	0	0.00
City of Kyiv	37,971	158	0.42	5,661	27	0.48	37,721	0	0.00

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

**Table 5. Percentage of Persons Tested for HIV and Found Positive Among Most-At-Risk Populations (MARPs) Classified as Codes 101.2, 102, 103, 104, and 105.2
Versus Total Persons Tested for HIV and Found Positive
(Excluding Data for Blood Donors and Pregnant Women) in 2015¹**

Region	Total Persons Tested for HIV			Total Persons Found Positive		
	Total Persons Tested (Excluding Blood Donors and Pregnant Women)	Including Total Persons Tested Belonging to MARPs	%	Total Persons Found Positive (Excluding Blood Donors and Pregnant Women)	Including Total Persons Found Positive Belonging to MARPs	%
Ukraine	1,284 160	224,002	17.4	21,151	2,931	13.9
Vinnytsia	29,832	3,745	12.6	290	25	8.6
Volyn	67,434	3,296	4.9	295	26	8.8
Dnipropetrovsk	142,777	27,196	19.0	3,902	480	12.3
Donetsk	51,516	12,164	23.6	1,459	148	10.1
Zhytomyr	35,300	4,766	13.5	590	67	11.4
Zakarpattia	45,607	1,789	3.9	87	5	5.7
Zaporizhzhia	65,444	9,064	13.9	652	103	15.8
Ivano-Frankivsk	33,229	1,595	4.8	276	55	19.9
Kyiv	36,290	4,628	12.8	1,262	271	21.5
Kirovohrad	19,109	2,307	12.1	681	122	17.9
Luhansk	14,402	4,739	32.9	172	28	16.3

Region	Total Persons Tested for HIV			Total Persons Found Positive		
	Total Persons Tested (Excluding Blood Donors and Pregnant Women)	Including Total Persons Tested Belonging to MARPs	%	Total Persons Found Positive (Excluding Blood Donors and Pregnant Women)	Including Total Persons Found Positive Belonging to MARPs	%
Lviv	49,837	9,621	19.3	616	90	14.6
Mykolaiv	61,518	12,795	20.8	1,152	188	16.3
Odesa	90,816	17,878	19.7	3,138	246	7.8
Poltava	27,926	2,867	10.3	481	53	11.0
Rivne	53,501	3,938	7.4	274	19	6.9
Sumy	22,238	6,467	29.1	237	41	17.3
Ternopil	19,752	1,622	8.2	99	7	7.1
Kharkiv	92,865	20,262	21.8	690	69	10.0
Kherson	36,460	7,052	19.3	606	47	7.8
Khmelnyskyi	31,957	6,312	19.8	280	26	9.3
Cherkasy	60,881	10,568	17.4	577	84	14.6
Chernivtsi	38,378	5,165	13.5	149	18	12.1
Chernihiv	49,928	5,526	11.1	555	81	14.6
City of Kyiv	107,163	38,640	36.1	2 631	632	24.0

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

**Table 6. Sero-Epidemiological Monitoring Data on HIV Prevalence
Among Most-At-Risk Populations (MARPs) in 2015¹**

Region	People Who Use Drugs, Code 102				Sex Workers, Code 105.2			
	Persons Tested		Those Found Positive	%	Persons Tested		Those Found Positive	%
	Total Persons Tested	Including Those Tested Using RDTs			Total Persons Tested	Including Those Tested Using RDTs		
Ukraine	129,278	112,552	2,162	1.7	25,627	23,999	58	0.2
Vinnytsia	2,583	1,982	17	0.7	341	341	0	0.0
Volyn	1,163	966	14	1.2	403	387	0	0.0
Dnipropetrovsk	15,357	12,274	374	2.4	2 240	2,234	3	0.1
Donetsk	9,315	8,320	113	1.2	531	497	7	1.3
Zhytomyr	2,934	2,517	49	1.7	719	716	0	0.0
Zakarpattia	521	472	2	0.4	165	153	0	0.0
Zaporizhzhia	4,952	3,992	78	1.6	524	428	5	1.0
Ivano-Frankivsk	479	122	46	9.6	0	0	0	0
Kyiv	2,923	2,416	237	8.1	290	140	0	0.0
Kirovohrad	479	330	92	19.2	1,065	361	18	1.7
Luhansk	4,099	4,099	16	0.4	374	374	8	2.1
Lviv	5,708	4,246	69	1.2	1,371	1,371	0	0.0

Region	People Who Use Drugs, Code 102				Sex Workers, Code 105.2			
	Persons Tested		Those Found Positive	%	Persons Tested		Those Found Positive	%
	Total Persons Tested	Including Those Tested Using RDTs			Total Persons Tested	Including Those Tested Using RDTs		
Mykolaiv	6,907	5,808	160	2.3	1,930	1,902	2	0.1
Odesa	11,013	10,343	118	1.1	2,772	2,765	6	0.2
Poltava	1,541	474	47	3.0	190	0	0	0.0
Rivne	2,404	2,292	10	0.4	401	396	2	0.5
Sumy	3,487	2,996	30	0.9	970	969	1	0.1
Ternopil	762	431	2	0.3	117	116	0	0.0
Kharkiv	9,922	9,339	44	0.4	3,290	3,290	0	0.0
Kherson	4,972	4,353	32	0.6	397	397	0	0.0
Khmelnyskyi	3,208	2,923	17	0.5	765	764	0	0.0
Cherkasy	7,596	7,203	64	0.8	810	777	0	0.0
Chernivtsi	3,716	2,908	8	0.2	444	441	1	0.2
Chernihiv	2,502	1,939	73	2.9	310	11	1	0.3
City of Kyiv	20,735	19,807	450	2.2	5,208	5,169	4	0.1

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 6 (Continued)

Region	Persons Who Have Had Homosexual Contact, Codes 101.2+103				Persons Who Have Sexually Transmitted Infections or Related Symptoms, Code 104			
	Persons Tested		Those Found Positive	%	Persons Tested		Those Found Positive	%
	Total Persons Tested	Including Those Tested Using RDTs			Total Persons Tested	Including Those Tested Using RDTs		
Ukraine	25,684	25,019	273	1.1	43,413	6,576	438	1.0
Vinnytsia	412	385	5	1.2	409	24	3	0.7
Volyn	359	298	4	1.1	1,371	0	8	0.6
Dnipropetrovsk	820	798	4	0.5	8,779	1,806	99	1.1
Donetsk	1,179	1,161	5	0.4	1,139	1	23	2.0
Zhytomyr	178	169	5	2.8	935	337	13	1.4
Zakarpattia	16	2	1	6.3	1,087	456	2	0.2
Zaporizhzhia	1,444	1,410	9	0.6	2,144	110	11	0.5
Ivano-Frankivsk	9	3	3	33.3	1,107	52	6	0.5
Kyiv	296	283	16	5.4	1,119	738	18	1.6
Kirovohrad	7	3	3	42.9	756	12	9	1.2
Luhansk	10	10	1	10.0	256	256	3	1.2
Lviv	1,178	1,078	5	0.4	1,364	0	16	1.2

Region	Persons Who Have Had Homosexual Contact, Codes 101.2+103				Persons Who Have Sexually Transmitted Infections or Related Symptoms, Code 104			
	Persons Tested		Those Found Positive	%	Persons Tested		Those Found Positive	%
	Total Persons Tested	Including Those Tested Using RDTs			Total Persons Tested	Including Those Tested Using RDTs		
Mykolaiv	1,662	1,640	5	0.3	2,296	788	21	0.9
Odesa	1,074	1,034	28	2.6	3,019	741	94	3.1
Poltava	17	9	1	5.9	1,119	306	5	0.4
Rivne	398	394	0	0.0	735	0	7	1.0
Sumy	413	407	0	0.0	1,597	75	10	0.6
Ternopil	3	0	3	100.0	740	330	2	0.3
Kharkiv	1,490	1,468	7	0.5	5,560	215	18	0.3
Kherson	506	501	4	0.8	1,177	86	11	0.9
Khmelnytskyi	3	0	2	66.7	2,336	0	7	0.3
Cherkasy	740	721	4	0.5	1,422	0	16	1.1
Chernivtsi	811	793	7	0.9	194	0	2	1.0
Chernihiv	904	896	1	0.1	1,810	28	6	0.3
City of Kyiv	11,755	11,556	150	1.3	942	215	28	3.0

Table 7. HIV Prevalence in Ukraine in 2013–2015¹

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Ukraine²	20,294	47.1	+5.0	19 273	44.8	–5.0	15869	37.0	–17.4
Ukraine (Including AR Crimea and the city of Sevastopol)	21,631	47.6	+4.6						
AR Crimea	1,087	55.3	–1.5						
Vinnytsia	313	19.3	–4.4	392	24.3	+25.2	303	18.9	–22.3
Volyn	267	25.6	–3.8	264	25.3	–1.1	277	26.6	+4.9
Dnipropetrovsk	3,450	104.7	+1.3	3,184	96.9	–7.7	2,881	88.2	–9.0
Donetsk	3,648	83.9	–1.7	3,043	70.4	–16.2	1,023	23.9	–66.1
Zhytomyr	423	33.5	+6.4	403	32.0	–4.7	462	36.9	+15.3
Zakarpattia	81	6.4	–1.6	83	6.6	+2.5	71	5.6	–14.5
Zaporizhzhia	605	34.0	+16.9	612	34.5	+1.2	573	32.6	–5.8
Ivano-Frankivsk	159	11.5	–7.7	184	13.3	+15.7	180	13.0	–2.2
Kyiv	727	42.1	+4.2	983	56.9	+35.2	973	56.2	–1.2
Kirovohrad	345	34.9	–4.4	458	46.5	+32.7	519	53.1	+14.2
Luhansk	910	40.6	+24.7	518	23.2	–43.0	183	8.3	–64.4
Lviv	418	16.5	+6.4	490	19.3	+17.3	454	17.9	–7.3

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Mykolaiv	1,081	92.5	−3.6	1,086	93.1	+0.5	863	74.3	−20.2
Odesa	2,751	114.8	+19.3	2,622	109.4	−4.7	2,382	99.5	−9.0
Poltava	508	34.8	+15.3	419	28.8	−17.5	449	31.1	+7.9
Rivne	254	21.9	+4.3	258	22.2	+1.6	249	21.4	−3.6
Sumy	206	18.2	+22.8	202	17.9	−1.9	224	20.0	+11.9
Ternopil	132	12.3	+13.4	106	9.9	−19.6	116	10.9	+9.8
Kharkiv	646	23.6	+9.5	537	19.6	−16.9	526	19.3	−1.7
Kherson	557	51.9	−0.7	531	49.6	−4.7	521	48.9	−1.4
Khmelnyskyi	334	25.5	+9.6	285	21.8	−14.7	194	14.9	−31.6
Cherkasy	456	36.2	−2.8	605	48.2	+32.6	541	43.4	−10.0
Chernivtsi	108	11.9	−1.2	114	12.5	+5.6	98	10.8	−14.1
Chernihiv	510	47.8	+2.1	511	48.1	+0.2	498	47.4	−1.5
City of Kyiv	1,405	49.0	+6.3	1,383	48.1	−1.6	1,309	45.2	−6.0
City of Sevastopol	250	64.8	+7.2						

¹ Including infants born to HIV-infected mothers, whose HIV status is indeterminate

² Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015). For comparison purposes only, appropriate 2013 data for AR Crimea and the city of Sevastopol are provided

Table 8. Numbers of HIV-Infected Persons Arriving From the Donetsk and Luhansk Oblasts, and AR Crimea and Registered with AIDS-Service HCIs in Other Regions for Monitoring and Follow-Up in 2014–2015

Region	2014				2015			
	Total Persons Registered	Including Those Arriving from			Total Persons Registered	Including Those Arriving from		
		Donetsk Oblast	Luhansk Oblast	AR Crimea		Donetsk Oblast	Luhansk Oblast	AR Crimea
Ukraine	360	216	94	50	731	572	127	32
Vinnytsia	18	17		1	15	11	4	0
Volyn	7	4	0	3	2	2	0	0
Dnipropetrovsk	13	9	3	1	109	93	16	0
Donetsk	No Data Available				No Data Available			
Zhytomyr	3	1	1	1	15	11	2	2
Zakarpattia	7	5	1	1	6	5	0	1
Zaporizhzhia	16	12	1	3	118	107	8	3
Ivano-Frankivsk	1	0	0	1	11	10	0	1
Kyiv	0	0	0	0	35	26	9	0
Kirovohrad	3	2	0	1	13	8	3	2
Luhansk ¹	No Data Available							
Lviv	13	5	4	4	22	16	3	3

Region	2014				2015			
	Total Persons Registered	Including Those Arriving from			Total Persons Registered	Including Those Arriving from		
		Donetsk Oblast	Luhansk Oblast	AR Crimea		Donetsk Oblast	Luhansk Oblast	AR Crimea
Mykolaiv	16	4	7	5	4	2	2	0
Odesa	56	35	16	5	45	40	4	1
Poltava	9	5	3	1	50	45	4	1
Rivne	2	2	0	0	4	4	0	0
Sumy	20	16	3	1	25	19	6	0
Ternopil	6	5	1	0	8	7	1	0
Kharkiv	11	4	6	1	47	29	13	5
Kherson	5	2	2	1	12	10	0	2
Khmelnyskyi	7	5	2	0	20	17	3	0
Cherkasy	0	0	0	0	0	0	0	0
Chernivtsi	14	8	3	3	0	0	0	0
Chernihiv	3	0	2	1	11	9	2	0
City of Kyiv	130	75	39	16	136	99	26	11

¹ Excluding data for a part of the area affected by the anti-terrorist operation

Table 9. Persons Newly Diagnosed with HIV Infection Aged 15–24 Years in 2013–2015

Region	2013		2014		2015	
	Including Those Aged 15–24 Years	Percentage of All New HIV Infections	Including Those Aged 15–24 Years	Percentage of All New HIV Infections	Including Those Aged 15–24 Years	Percentage of All New HIV Infections
Ukraine¹	1,466	7.2	1,298	6.7	909	5.7
Ukraine (Including AR Crimea and the city of Sevastopol)	1,534	7.1				
AR Crimea	55	5.1				
Vinnytsia	38	12.1	28	7.1	22	7.3
Volyn	20	7.5	20	7.6	21	7.6
Dnipropetrovsk	161	4.7	143	4.5	128	4.4
Donetsk	229	6.3	242	8.0	56	5.5
Zhytomyr	47	11.1	31	7.7	31	6.7
Zakarpattia	16	19.8	4	4.8	3	4.2
Zaporizhzhia	39	6.4	38	6.2	38	6.6
Ivano-Frankivsk	10	6.3	22	12.0	8	4.4
Kyiv	72	9.9	74	7.5	54	5.5
Kirovohrad	21	6.1	28	6.1	19	3.7
Luhansk	88	9.7	42	8.1	6	3.3

Region	2013		2014		2015	
	Including Those Aged 15–24 Years	Percentage of All New HIV Infections	Including Those Aged 15–24 Years	Percentage of All New HIV Infections	Including Those Aged 15–24 Years	Percentage of All New HIV Infections
Lviv	46	11.0	50	10.2	32	7.0
Mykolaiv	65	6.0	32	2.9	42	4.9
Odesa	245	8.9	207	7.9	149	6.3
Poltava	51	10.0	32	7.6	24	5.3
Rivne	28	11.0	22	8.5	20	8.0
Sumy	19	9.2	17	8.4	17	7.6
Ternopil	11	8.3	8	7.5	2	1.7
Kharkiv	34	5.3	41	7.6	41	7.8
Kherson	44	7.9	26	4.9	26	5.0
Khmelnytskyi	14	4.2	18	6.3	11	5.7
Cherkasy	34	7.5	55	9.1	30	5.5
Chernivtsi	9	8.3	9	7.9	6	6.1
Chernihiv	32	6.3	32	6.3	20	4.0
City of Kyiv	93	6.6	77	5.6	103	7.9
City of Sevastopol	13	5.2				

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015). For comparison purposes only, appropriate 2013 data for AR Crimea and the city of Sevastopol are provided

Table 10. Distribution of HIV Infections Among Ukrainian Nationals by Mode of Transmission¹

Mode of HIV Transmission	New HIV Infections Registered During the Reporting Year			HIV-Infected Persons Registered for Monitoring and Follow-up as of the End of the Reporting Year		
	2013	2014	2015	2013	2014	2015
Total persons infected	21,631	19,273	15,869	139,573	137,970	126,604
Including those: Infected by sexual transmission	11,734	10,925	9,411	70,341	72,561	69,054
Including: <i>Homosexual transmissions</i>	262	277	368	884	1,221	1,368
<i>Heterosexual transmissions</i>	11,472	10,648	9,043	69,457	71,340	67,686
Those infected parenterally	5,849	4,674	3,450	56,940	53,976	47,826
Including infections transmitted through: <i>Intravenous drug use</i>	5,847	4,670	3,449	56,886	53,920	47,776
<i>Transfusion of blood-derived products or blood components</i>	0	0	0	14	13	11

Mode of HIV Transmission	New HIV Infections Registered During the Reporting Year			HIV-Infected Persons Registered for Monitoring and Follow-up as of the End of the Reporting Year		
	2013	2014	2015	2013	2014	2015
<i>Transplantation of donor organs, cells, tissues, biological materials (fluids)</i>	0	0	0	0	0	0
<i>Other medical procedures</i>	1	0	0	9	10	8
<i>Occupational exposures</i>	0	0	0	2	1	1
<i>Other non-medical interventions</i>	1	4	1	29	32	30
Infants born to HIV-infected mothers	3,898	3,600	2,967	10,058	9,738	8,540
Including those with: <i>Confirmed HIV infection</i>	127	122	83	3,147	3,036	2,857
<i>HIV infection during confirmatory testing</i>	3,771	3,478	2,884	6,911	6,702	5,683
Mode of transmission not identified	150	74	41	2,234	1,695	1,184

¹ Excluding data for the occupied AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015).

Table 11. HIV Infections Officially Registered Among People Who Inject Drugs (PWIDs) and Their Share in Total New HIV Infections

Region	1997 ¹		2008 ²		2015 ³	
	PWIDs	%	PWIDs	%	PWIDs	%
Ukraine (Excluding AR Crimea and the City of Sevastopol)	6,966	84.3	6,558	36.9	3,449	21.7
Ukraine (Including AR Crimea and the City of Sevastopol)	7,448	83.6	7,009	37.0		
AR Crimea	376	71.9	354	35.3		
Vinnitsia	37	72.5	98	31.5	33	10.9
Volyn	90	94.7	71	29.1	29	10.5
Dnipropetrovsk	2,042	93.1	1,316	42.7	757	26.3
Donetsk	1,710	81.8	1,295	32.4	152	14.9
Zhytomyr	50	89.3	134	39.4	101	21.9
Zakarpattia	21	75.0	3	7.1	5	7.0
Zaporizhzhia	264	89.2	188	35.7	142	24.8
Ivano-Frankivsk	18	90.0	51	30.7	30	16.7
Kyiv	71	89.9	236	33.7	310	31.9
Kirovohrad	16	76.2	53	22.2	98	18.9
Luhansk	147	86.0	295	43.5	35	19.1
Lviv	51	82.3	155	49.2	132	29.1
Mykolaiv	268	85.6	454	38.2	182	21.1
Odesa	769	67.3	431	27.7	319	13.4
Poltava	213	93.0	152	40.2	156	34.7
Rivne	13	68.4	102	47.2	36	14.5

Region	1997 ¹		2008 ²		2015 ³	
	PWIDs	%	PWIDs	%	PWIDs	%
Sumy	19	82.6	55	29.9	52	23.2
Ternopil	30	85.7	68	52.7	11	9.5
Kharkiv	205	74.0	218	42.2	119	22.6
Kherson	64	71.9	233	39.6	114	21.9
Khmelnytskyi	40	81.6	77	38.3	20	10.3
Cherkasy	188	82.5	134	37.5	142	26.2
Chernivtsi	80	94.1	19	21.1	12	12.2
Chernihiv	102	94.4	123	28.1	138	27.7
City of Kyiv	458	90.7	597	47.5	324	24.8
City of Sevastopol	106	85.5	97	43.7		

¹ The year with the highest reported number of HIV cases during the entire course of HIV epidemiological surveillance in Ukraine

² The year that marked a shift in the predominant mode of HIV transmission in Ukraine, from parenteral (artificial) transmission during intravenous drug use to sexual transmission, primarily during heterosexual contact

³ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 12. Concomitant Conditions in Patients with Newly Diagnosed HIV Infection (Regardless of the Stage) Aged 15 Years and Older Registered in Ukraine for Monitoring and Follow-up in 2015¹

Key Criteria	Absolute Number	Share in Percentage, %
Total HIV-infected persons aged 15 years and older,	12,893	
Including:	9,902	76.8
1. Those tested for HBV markers,		
Including those tested positive for HBV markers	835	8.4
2. Those tested for HCV markers,	9,720	75.4
Including those tested positive for HCV markers	3,525	36.3
3. Those tested for sexually transmitted infections (STIs),	10,331	80.1
Including:		
those tested positive for STIs	1,947	18.8
Total persons tested positive for syphilis	89	0.9
4. Persons with reported alcohol and drug addiction issues,	3,872	30.0
Including:		
Those with alcohol issues	1,972	50.9
Those addicted to non-intravenous drugs, psychoactive substances and precursors	1,093	28.2
Active PWIDs	1,140	29.4
5. Percentage share of active PWIDs with newly diagnosed HIV infection transmitted parenterally during intravenous drug use		33.1

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 13. Indicators of Timeliness of HIV Patients' Linkage to HCIs for Monitoring and Follow-Up and Frequency of Medical Check-Ups in 2015

Region	Coverage of HIV-Positive Patients with Monitoring and Follow-Up Services Versus Numbers of Infections Identified Based on SEM Data, %	HIV-Infected Persons Aged 15 Years and Older (New Infections)			Actively Monitored Group ^{1,2} , %
		Percentage of Persons Registered for Monitoring and Follow-Up		Coverage of Target Persons with Research Efforts to Determine Absolute or Relative CD4 Counts ¹ , %	
		Diagnosed with Stages III–IV of HIV Infection	With Immune Suppression Status of 200–349 Cells per mcL and <200 Cells per mcL		
Ukraine	68.4	55.1	49.9	70.3	78.6
Vinnytsia	89.9	48.9	49.8	84.1	85.3
Volyn	85.2	45.6	48.4	89.6	90.3
Dnipropetrovsk	67.7	60.2	57.1	73.3	77.4
Donetsk	62.8	59.9	41.0	49.5	70.1
Zhytomyr	70.1	49.5	49.7	73.3	85.1
Zakarpattia	74.0	52.5	47.5	76.4	83.8
Zaporizhzhia	79.6	49.3	51.3	68.6	78.3
Ivano-Frankivsk	57.7	68.3	44.1	84.3 ³	83.2
Kyiv	70.8	60.6	57.3	71.9	74.1
Kirovohrad	68.8	50.8	46.3	75.4	86.1
Luhansk	92.4	48.0	41.9	80.3	81.4
Lviv	68.7	45.8	46.6	68.7	77.1

Region	Coverage of HIV-Positive Patients with Monitoring and Follow-Up Services Versus Numbers of Infections Identified Based on SEM Data, %	HIV-Infected Persons Aged 15 Years and Older (New Infections)			Actively Monitored Group ^{1,2} , %
		Percentage of Persons Registered for Monitoring and Follow-Up		Coverage of Target Persons with Research Efforts to Determine Absolute or Relative CD4 Counts ¹ , %	
		Diagnosed with Stages III–IV of HIV Infection	With Immune Suppression Status of 200–349 Cells per mcL and <200 Cells per mcL		
Mykolaiv	70.0	51.1	54.5	71.7	73.4
Odesa	69.8	68.5	46.5	56.7	79.3
Poltava	84.4	47.9	51.6	72.2	74.7
Rivne	81.9	35.4	46.4	88.3	89.3
Sumy	82.1	42.2	47.6	71.4	77.6
Ternopil	95.9	40.9	17.2	100.0 ³	95.7
Kharkiv	68.0	55.0	44.0	78.8	81.0
Kherson	79.2	51.9	43.2	81.3	82.6
Khmelnyskyi	60.1	57.3	45.5	82.8	89.4
Cherkasy	87.7	53.5	49.3	73.8	78.1
Chernivtsi	61.3	45.0	53.8	78.3	81.8
Chernihiv	79.2	45.0	45.2	81.9	83.0
City of Kyiv	46.1	42.9	53.5	78.5	81.0

¹ Data adjusted in agreement with the results of regional-level verification and information provided by regional AIDS centers

² The actively monitored group comprises persons who had at least one medical check-up in the reporting year

³ To be re-checked

Table 14. AIDS Prevalence in Ukraine in 2013–2015

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Ukraine¹	8,945	20.8	−7.3	9 844	22.9	+10.1	8468	19.8	−13.7
Ukraine (Including AR Crimea and the City of Sevastopol)	9,362	20.6	−6.7						
AR Crimea	291	14.8	+34.5						
Vinnitsia	171	10.6	−5.8	223	13.8	+30.4	183	11.4	−17.5
Volyn	110	10.6	−24.3	144	13.8	+30.8	128	12.3	−11.2
Dnipropetrovsk	2,071	62.9	+9.5	2,120	64.5	+2.4	2,047	62.7	−2.9
Donetsk	1,973	45.4	−15.5	1 882	43.5	−4.6	645	15.1	−65.4
Zhytomyr	202	16.0	+1.2	185	14.7	−8.1	216	17.3	+17.5
Zakarpattia	35	2.8	+9.0	38	3.0	+8.4	52	4.1	+36.7
Zaporizhzhia	387	21.8	−4.5	386	21.8	−0.3	376	21.4	−2.0
Ivano-Frankivsk	122	8.8	+96.5	113	8.2	−7.3	85	6.1	−24.8
Kyiv	327	19.0	−18.4	325	18.8	−0.6	408	23.6	+25.3
Kirovohrad	75	7.6	+13.2	134	13.6	+78.7	230	23.5	+72.9
Luhansk	361	16.1	+15.5	204	9.1	−43.5	102	4.6	−49.6

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Lviv	209	8.2	+26.8	184	7.2	-12.0	189	7.5	+2.8
Mykolaiv	286	24.5	+16.1	463	39.7	+61.9	371	31.9	-19.5
Odesa	619	25.8	-47.1	1,433	59.8	+131.5	1,407	58.8	-1.7
Poltava	241	16.5	-12.1	201	13.8	-16.6	255	17.7	+27.7
Rivne	68	5.9	+9.4	78	6.7	+14.7	86	7.4	+10.1
Sumy	92	8.1	+66.4	96	8.5	+4.3	99	8.8	+4.0
Ternopil	43	4.0	+44.1	54	5.0	+25.6	41	3.8	-23.8
Kharkiv	287	10.5	+1.6	212	7.8	-26.1	204	7.5	-3.4
Kherson	177	16.5	-9.9	174	16.3	-1.7	187	17.6	+8.0
Khmelnyskyi	137	10.5	-20.7	157	12.0	+14.6	128	9.9	-18.1
Cherkasy	258	20.5	-10.4	284	22.6	+10.1	261	20.9	-7.5
Chernivtsi	30	3.3	-3.5	28	3.1	-6.7	50	5.5	+78.4
Chernihiv	194	18.2	+11.9	227	21.4	+17.0	238	22.6	+5.9
City of Kyiv	470	16.4	+1.5	499	17.3	+6.2	480	16.6	-4.4
City of Sevastopol	126	32.7	-25.3						

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015). For comparison purposes only, appropriate 2013 data for AR Crimea and the city of Sevastopol are provided

Table 15. TB Patients Among Those Newly Diagnosed with AIDS in Ukraine in 2014–2015

Region	2013			2014		
	Total AIDS Patients Diagnosed with TB	Percentage of All New AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV	Total AIDS Patients Diagnosed with TB	Percentage of All New AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV
Ukraine¹	4,849	49.3	74.4	4,470	52.8	83.1
Vinnytsia	70	31.4	80.0	51	27.9	82.4
Volyn	34	23.6	85.3	30	23.4	76.7
Dnipropetrovsk	1,053	49.7	66.4	846	41.3	80.9
Donetsk	280	14.9	100.0	236	36.6	88.1
Zhytomyr	107	57.8	80.4	123	56.9	87.0
Zakarpattia	17	44.7	88.2	23	44.2	95.7
Zaporizhzhia	249	64.5	57.8	194	51.6	49.5
Ivano-Frankivsk	23	20.4	100.0	62	72.9	75.8
Kyiv	132	40.6	95.5	171	41.9	94.2
Kirovohrad	85	63.4	100.0	71	30.9	100.0
Luhansk	82	40.2	72.0	53	52.0	90.6
Lviv	143	77.7	100.0	136	72.0	100.0

Region	2013			2014		
	Total AIDS Patients Diagnosed with TB	Percentage of All New AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV	Total AIDS Patients Diagnosed with TB	Percentage of All New AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV
Mykolaiv	379	81.9	60.9	368	99.2	56.3
Odesa	947	66.1	60.3	976	69.4	88.0
Poltava	100	49.8	76.0	71	27.8	84.5
Rivne	47	60.3	93.6	42	48.8	100.0
Sumy	73	76.0	69.9	73	73.7	80.8
Ternopil	13	24.1	53.8	22	53.7	100.0
Kharkiv	128	60.4	93.8	110	53.9	82.7
Kherson	156	89.7	100.0	136	72.7	97.8
Khmelnytskyi	88	56.1	86.4	70	54.7	98.6
Cherkasy	153	53.9	100.0	137	52.5	97.8
Chernivtsi	24	85.7	66.7	45	90.0	91.1
Chernihiv	102	44.9	100.0	96	40.3	93.8
City of Kyiv	364	72.9	70.9	328	68.3	79.6

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015)

Table 16. TB Patients Among Those Diagnosed with AIDS and Registered for Monitoring and Follow-Up in Ukraine

Region	As of January 1, 2015			As of January 1, 2016		
	Total AIDS Patients Diagnosed with TB	Percentage of All AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV	Total AIDS Patients Diagnosed with TB	Percentage of All AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV
Ukraine¹	14,688	44.1	28.7	12,566	36.9	28.5
Vinnytsia	291	33.4	20.3	360	36.4	18.1
Volyn	65	13.3	53.8	53	9.6	41.5
Dnipropetrovsk	3,440	55.9	18.0	3,211	45.0	24.0
Donetsk	2,806	37.4	24.8	1,371	33.2	20.3
Zhytomyr	412	63.7	20.9	479	62.9	22.3
Zakarpattia	26	29.9	76.9	30	24.2	83.3
Zaporizhzhia	167	14.8	44.3	271	20.5	31.7
Ivano-Frankivsk	43	13.9	60.5	50	13.9	40.0
Kyiv	231	15.5	65.8	511	28.2	46.4
Kirovohrad	284	96.3	100.0	308	71.1	37.0
Luhansk	373	44.6	28.4	180	45.2	27.2
Lviv	628	77.6	22.8	687	74.8	19.8

Region	As of January 1, 2015			As of January 1, 2016		
	Total AIDS Patients Diagnosed with TB	Percentage of All AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV	Total AIDS Patients Diagnosed with TB	Percentage of All AIDS Cases	Percentage of Newly Diagnosed TB Cases Among Patients Diagnosed with TB/HIV
Mykolaiv	417	40.0	37.9	374	30.1	52.7
Odesa	2,275	50.6	33.5	1,054	19.3	49.0
Poltava	144	18.3	34.7	111	11.7	38.7
Rivne	171	70.7	25.7	194	64.5	21.6
Sumy	78	24.1	21.8	74	19.2	37.8
Ternopil	16	11.5	50.0	55	35.3	100.0
Kharkiv	204	35.9	57.4	205	29.8	42.0
Kherson	236	33.5	52.5	225	28.0	23.1
Khmelnyskyi	229	43.2	16.2	262	42.8	21.4
Cherkasy	595	66.5	25.7	628	62.5	19.4
Chernivtsi	96	49.5	12.5	152	63.9	25.0
Chernihiv	148	22.8	62.2	177	21.4	48.0
City of Kyiv	1,313	62.6	25.7	1,544	64.5	22.9

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015)

Table 17. AIDS-Related Mortality in Ukraine in 2013–2015

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Ukraine¹	3,367	7.8	−8.9	3,426	8.0	+1.8	3,032	7.1	−11.2
Ukraine (Including AR Crimea and the City of Sevastopol)	3,514	7.7	−8.9						
AR Crimea	107	5.4	+1.7						
Vinnytsia	56	3.5	+0.8	52	3.2	−7.1	44	2.7	−15.0
Volyn	62	6.0	+19.0	49	4.7	−21.0	59	5.7	+20.3
Dnipropetrovsk	930	28.2	−1.7	928	28.2	−0.2	920	28.2	−0.3
Donetsk	648	14.9	−23.1	719	16.6	+11.0	337	7.9	−52.7
Zhytomyr	82	6.5	−12.2	83	6.6	+1.2	87	6.9	+5.4
Zakarpattia	12	1.0	−14.6	10	0.8	−16.7	12	1.0	+19.9
Zaporizhzhia	121	6.8	−10.4	130	7.3	+7.4	155	8.8	+20.0
Ivano-Frankivsk	41	3.0	+115.5	32	2.3	−22.0	29	2.1	−9.4
Kyiv	64	3.7	−48.5	56	3.2	−12.5	106	6.1	+88.9
Kirovohrad	63	6.4	+99.1	65	6.6	+3.2	91	9.3	+41.0
Luhansk	143	6.4	+19.5	108	4.8	−24.5	41	1.9	−61.7

Region	2013			2014			2015		
	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %	Absolute Number	Per 100,000 Population	Rate of Growth, %
Lviv	79	3.1	+1.4	75	3.0	−5.1	78	3.1	+4.1
Mykolaiv	118	10.1	+6.0	131	11.2	+11.0	112	9.6	−14.1
Odesa	290	12.1	−8.2	366	15.3	+26.2	326	13.6	−10.8
Poltava	80	5.5	−41.9	87	6.0	+8.8	95	6.6	+9.9
Rivne	17	1.5	−15.2	20	1.7	+17.6	23	2.0	+14.9
Sumy	19	1.7	+60.4	14	1.2	−26.3	21	1.9	+51.3
Ternopil	16	1.5	+0.5	23	2.1	+43.8	17	1.6	−25.8
Kharkiv	77	2.8	−6.0	34	1.2	−55.8	58	2.1	+71.2
Kherson	37	3.4	+28.6	33	3.1	−10.8	35	3.3	+6.6
Khmelnyskyi	48	3.7	−13.6	55	4.2	+14.6	44	3.4	−19.6
Cherkasy	82	6.5	−21.1	67	5.3	−18.3	75	6.0	+12.7
Chernivtsi	13	1.4	−7.4	16	1.8	+23.1	13	1.4	−18.8
Chernihiv	77	7.2	11.7	74	7.0	−3.9	71	6.8	−3.0
City of Kyiv	192	6.7	−11.2	199	6.9	+3.6	183	6.3	−8.6
City of Sevastopol	40	10,4	−25,2						

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015). For comparison purposes only, appropriate 2013 data for AR Crimea and the city of Sevastopol are provided

Table 18. Causes of Death of HIV-Infected Persons in Ukraine in 2014–2015¹

Region	2014			2015		
	Total	Those Accessing ART		Total	Those Accessing ART	
		Total	Percentage of Patients in Need of ART		Total	Percentage of Patients in Need of ART
Total deaths, Including:	5,893	2,318	46.2	4,990	1,976	45.3
Those directly related to HIV infection	3,742	1,680	44.9	3,154	1,278	40.5
Including: Those diagnosed with Stage III of HIV infection	316	161	50.9	122	29	23.8
Those diagnosed with Stage IV of HIV infection	3,426	1,519	44.3	3,032	1,249	41.2
Including those due to: TB/HIV co-infection	2,183	1,077	49.3	1,675	799	47.7
Not related to HIV infection	2,127	635	50.4	1,821	694	57.8
Including those due to: TB	165	54	41.2	114	42	44.2
HBV and/or HCV, cirrhosis Liver disease of viral etiology	461	132	49.6	373	140	53.2
Other conditions	1,198	342	48.6	1,068	397	59.1
Other causes	303	107	67.3	266	115	67.6
Cause of death unknown	24	3	25.0	15	4	57.1
Percentage of people who inject drugs among those who died	45.7			45.2		

¹ Excluding data for AR Crimea, the city of Sevastopol (since 2014), and a part of the area affected by the anti-terrorist operation (since 2015)

Table 19. HIV and AIDS Prevalence Among Ukrainian Nationals As of January 1, 2016 (Based on Medical Records, Per 100,000 Population)

Region	Persons with HIV	HIV Prevalence	Persons with AIDS	AIDS Prevalence
Ukraine	126,604	297.2	34,016	79.8
Vinnysia	2,471	154.8	988	61.9
Volyn	1,914	184.0	552	53.1
Dnipropetrovsk	25,181	774.0	7,142	219.5
Donetsk ¹	12,656	297.5	4,128	97.0
Zhytomyr	2,854	228.5	761	60.9
Zakarpattia	421	33.5	124	9.9
Zaporizhzhia	4,051	231.0	1,323	75.4
Ivano-Frankivsk	892	64.6	359	26.0
Kyiv	5,712	330.9	1,811	104.9
Kirovohrad	2,420	250.2	433	44.8
Luhansk ¹	1,971	89.5	398	18.1
Lviv	2,993	118.9	918	36.5
Mykolaiv	7,832	676.2	1,244	107.4
Odesa	19,550	821.5	5,474	230.0
Poltava	3,188	222.6	950	66.3
Rivne	1,651	142.2	301	25.9
Sumy	1,293	116.3	386	34.7
Ternopil	912	85.8	156	14.7
Kharkiv	3,300	122.1	689	25.5
Kherson	4,021	378.8	803	75.6
Khmelnytskyi	2,033	157.3	612	47.4
Cherkasy	3,279	264.4	1,004	81.0
Chernivtsi	833	91.8	238	26.2
Chernihiv	3,522	339.5	828	79.8
City of Kyiv	11,654	407.0	2,394	83.6

¹ Excluding data for a part of the area affected by the anti-terrorist operation

Table 20. Official Record of Children Aged 0-18 Years in Health Care Institutions Responsible for Monitoring and Follow-Up for HIV-Infected Patients, in 2015

Region	New Infections in 2015					Those Monitored as of January 1, 2016			
	HIV Infections ¹			AIDS Cases	Deaths	HIV-Infected Children ¹			Including Those with AIDS
	Aged 0–18 Years	Including				Aged 0–18 Years	Including		
		Aged 0–14 Years	Aged 15–17 Years				Aged 0–14 Years	Aged 15–17 Years	
Ukraine	3,011	2,976	35	52	57	8,609	8,229	380	809
Vinnysia	84	84	0	2	2	188	183	5	30
Volyn	62	62	0	1	1	130	127	3	11
Dnipropetrovsk	517	506	11	15	5	1,476	1,383	93	166
Donetsk ²	241	238	3	2	9	681	655	26	60
Zhytomyr	92	92	0	0	2	226	223	3	27
Zakarpattia	12	12	0	0	1	45	44	1	5
Zaporizhzhia	81	80	1	0	1	204	191	13	23
Ivano-Frankivsk	19	19	0	0	1	59	56	3	13
Kyiv	190	189	1	2	0	471	449	22	80
Kirovohrad	119	119	0	3	5	329	328	1	19
Luhansk ²	35	35	0	1	1	116	109	7	5
Lviv	75	74	1	0	1	253	250	3	12

Region	New Infections in 2015					Those Monitored as of January 1, 2016			
	HIV Infections¹			AIDS Cases	Deaths	HIV-Infected Children¹			Including Those with AIDS
	Aged 0–18 Years	Including				Aged 0–18 Years	Including		
		Aged 0–14 Years	Aged 15–17 Years				Aged 0–14 Years	Aged 15–17 Years	
Mykolaiv	154	151	3	1	5	499	454	45	20
Odesa	458	451	7	9	14	1,646	1,571	75	81
Poltava	77	75	2	2	3	207	191	16	15
Rivne	58	57	1	0	1	110	108	2	7
Sumy	39	39	0	2	0	99	96	3	5
Ternopil	23	23	0	2	0	39	39	0	5
Kharkiv	109	108	1	0	2	254	245	9	11
Kherson	109	109	0	2	1	289	281	8	16
Khmelnyskyi	51	51	0	1	1	169	162	7	46
Cherkasy	82	81	1	1	1	233	219	14	25
Chernivtsi	18	18	0	0	0	133	133	0	54
Chernihiv	79	78	1	0	0	221	213	8	15
City of Kyiv	227	225	2	6	0	532	519	13	58

¹ Including infants born to HIV-infected mothers, whose HIV status is indeterminate

² Excluding data for a part of the area affected by the anti-terrorist operation

Table 21. Official Record of Infants Born to HIV-Infected Mothers in Health Care Institutions Responsible for Monitoring and Follow-Up for HIV-Infected Patients, in 2015

Region	New Infections in 2015		Those Taken off the Books Due to Lack of HIV Diagnosis	Those Monitored As of January 1, 2016		
	Infants Born to HIV-Infected Mothers ¹	AIDS Cases		HIV-Infected Children	Including Those with AIDS	Children Diagnosed with HIV Infection Being Re-Tested for Confirmatory Purposes
Ukraine	2,967	48	2,932	2,857	794	5,683
Vinnytsia	84	2	63	46	31	143
Volyn	62	1	47	41	11	89
Dnipropetrovsk	506	15	508	623	179	868
Donetsk ²	237	1	284	247	58	413
Zhytomyr	91	0	74	51	23	166
Zakarpattia	12	0	12	9	3	34
Zaporizhzhia	80	0	109	61	21	140
Ivano-Frankivsk	19	0	20	23	11	34
Kyiv	188	1	148	120	68	319
Kirovohrad	118	3	78	107	15	222
Luhansk ²	35	1	54	43	5	73
Lviv	75	0	101	48	11	203

Region	New Infections in 2015		Those Taken off the Books Due to Lack of HIV Diagnosis	Those Monitored As of January 1, 2016		
	Infants Born to HIV-Infected Mothers ¹	AIDS Cases		HIV-Infected Children	Including Those with AIDS	Children Diagnosed with HIV Infection Being Re-Tested for Confirmatory Purposes
Mykolaiv	150	1	197	188	19	303
Odesa	450	10	345	477	88	1,177
Poltava	75	2	78	70	15	137
Rivne	57	0	66	22	7	86
Sumy	38	1	38	30	4	67
Ternopil	22	1	19	5	4	33
Kharkiv	108	0	85	57	11	194
Kherson	109	2	105	92	16	197
Khmelnytskyi	51	1	57	50	46	119
Cherkasy	81	1	98	87	25	143
Chernivtsi	18	0	20	96	54	37
Chernihiv	77	0	87	87	16	132
City of Kyiv	224	5	239	177	53	354

¹ Including infants born to HIV-infected mothers, whose HIV status is indeterminate

² Excluding data for a part of the area affected by the anti-terrorist operation

Table 22. Rates of HIV Mother-To-Child Transmission (MTCT) (Based on Cohort Analysis Data for 2011, 2012, and 2013)¹

Region	2011		2012		2013		MTCT Av ² %
	HIV-Infected Infants	HIV-Infected Infants	HIV-Infected Infants	MTCT, %	HIV-Infected Infants	MTCT, %	
Ukraine	132	3.82	149	4.31	111	3.91	4.11
AR Crimea	4	2.13	x	x	x	x	x
Vinnytsia	3	5.08	8	13.11	2	2.86	6.78
Volyn	4	8.51	1	1.89	1	1.89	4.08
Dnipropetrovsk	21	4.17	33	5.96	28	5.89	5.65
Donetsk	33	5.0	37	6.01	10	4.05	5.54
Zhytomyr	2	1.89	3	2.83	0	0.0	1.7
Zakarpattia	0	0.0	0	0.0	1	10.0	3.03
Zaporizhzhia	2	2.35	4	4.08	1	1.1	2.62
Ivano-Frankivsk	1	4.17	0	0.0	1	4.0	2.6
Kyiv	6	3.55	4	2.96	8	5.84	4.26
Kirovohrad	4	4.35	5	5.62	8	8.89	6.69
Luhansk	2	1.98	2	1.47	2	5.13	2.22
Lviv	1	1.28	0	0.0	1	1.32	0.89
Mykolaiv	8	3.59	8	3.67	7	3.74	3.8

Region	2011		2012		2013		MTCT Av ² %
	HIV-Infected Infants	HIV-Infected Infants	HIV-Infected Infants	MTCT, %	HIV-Infected Infants	MTCT, %	
Odesa	21	4.87	21	4.64	18	4.85	5.02
Poltava	4	4.26	1	1.52	3	4.0	3.52
Rivne	0	0.0	3	6.25	2	3.7	3.38
Sumy	1	2.63	4	10.81	0	0.0	4.59
Ternopil	0	0.0	0	0.0	1	7.14	2.38
Kharkiv	1	1.12	0	0.0	1	1.01	0.7
Kherson	2	2.13	1	0.98	2	1.87	1.68
Khmelnyskyi	2	3.51	1	1.75	0	0.0	1.71
Cherkasy	5	5.0	4	4.08	4	4.3	3.96
Chernivtsi	1	5.0	0	0.0	0	0.0	1.92
Chernihiv	3	3.45	4	4.82	4	4.12	4.3
City of Kyiv	5	2.25	5	2.46	6	2.74	2.55
City of Sevastopol	0	0.0	x	x			

¹ Excluding data contained in Reporting Form No. 63-1 from AR Crimea, the city of Sevastopoly in 2014, and a part of the area affected by the anti-terrorist operation in 2015

² MTCT is the average rate calculated using the Interval Aggregation Method, taking into account the number of children diagnosed with HIV infection and the number of cases involving HIV-infected children reported in 2011–2013 for each region and the country as a whole. This method is used for monitoring projects where researchers are sometimes unable to identify a clear trend in the dynamics of a phenomenon being examined over a lengthy period of time

Table 23. Progress Indicators for the Mother-to-Child HIV Transmission Prevention Program in Different Regions of Ukraine in 2015

Region	PMTCT Program Progress Indicators in 2015													
	Percentage of Pregnant Women Reached with HIV Testing	Percentage of Pregnant Women Diagnosed as HIV-Positive After 26 Weeks of Pregnancy , During or After Childbirth (Among New HIV Infections)	Percentage of HIV-Infected Pregnant Women Receiving Antiretroviral Drugs	Number of Births Given by HIV-Infected Women	Percentage of HIV-Infected Women Brought to Maternity Hospitals/Obstetric Units Prior to Labor and Delivery	Percentage of HIV-Infected Women with Babies Delivered by Cesarean Section	Percentage of HIV-Infected Pregnant Women Continuing to Receive ART After Childbirth	Number of Live Births by HIV-Infected Women	Percentage of Babies Born to HIV-Infected Women Receiving ARVs for Preventive Purposes	Percentage of Bottle-Fed Babies Born to HIV-Infected Women	Percentage of Babies Born to HIV-Infected Women Involved in Early Detection Efforts During the Reporting Year (DNA PCR)	Number of New HIV Infections Among Babies Born to HIV-Infected Women in 2015 (Based on DNA PCR Tests, RNA diagnostics)	Rate of HIV Transmission from Mother to Child in 2015, Based on PCR Tests	Number and Percentage of HIV-Infected Children Aged Under 18 Years Monitored by Health Care Services and Living in Families (with Parents, Family Members, Adopted)
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ukraine	97.6	22.4	95.0	2 962	62.3	32.9	54.8	2 982	97.3	98.1	84.3	54	2.1	2927/93%
Vinnytsia	97.0	26.1	97.6	82	54.9	17.1	58.8	83	100.0	100.0	97.3	2	2.4	41 / 91%
Volyn	97.3	25.0	95.1	61	60.7	47.5	65.5	61	98.4	98.4	61.1	1	1.7	36 / 88%
Dnipropetrovsk	96.3	25.6	93.2	511	71.6	25.0	23.5	516	97.9	99.6	76.4	17	3.8	565 / 93%
Donetsk	96.9	35.3	91.7	240	67.5	27.9	46.8	246	97.2	98.4	47.6	3	1.2	236 / 88%
Zhytomyr	97.5	11.8	100.0	86	51.2	46.5	68.6	88	100.0	100.0	98.9	2	2.4	54 / 90%

<i>A</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>
Zakarpattia	98.5	28.6	100.0	11	0.0	9.1	90.9	12	91.7	100.0	84.2	2	x	8 / 73%
Zaporizhzhia	91.8	16.3	92.9	85	47.1	42.4	54.4	83	98.8	98.8	97.0	1	1.5	61 / 95%
Ivano-Frankivsk	99.0	12.5	100.0	16	56.3	43.8	100.0	17	100.0	100.0	100.0	0	0.0	24 / 95%
Kyiv	97.3	24.7	98.4	186	52.7	22.0	83.1	186	97.8	99.5	82.0	0	0.0	136 / 89%
Kirovohrad	98.0	21.3	93.9	98	76.5	19.4	26.1	96	95.8	99.0	75.6	4	4.2	98 / 92%
Luhansk	98.4	15.4	91.7	36	55.6	25.0	100.0	35	100.0	100.0	97.8	0	0.0	40 / 93%
Lviv	98.9	28.1	92.5	67	52.2	52.2	100.0	69	98.6	98.6	80.0	3	4.1	47 / 94%
Mykolaiv	97.8	12.2	99.3	150	39.3	26.7	83.9	151	99.3	99.3	94.2	2	1.4	185 / 94%
Odesa	98.8	27.1	96.2	423	70.0	52.7	72.7	422	99.5	99.8	92.5	8	2.3	420 / 90%
Poltava	96.5	11.4	98.7	75	88.0	18.7	59.5	73	98.6	98.6	80.5	1	1.6	68 / 97%
Rivne	97.9	16.0	94.7	57	63.2	36.8	29.6	56	100.0	100.0	98.4	0	0.0	24 / 100%
Sumy	98.1	10.7	100.0	34	88.2	50.0	60.6	34	100.0	100.0	100.0	0	0.0	26 / 81%
Ternopil	98.1	0.0	100.0	20	75.0	15.0	70.0	20	100.0	100.0	94.7	0	0.0	5 / 83%
Kharkiv	96.7	26.1	98.1	104	64.4	21.2	55.9	108	98.1	99.1	90.6	0	0.0	58 / 97%
Kherson	97.6	4.9	97.2	106	50.0	34.0	72.8	107	98.1	98.1	93.9	2	2.0	89 / 97%
Khmelnyskyi	98.6	25.0	98.0	50	98.0	56.0	42.9	50	98.0	100.0	98.3	1	2.1	50 / 98%
Cherkasy	97.1	26.1	97.5	79	54.4	34.2	50.6	78	100.0	100.0	93.6	0	0.0	84 / 93%
Chernivtsi	97.7	0.0	100.0	17	76.5	47.1	58.8	18	100.0	100.0	90.0	2	x	96 / 100%
Chernihiv	97.9	14.3	94.6	74	31.1	20.3	67.1	72	97.2	100.0	95.7	0	0.0	87 / 98%
City of Kyiv*	99.4	15.7	88.8	294	56.1	32.3	29.9	301	86.4	86.4	96.8	3	1.6	172 / 97%

Table 24. Institutions and Organizations Delivering ART to HIV/AIDS-Infected Patients in Different Regions of Ukraine

Region	As of January 1, 2014	As of January 1, 2015	As of January 1, 2016
Ukraine	197	216	235
Vinnysia	5	5	6
Volyn	2	2	4
Dnipropetrovsk	30	32	37
Donetsk	43	43	21 ³
Zhytomyr	2	3	5
Zakarpattia	1	1	1
Zaporizhzhia	5	6	7
Ivano-Frankivsk	1	1	1
Kyiv	6	6	11
Kirovohrad	1	2	2
Luhansk	9	9	5 ³
Lviv	5	7	8
Mykolaiv	9	9	9
Odesa	21 ¹	23 ¹	34 ¹
Poltava	9	9	12
Rivne	3	3	7
Sumy	3	5	5
Ternopil	3	3	3
Kharkiv	7	7	11
Kherson	7	7	10
Khmelnytskyi	4	6	7
Cherkasy	13	19	20
Chernivtsi	1	1	1
Chernihiv	2	2	3
City of Kyiv	3 ²	3 ²	3 ²
National-Level Institutions	2	2	2

These data exclude appropriate details for AR Crimea and the city of Sevastopol

¹ *Includes seven ART sites of the Odesa City AIDS Center*

² *Includes three ART sites of the Kyiv City AIDS Center*

³ *Excluding data for a part of the area affected by the anti-terrorist operation*

Table 25. Total Persons Infected with HIV/AIDS Receiving ART as of January 1, 2016¹

Region/ Organization	Healthcare Institutions of MoH and the National Academy of Medical Sciences of Ukraine [NAMS]				Healthcare Institutions Affiliated with SPSU	Total Number
	Adults		Children	Total, HCIs of Ukraine's MoH and NAMS	Adults	
	Government Funding	Global Fund Round 10	Government Funding		Global Fund Round 10	
Total	39,697	16,300	2,761	58,758	1,995	60,753
Vinnitsia	875	363	39	1,277	41	1,318
Volyn	601	234	39	874	24	898
Dnipropetrovsk	6,008	3,388	544	9,940	336	10,276
Donetsk	3,581	1,101	233	4,915	54	4,969
Zhytomyr	804	366	55	1,225	65	1,290
Zakarpattia	168	20	10	198	0	198
Zaporizhzhia	1,342	516	65	1,923	100	2,023
Ivano-Frankivsk	522	75	21	618	5	623
Kyiv	1,383	813	142	2,338	166	2,504
Kirovohrad	669	255	82	1,006	28	1,034
Luhansk	980	217	41	1,238	9	1,247
Lviv	862	360	46	1,268	127	1,395
Mykolaiv	3,542	1,057	184	4,783	181	4,964

Region/ Organization	Healthcare Institutions of MoH and the National Academy of Medical Sciences of Ukraine [NAMS]				Healthcare Institutions Affiliated with SPSU	Total Number
	Adults		Children	Total, HCIs of Ukraine's MoH and NAMS	Adults	
	Government Funding	Global Fund Round 10	Government Funding		Global Fund Round 10	
Odesa	5,197	2,322	399	7,918	152	8,070
Poltava	1,147	411	65	1,623	92	1,715
Rivne	450	178	20	648	55	703
Sumy	422	148	32	602	24	626
Ternopil	444	84	3	531	41	572
Kharkiv	1,057	633	53	1,743	176	1,919
Kherson	1 263	500	89	1,852	177	2,029
Khmelnyskyi	552	274	48	874	42	916
Cherkasy	806	500	81	1,387	64	1,451
Chernivtsi	231	100	92	423	2	425
Chernihiv	1,131	418	80	1,629	34	1,663
City of Kyiv	3,620	1,233	168	5,021	–	5,021
NCSH “OKHMATDYT”	79	10	130	219	–	219
IEID (NAMS)	1,961	724	0	2,685	–	2,685

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 26. Comparative Table of Numbers of Persons Receiving ART in Healthcare Institutions of Ukraine's Ministry of Health and the National Academy of Medical Sciences of Ukraine as of January 1, 2015 and January 1, 2016¹

Region/ Organization	Total Persons Receiving APT		Annual Growth (In Absolute Numbers)	Annual Growth
	As of January 1, 2015	as of January 1, 2016		
Total	53,937	60,753	6,816	13.0%
Vinnysia	1,187	1,318	131	11.4%
Volyn	869	898	27	3.2%
Dnipropetrovsk	9,047	10,276	1,195	13.7%
Donetsk	4,541	4,969	425	9.5%
Zhytomyr	1,128	1,290	147	13.6%
Zakarpattia	146	198	52	35.6%
Zaporizhzhia	1,782	2,023	207	12.1%
Ivano-Frankivsk	555	623	66	12.0%
Kyiv	1,950	2,504	540	30.0%
Kirovohrad	854	1,034	183	22.2%
Luhansk	1,244	1,247	86	7.5%
Lviv	1,279	1,395	119	10.4%
Mykolaiv	4,646	4,964	324	7.3%
Odesa	6,895	8,070	1,174	17.4%
Poltava	1,547	1,715	164	11.2%
Rivne	662	703	34	5.5%
Sumy	554	626	76	14.4%
Ternopil	528	572	48	9.9%
Kharkiv	1,796	1,919	118	7.3%
Kherson	1,844	2,029	164	9.7%
Khmelnytskyi	793	916	122	16.2%
Cherkasy	1,201	1,451	239	20.8%
Chernivtsi	378	425	50	13.4%
Chernihiv	1,475	1,663	188	13.0%
City of Kyiv	4,499	5,021	522	11.6%
NCSH "OKHMATDYT"	209	219	10	4.8%
NAMS IEID	2,328	2,685	357	15.3%

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 27. Total Persons Infected with HIV/AIDS Receiving and Needing ART in Healthcare Institutions of Ukraine's Ministry of Health and the National Academy of Medical Sciences of Ukraine as of January 1, 2016.¹
*(Based on Data from Reporting Form No. 56)**

Description	Total Persons Receiving ART	Total Persons Needing ART (Among Those Not Receiving ART)	Total Persons Needing ART (Including Those Receiving ART)
Total Number, Including:	60,753	4,438	65,191
Total adults aged 18 years and older:	57,992	4,394	62,386
Including: men	30,891	2,415	33,306
women	27,101	1,979	29,080
Total children aged 0–18 years:	2,761	44	2,805
Including: boys	1,321	22	1,343
girls	1,440	22	1,462
Including: children aged 0–3 years (inclusive),	374	x	374
children aged 4–10 years (inclusive)	1,293	x	1,293
children aged 11–14 years (inclusive)	748	x	748
children aged 15–18 years	346	x	346
Persons with active tuberculosis	5,273	909	6,182
Persons with active HIV infection	6,575	988	7,563

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

**Table 28. Characteristics of the Patient Cohort Starting ART in 2014,
12 Months After Initiation of ART (Based on Data from Reporting Form No. 57)¹**

Region/ Organization	Percentage of Persons Receiving ART 12 Months After Initiation of Therapy	Percentage of Persons Discontinuing Therapy Due to Death Within 12 Months	Percentage of Persons Discontinuing ART Within 12 Months, Overall Number
Total	85.52%	6.2%	8.3%
Vinnysia	81.97%	6.9%	11.2%
Volyn	88.31%	6.5%	5.2%
Dnipropetrovsk	89.21%	6.0%	4.8%
Donetsk	–	–	–
Zhytomyr	82.39%	7.0%	10.6%
Zakarpattia	82.26%	16.1%	1.6%
Zaporizhzhia	73.89%	10.5%	15.6%
Ivano-Frankivsk	83.57%	4.3%	12.1%
Kyiv	82.89%	6.7%	10.4%
Kirovohrad	68.75%	7.8%	23.4%
Luhansk	–	–	–
Lviv	81.27%	7.0%	11.7%
Mykolaiv	77.91%	10.1%	12.0%
Odesa	93.82%	3.6%	2.5%
Poltava	82.58%	5.9%	11.5%
Rivne	86.05%	6.4%	7.6%
Sumy	85.92%	2.1%	12.0%
Ternopil	89.47%	7.9%	2.6%
Kharkiv	76.80%	2.9%	20.3%
Kherson	82.82%	6.0%	11.2%
Khmelnytskyi	80.10%	13.1%	6.8%
Cherkasy	86.76%	5.1%	8.1%
Chernivtsi	70.24%	7.1%	22.6%
Chernihiv	89.07%	5.3%	5.6%
City of Kyiv	89.42%	5.9%	4.6%
NCSH "OKHMATDYT"	100.00%	0.0%	0.0%
IEID (NAMS)	91.13%	3.2%	5.6%

¹ Excluding data for AR Crimea, the city of Sevastopol, and a part of the area affected by the anti-terrorist operation

Table 29. Inpatient Departments of AIDS Centers in 2015

Calculation Formula	Regional AIDS Centers									City AIDS Centers
	Vinnytsia Oblast Center	Dnipropetrovsk Oblast Center	Zaporizhzhia Oblast Center	Ivano-Frankivsk Oblast Center	Odesa Oblast Center	Mykolaiv Oblast Center	Poltava Oblast Center	Khmelnytskyi Oblast Center	Kyiv City Center	Dnipropetrovsk City Center
	Overall Numbers (Total Beds)									
Total Beds for Inpatients as of the End of 2015	20	30	30	35	50	Starting from Aug. 1, 2015 30	26	30	45	30
Total Physician Positions Occupied x 100 % / Total Staff Physicians	100%	100%	100%	100%	100%	100%	89.6%	89.5%	100%	100%
Total Persons Admitted As Inpatients During 2015	521	646	314	227	845	709	247	345	768	522
Total Inpatients Discharged During 2015 (Including Those Transferred to Other Inpatient Units)	508	646	298	242	798	705	220	320	715	513
Total Ward Deaths Among Inpatients During 2015	14	1	16	18	50	13	25	19	78	26
Total Department Deaths Among Inpatients x 100% / Total Patients Released (Those Discharged and Those Who Died)	2.7%	0.15%	5.1%	6.4%	0.6%	1.8%	10%	5.6%	9.8%	3.8%
Total Bed Days of Inpatients/Total Patients Released	19	15.1	25.5	19.6	20.7	21.8	21.6	20.99	14.4	14.6
Total Patients Treated /Annual Average Beds	26	21.5	10.5	7.8	16.9	15	9.4	11.3	17.3	22.9
Total Bed Days Actually Occupied by Inpatients/ Annual Average Beds	437	326.5	267	153.1	349	325.9	203.2	223.97	249	334.2

Table 30. Laboratory Testing in AIDS Centers in 2015

No.	Name of Oblast/ Institution	CD4 Cell Count, Total Laboratories Across the Region/Total Equipment Units in the Institution	VL, Total Laboratories Across the Region/Total Equipment Units in the Institution	Proviral DNA	HIV Confirmatory Test
1	Vinnitsia	1	1	0 — Testing conducted by Kyiv AIDS Center	Yes
2	Volyn	1 — Testing conducted by Oblast Children's Hospital and Rivne Oblast AIDS Center	0 — Testing conducted by Rivne Oblast AIDS Center	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes
3	Dnipropetrovsk	3	2	1	Yes, two laboratories: Dnipropetrovsk Oblast AIDS Center and Kryvyi Rih City AIDS Center
4	Donetsk	1	1	0 Testing conducted by UCDC	Yes, two laboratories: Slovyansk City AIDS Center and Mariupol City AIDS Center
5	Zhytomyr	0 — Testing conducted by Kyiv City AIDS Center	0 — Testing conducted by Kyiv City AIDS Center	0 — Testing conducted by Kyiv City AIDS Center	Yes
6	Zakarpattia	1	1	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes
7	Zaporizhzhia	1	1	0 — Testing conducted by UCDC	Yes
8	Ivano-Frankivsk	1	1	1	Yes

No.	Name of Oblast/ Institution	CD4 Cell Count, Total Laboratories Across the Region/Total Equipment Units in the Institution	VL, Total Laboratories Across the Region/Total Equipment Units in the Institution	Proviral DNA	HIV Confirmatory Test
9	Kyiv	1 — Testing conducted by Oblast Hospital	0 — Testing conducted by UCDC	0 — Testing conducted by UCDC	No Testing conducted by IEID
10	Kirovohrad	0 — Testing conducted by Odesa Oblast AIDS Center	0 — Testing conducted by Odesa Oblast AIDS Center	0 — Testing conducted by Odesa Oblast AIDS Center	Yes
11	Luhansk	0 — Testing conducted by Kharkiv Oblast AIDS Center	0 — Testing conducted by Kharkiv Oblast AIDS Center	0 — Testing conducted by UCDC	0 — Testing conducted by Kharkiv Oblast AIDS Center
12	Lviv	1	1	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes
13	Mykolaiv	1	1	0 — Testing conducted by Odesa Oblast AIDS Center	Yes
14	Odesa	2	1	1	Yes (by State Institution “Odesa Oblast Laboratory Center of the State Service of Ukraine for Sanitary and Epidemic Control”
15	Poltava	1	1	1	Yes
16	Rivne	1	1	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes
17	Ternopil	1	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes

No.	Name of Oblast/ Institution	CD4 Cell Count, Total Laboratories Across the Region/Total Equipment Units in the Institution	VL, Total Laboratories Across the Region/Total Equipment Units in the Institution	Proviral DNA	HIV Confirmatory Test
18	Kherson	1	1	0 — Testing conducted by Odesa Oblast AIDS Center	Yes
19	Khmelnyskyi	1	0 — Testing conducted by Vinnytsia Oblast AIDS Center	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	No — Testing conducted by Vinnytsia Oblast AIDS Center
20	Cherkasy	1	0 — Testing conducted by Kyiv City AIDS Center	0 — Testing conducted by Kyiv City AIDS Center	Yes
21	Chernivtsi	0 — Testing conducted by Ternopil Oblast AIDS Center	0 — Testing conducted by Zakarpattia Oblast AIDS Center	0 — Testing conducted by Ivano-Frankivsk Oblast AIDS Center	Yes
22	Chernihiv	1	0 — Testing conducted by UCDC	0 — Testing conducted by UCDC	Yes
23	City of Kyiv	2	1	1	Yes
24	UCDC	2	1	1	No
25	IEID	1	1	0	Yes (for the Kyiv oblast)
Total		26	16	6	23

Table 31. HIV-Infected Persons Reached with Testing for CD4 Cell Counts (Lymphocytes) in Different Regions of Ukraine in 2015

Region/ Organization	Those Monitored (Not Receiving ART)	Total Patients on ART (As of January 1, 2015)	Total Patients on ART (As of January 1, 2016)	Patients on ART	Percentage of Those Reached with Testing (ART*2+New ART*1)	Patients Without ART	Percentage of Those Reached with Testing (MG*2), MG=Monitored Group
				Total Tests for CD4 Lymphocytes		Total Tests for CD4 Lymphocytes	
Ukraine	86,570	53,937	60,753	92,867	80.97	41,881	24.19
Vinnytsia	1,120	1,187	1,318	3,228	128.86	1,051	46.92
Volyn	907	869	898	1,760	99.60	968	53.36
Dnipropetrovsk	15,078	9,047	10,276	16 595	85.88	10,280	34.09
Donetsk	24,235	4,541	4,969	6,750	70.98	2,874	5.93
Zhytomyr	1,473	1,128	1,290	1,462	60.46	541	18.36
Zakarpattia	224	146	198	523	152.03	167	37.28
Zaporizhzhia	2,076	1,782	2,023	4,003	105.20	2,225	53.59
Ivano-Frankivsk	260	555	623	951	80.73	119	22.88
Kyiv	3,146	1,950	2,504	3,270	73.42	2,659	42.26
Kirovohrad	1,249	854	1,034	985	52.17	289	11.57
Luhansk	3,215	1,244	1,247	1,045	41.95	254	3.95
Lviv	1,451	1,279	1,395	1,815	67.88	1,129	38.90
Mykolaiv	2,929	4,646	4,964	4,318	44.93	885	15.11

Region/ Organization	Those Monitored (Not Receiving ART)	Total Patients on ART (As of January 1, 2015)	Total Patients on ART (As of January 1, 2016)	Patients on ART	Percentage of Those Reached with Testing (ART*2+New ART*1)	Patients Without ART	Percentage of Those Reached with Testing (MG*2), MG=Monitored Group
				Total Tests for CD4 Lymphocytes		Total Tests for CD4 Lymphocytes	
Odesa	11,207	6,895	8,070	8,730	58.34	4,518	20.16
Poltava	1,372	1,547	1,715	2,997	91.88	1,112	40.52
Rivne	884	662	703	1,282	93.92	1,042	58.94
Sumy	595	554	626	1,434	121.53	747	62.77
Ternopil	311	528	572	668	60.73	351	56.43
Kharkiv	1,214	1,796	1,919	5,090	137.01	1,639	67.50
Kherson	1,984	1 844	2,029	4,077	105.27	1,695	42.72
Khmelnyskyi	1,234	793	916	916	53.60	486	19.69
Cherkasy	1,920	1,201	1,451	3,587	135.26	1,016	26.46
Chernivtsi	383	378	425	1,007	125.40	297	38.77
Chernihiv	1,727	1,475	1,663	3,594	114.53	1,517	43.92
City of Kyiv	6,376	4,499	5,021	11,007	115.62	3,633	28.49
NCSH "OKHMATDYT"	0	209	219	445	103.97	75	0
IEID (NAMS) ¹	0	2,328	2,685	1,328	26.49	312	0

¹ Data for the first quarter of 2015

Table 32. HIV-Infected Persons Reached with Testing for Viral Load Levels in Different Regions of Ukraine in 2015

Region/ Organization	Those Monitored (Not Receiving ART)	Total Patients on ART (As of January 1, 2015)	Total Patients on ART (As of January 1, 2016)	Patients on ART	Percentage of Those Reached with Testing (ART*2+New ART*1)	Patients Without ART	Percentage of Those Reached with Testing (MG *2) MG = Monitored Group
				Total Tests for HIV-1 VL Levels		Total Tests for HIV-1 VL Levels	
Ukraine	86,570	53,937	60,753	37,741	32.9	8,674	5.0
Vinnytsia	1,120	1,187	1,318	915	36.5	175	7.8
Volyn	907	869	898	444	25.1	167	9.2
Dnipropetrovsk	15,078	9,047	10,276	6,494	33.6	3 078	10.2
Donetsk	24,235	4,541	4,969	1,484	15.6	518	1.1
Zhytomyr	1,473	1,128	1,290	983	40.7	97	3.3
Zakarpattia	224	146	198	127	36.9	21	4.7
Zaporizhzhia	2,076	1,782	2,023	1,639	43.1	143	3.4
Ivano-Frankivsk	260	555	623	578	49.1	19	3.7
Kyiv	3,146	1,950	2,504	1,444	32.4	324	5.1
Kirovohrad	1,249	854	1,034	364	19.3	34	1.4
Luhansk	3,215	1,244	1,247	591	23.7	14	0.2
Lviv	1,451	1,279	1,395	1,149	43.0	573	19.7

Region/ Organization	Those Monitored (Not Receiving ART)	Total Patients on ART (As of January 1, 2015)	Total Patients on ART (As of January 1, 2016)	Patients on ART	Percentage of Those Reached with Testing (ART*2+New ART*1)	Patients Without ART	Percentage of Those Reached with Testing (MG *2) MG = Monitored Group
				Total Tests for HIV-1 VL Levels		Total Tests for HIV-1 VL Levels	
Mykolaiv	2,929	4,646	4,964	2,542	26.5	929	15.9
Odesa	11,207	6,895	8,070	4,163	27.8	509	2.3
Poltava	1,372	1,547	1,715	1,042	31.9	192	7.0
Rivne	884	662	703	499	36.6	151	8.5
Sumy	595	554	626	281	23.8	25	2.1
Ternopil	311	528	572	119	10.8	80	12.9
Kharkiv	1,214	1,796	1,919	1,478	39.8	548	22.6
Kherson	1,984	1,844	2,029	1,948	50.3	157	4.0
Khmelnyskyi	1,234	793	916	435	25.5	101	4.1
Cherkasy	1,920	1,201	1,451	971	36.6	106	2.8
Chernivtsi	383	378	425	282	35.1	73	9.5
Chernihiv	1,727	1,475	1,663	1,276	40.7	157	4.5
City of Kyiv	6,376	4,499	5,021	5,185	54.5	282	2.2
NCSH "OKHMATDYT"	0	209	219	170	39.7	7	0
IEID (NAMS)	0	2,328	2,685	1,138	22.7	194	0

Table 33. Numbers of HIV-Infected Persons Tested for Antibodies to HIV ½ Among MARPs Using ELISA Assay Kits Purchased Through GF Funding and Related Test Results (2015)

Region/ City	Total Tests (Including Control and Repeat Tests)	Total Persons Tested	Total Persons with Detected and Confirmed Antibodies to HIV	Percentage of Those Found HIV-Positive
Vinnitsia	0	0	0	0.00
Volyn	1,632	1,489	19	1.28
Dnipropetrovsk	7,296	6,340	328	5.17
Donetsk ¹	4,941	4,208	208	4.94
Zhytomyr	1,920	1694	68	4.01
Zakarpattia	112	102	0	0.00
Zaporizhzhia	4,512	4,037	83	2.06
Ivano-Frankivsk	1,540	1 404	26	1.85
Kyiv	2,304	2,111	177	8.38
Kirovohrad	3,168	2,421	434	17.93
Luhansk ²	–	–	–	–
Lviv	11,687	11,181	207	1.85
Mykolaiv	4,224	3,866	114	2.95
Odesa	4,440	3,125	380	12.16
Poltava	2,545	1,978	155	7.84
Rivne	1,920	1,810	23	0.00
Sumy	4,393	4,107	84	2.05
Ternopil	1,123	1,036	16	1.54
Kharkiv	9,600	8,608	246	2.86
Kherson	3,168	2,745	144	5.25
Khmelnytskyi	1,341	1,267	2	0.16
Cherkasy	1,928	1,756	36	2.05
Chernivtsi	1,440	1,363	6	0.44
Chernihiv	2,112	2,002	31	1.55
City of Kyiv	10,733	9,815	844	8.60
TOTAL	88,079	78,465	3,631	4.63

¹ Data for Quarter 1 provided by the Donetsk Oblast AIDS Center, those for Quarters 2–4 — by the Solvyansk City AIDS Center

² Data not provided

Table 34. 2015 Consolidated Data on ART Virological Efficacy

Region/ Organization	Total Persons Tested	Including Those with VL Levels (RNA Copies per mL)					
		High Efficacy		'Blips'		Low Efficacy	
		VL <40 Copies per mL		VL from 40–1,000 Copies per mL and Upward		VL >1,000 Copies per mL	
			%	Absolute Number	%	Absolute Number	%
Ukraine	38,447	29,882	77.7	4,482	11.7	4,083	10.6
Vinnitsia	851	621	73.0	107	12.6	123	14.5
Volyn	436	309	70.9	71	16.3	56	12.8
Dnipropetrovsk	2,819	2,414	85.6	196	7.0	209	7.4
Donetsk ¹	441	355	80.5	34	7.7	52	11.8
Zhytomyr	788	581	73.7	119	15.1	88	11.2
Zaporizhzhia	1,690	1,318	78.0	173	10.2	199	11.8
Ivano-Frankivsk	738	516	69.9	158	21.4	64	8.7
Kirovohrad	386	274	71.0	55	14.2	57	14.8
Kyiv	1,311	1,053	80.3	122	9.3	136	10.4
Luhansk ²	–	–	–	–	–	–	–
Lviv	1,503	985	65.5	227	15.1	291	19.4
Mykolaiv	2,510	1,930	76.9	253	10.1	327	13.0
Odesa	5,819	4,549	78.2	656	11.3	614	10.6
Poltava	1,082	862	79.7	127	11.7	93	8.6

Region/ Organization	Total Persons Tested	Including Those with VL Levels (RNA Copies per mL)					
		High Efficacy		'Blips'		Low Efficacy	
		VL <40 Copies per mL		VL from 40–1,000 Copies per mL and Upward		VL >1,000 Copies per mL	
			%	Absolute Number	%	Absolute Number	%
Rivne	481	319	66.3	84	17.5	78	16.2
Sumy	423	347	82.0	34	8.0	42	9.9
Ternopil	143	86	60.1	37	25.9	20	14.0
Kharkiv	2,614	1,985	75.9	304	11.6	325	12.4
Kherson	1,725	1,453	84.2	91	5.3	181	10.5
Khmelnytskyi	395	310	78.5	42	10.6	43	10.9
Cherkasy	1,185	899	75.9	162	13.7	124	10.5
Chernihiv	1,163	948	81.5	96	8.3	119	10.2
City of Kyiv	5,306	4,408	83.1	563	10.6	335	6.3
Chernivtsi	238	192	80.7	18	7.6	28	11.8
City of Kryvyi Rih	2,049	1,471	71.8	293	14.30	285	13.9
Zakarpattia	198	142	71.7	31	15.7	25	12.6
City of Mariupol	1,106	732	66.2	254	23.0	120	10.8
NCSH "OKHMATDYT"	186	156	83.9	20	10.8	10	5.4
IEID	861	667	77.5	155	18.0	39	4.5

¹ Data for Quarter 1, 2015

² Data not provided

Table 35. Report on the Results of Tests to Detect HIV-1 Proviral DNA in Infants Born to HIV-Infected Mothers (2015)

Region	Total Babies Tested	Positive Test Results	Babies Born in 2013–2014			Babies Born in 2015		
			Total Babies	Babies Tested Two Times	Positive Test Results	Total Babies	Babies Tested Two Times	Positive Test Results
Vinnitsia	67	2	1	1	0	66	16	2
Volyn	44	1	11	0	0	33	0	1
Dnipropetrovsk	510	16+8 ¹	118	29	3+1 ¹	392	110	13+7 ¹
Donetsk ²								
Zhytomyr	105	2	30	22	1	75	56	1
Zakarpattia	19	2	12	5	0	7	4	2
Zaporizhzhia	98	4	33	2	3	65	22	1
Ivano-Frankivsk	17	0	1	0	0	16	9	0
Kyiv	121	5	18	0	2	103	2	3
Kirovohrad	90	5	18	1	1	72	1	4
Luhansk	41	0+1 ¹	17	7	0+1 ¹	24	20	0
Lviv	74	0	15	5	0	59	23	0
Mykolaiv	146	4	33	1	1	113	1	3
Odesa	397	11+1 ¹	97	9	1	300	79	10+1 ¹
Poltava	66	1	16	1	0	50	7	1
Rivne	59	1	10	0	0	49	2	1
Sumy	38	0	13	0	0	25	0	0
Ternopil	18	0	0	0	0	18	0	0
Kharkiv	104	1	27	3	0	77	19	1
Kherson	127	3+1 ¹	32	0	1+1 ¹	69	0	2
Khmelnytskyi	58	1	12	0	0	46	0	1
Cherkasy	89	0	27	8	0	62	17	0
Chernivtsi	13	1	0	0	0	13	0	1
Chernihiv	89	0	28	10	0	61	15	0
City of Kyiv	249	7	61	21	3	188	50	4
Total	2,639	67+11¹	630	125	16+3¹	1,983	453	51+8¹

¹ Discordant test results to be re-checked

² Data not provided

Table 36. HIV Resistance Mutations to Antiretroviral Drugs in 2015

Region/ Organization	Quota	Total Samples Provided	Those Not Tested ¹		Total Number Tested		Mutations Detected		Mutations Not Detected		Those Tested Negative in PCR	
			Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Vinnitsia	7	21			21	100%	16	76.2%	3	14.3%	2	9.5%
Volyn	5	4			4	100%	3	75%			1	25%
Dnipropetrovsk	34	40	3	7.5%	37	92.5%	12	32.4%	21	56.8%	4	10.8%
Donetsk	45	33	5	15.2%	28	84.8%	14	50%	5	17.9%	9	32.1%
Zhytomyr	8	19	5	26.3%	14	73.7%	13	92.9%	1	7.1%		
Zakarpattia	2	3			3	100%			3	100%		
Zaporizhzhia	15	17	1	5.9%	16	94.1%	4	25%	11	68.8%	1	6.3%
Ivano-Frankivsk	10	14	1	7.1%	13	92.9%	3	23.1%	6	46.2%	4	30.8%
Kyiv	15	36	2	5.6%	34	94.4%	18	52.9%	10	29.4%	6	17.6%
Kirovohrad	8	7	1	14.3%	6	85.7%	3	50%	3	50%		
Luhansk	20	13	3	23.1%	10	76.9%	8	80%	2	20%		
Lviv	23	8	1	12.5%	7	87.5%	5	71.4%	2	28.6%		
Mykolaiv	30	29			29	100%	18	62.1%	8	27.6%	3	10.3%
Odesa	41	57	1	1.8%	56	98.2%	44	78.6%	9	16.1%	3	5.4%
Poltava	9	9	2	22.2%	7	77.8%	3	42.9%	4	57.1%		
Rivne	8	8			8	100%	8	100%				
Sumy	1	2			2	100%	2	100%				

Region/ Organization	Quota	Total Samples Provided	Those Not Tested ¹		Total Number Tested		Mutations Detected		Mutations Not Detected		Those Tested Negative in PCR	
			Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Ternopil	1	0			0							
Kharkiv	25	6			6	100%	5	83.3%	1	16.7%		
Kherson	14	9			9	100%	3	33.3%	6	66.7%		
Khmelnyskyi	6	12	4	33.3%	8	66.7%	6	75%	2	25%		
Cherkasy	17	22			22	100%	12	54.5%	8	36.4%	2	9.1%
Chernivtsi	3	2			2	100%	1	50%	1	50%		
Chernihiv	9	16			16	100%	6	37.5%	5	31.3%	5	31.3%
IEID	10	7			7	100%	3	42.9%	3	42.9%	1	14.3%
NCSH "OKHMATDYT"	10	9	3	33.3%	6	66.7%	4	66.7%	2	33.3%		
Total	414	445	32	7.2%	413	92.8%	246	59.6%	124	30%	43	10.4%

¹ Subjects turned away and not tested for HIV resistance mutations due to the following reasons:

1 — HIV VL data provided not up-to-date (viral load levels recorded six months ago or more);

2 — HIV VL data unavailable;

3 — The blood sample was collected one month after an adjustment in ART regimens (whereas a minimum of six months must pass after the change);

4 — Insufficient HIV VL levels recorded (<2,000 RNA copies per mL);

5 — The blood sample was collected in a container with no EDTA anticoagulant added to prevent clotting;

6 — The patient's code specified on the blood sample container differs from that indicated on the referral form;

7 — The patient was not accessing ART at the time of being tested;

8 — All materials and the referral contaminated with blood plasma during transport.

Annex 2

Territorial Ratings Based on 2015 Statistical Indicators

Rating scores that describe the intensity of the HIV epidemic process are assigned based on the ranking of indicators related to trends in the growth of prevalence levels (P) over the two/three previous years and their rates of growth (R), (*Methodological Guidelines for Physicians (Epidemiologists) Working in Centers for Prevention and Control of AIDS, 'Analysis of the HIV/AIDS Epidemic Situation Based on Statistical Indicators,' MoH of Ukraine, 2006*).

All regions of the country were divided into three groups according to their reported HIV incidence rates based on the calculation of the root mean square deviation (σ) of the HIV incidence rate in 2015.

Group of Regions I includes regions (oblasts) with high HIV incidence rates, i.e., those exceeding 2σ (**> 50.5** cases per 100,000 population); **Group of Regions II** includes regions with medium HIV incidence rates, i.e., those ranging between 1σ and 2σ (**from 25.2 to 50.5** cases per 100,000 population); **Group of Regions III** includes regions with low HIV incidence rates, i.e., equal to 1σ or less (**≤ 25.2** cases per 100,000 population).

For all groups of regions with low, medium, or high HIV prevalence, the territorial rating was determined based on the intensity of the HIV epidemic process, using the ranking of prevalence levels (P) and average rates of growth (R) linked to eight statistical indicators provided in official statistical reports for 2013 — 2015, as set out below:

- HIV incidence among persons aged 15 years and older (based on data from RES) — P1, R1;
- HIV incidence among persons aged 15–24 years (based on data from RES) — (P2, R2);
- HIV prevalence among pregnant women (based on Reporting Forms No. 21, No. 63; this indicator covers the overall number of pregnant women infected with HIV, regardless of the time the subject is tested as HIV-positive) — P3, R3;
- HIV prevalence among pregnant women aged 15–24 years (based on data from RES, this indicator includes new HIV infections among the younger age group of pregnant women) — P4, R4;
- HIV prevalence among people who inject drugs (based on data from RES) — P5, R5;
- HIV prevalence among sex workers (based on data from RES) — P6, R6;

— HIV prevalence among men having sex with men (based on data from RES) — P7, R7;

— Mortality related to HIV (based on data from RES) — P8, R8.

The first rankings with respect to Indicators P1 — P8 are assigned to regions with the lowest levels of said indicators and their related rates of growth. The summary ranking (SR) equals the sum of Indicator [rP] and the rate of growth of Indicator [rR].

Overall Criteria for Selection of Indicators

No.	Criteria	Explanations and Clarifications
1	Accessibility	Ability to obtain measurements for the indicator in all project geographic areas, primarily based on official statistics.
2	Dynamic responsiveness	The indicator is measured over time and shows quantitative trends.
3	Relevance to the stage of the epidemic	The indicator reflects the implementation status of the HIV response among MARPs
4	Accuracy and reliability	Data sources and methodology for estimating the indicator are reliable, indicator components — verifiable.

Based on the rating scores of the indicators that describe the intensity of the HIV epidemic process for 2015, the top (best) ranking in Group of Regions I is assigned to the Mykolaiv oblast, in Group of Regions II — the Cherkasy oblast, and in Group of Regions III — the Chernivtsi oblast.

The worst epidemiological indicators in Group of Regions I are recorded in the Odesa oblast, in Group of Regions II — in the Zaporizhzhia oblast, and in Group of Regions III — in the Sumy oblast.

Calculation of Rating Scores³

1. HIV Prevalence Among Persons Aged 15 and Older⁴ (P_1 , R_1)

Group of Regions I

Region	P_1 (Average 2012–2014) per 100,000 Population	P_1 (2015), per 100,000 Population	R_1 , %	rP_1 (2015)	rR_1
Dnipropetrovsk	99.1	85.2	–14.0	4	2
Kyiv	43.7	54.0	23.7	2	4
Kirovohrad	33.5	48.2	43.8	1	5
Mykolaiv	89.0	72.1	–18.9	2	1
Odesa	103.9	96.5	0.0	5	3

Group of Regions II

Region	P_1 (Average 2012–2014) per 100,000 Population	P_1 (2015), per 100,000 Population	R_1 , %	rP_1 (2015)	rR_1
Volyn	26.1	25.7	–1.8	1	3
Zhytomyr	28.9	35.2	21.7	4	8
Zaporizhzhia	30.5	32.5	6.7	3	6
Poltava	29.7	30.1	1.2	2	4
Kherson	48.1	45.8	–4.8	7	1
Cherkasy	37.4	42.7	14.2	5	7
Chernihiv	44.0	46.3	5.0	8	5
City of Kyiv	46.7	44.8	–4.0	6	2

Group of Regions III

Region	P_1 (Average 2012–2014) per 100,000 Population	P_1 (2015), per 100,000 Population	R_1 , %	rP_1 (2015)	rR_1
Vinnysia	19.9	16.1	–19.0	6	2
Zakarpattia	6.2	5.8	–5.7	1	6
Ivano-Frankivsk	12.2	14.1	15.3	5	9
Lviv	16.1	18.0	11.6	8	8
Rivne	21.3	20.7	–2.7	10	7
Sumy	15.1	19.0	25.5	9	10

Region	P ₁ (Average 2012–2014) per 100,000 Population	P ₁ (2015), per 100,000 Population	R ₁ , %	rP ₁ (2015)	rR ₁
Ternopil	11.1	10.4	–6.8	2	5
Kharkiv	20.6	17.7	–14.0	7	3
Khmelnytskyi	21.7	13.0	–40.0	4	1
Chernivtsi	11.4	10.6	–6.9	3	4

³ Excluding data on the Donetsk and Luhansk oblasts.

⁴ Based on data from RES, total persons with newly diagnosed HIV infection aged 15 years and older per 100,000 population

2. HIV Prevalence Among Persons Aged 15–24 Years⁵ (P₂, R₂)

Group of Regions I

Region	P ₂ (Average 2012–2014) per 100,000 Population	P ₂ (2015), per 100,000 Population	R ₂ , %	rP ₂ (2015)	rR ₂
Dnipropetrovsk	44.2	37.3	–15.7	4	3
Kyiv	32.8	29.3	–10.7	2	5
Kirovohrad	21.3	17.5	–17.9	1	2
Mykolaiv	38.4	32.5	–15.4	3	4
Odesa	67.9	53.1	–21.8	5	1

Group of Regions II

Region	P ₂ (Average 2012–2014) per 100,000 Population	P ₂ (2015), per 100,000 Population	R ₂ , %	rP ₂ (2015)	rR ₂
Volyn	16.7	16.0	–4.2	2	6
Zhytomyr	23.7	20.6	–13.0	4	5
Zaporizhzhia	19.5	21.0	7.7	5	7
Poltava	22.9	15.5	–32.3	1	1
Kherson	26.7	21.6	–19.1	7	4
Cherkasy	30.7	22.1	–27.8	6	2
Chernihiv	26.0	18.9	–27.1	3	3
City of Kyiv	22.0	31.3	42.3	8	8

Group of Regions III

Region	P ₂ (Average 2012–2014) per 100,000 Population	P ₂ (2015), per 100,000 Population	R ₂ , %	rP ₂ (2015)	rR ₂
Vinnitsia	15.5	11.7	–24.8	7	7
Zakarpattia	6.3	1.8	–71.3	2	2
Ivano-Frankivsk	9.5	4.5	–53.0	3	3
Lviv	13.5	10.1	–25.3	6	6
Rivne	16.1	13.0	–19.3	8	8
Sumy	14.5	14.4	–0.6	10	9
Ternopil	6.7	1.5	–77.6	1	1
Kharkiv	11.7	13.3	14.3	9	10
Khmelnytskyi	10.8	7.4	–31.6	5	4
Chernivtsi	6.8	5.0	–26.9	4	5

⁵ Based on data from RES, total persons with newly diagnosed HIV infection aged 15–24 years per 100,000 population

3. HIV Prevalence Among Pregnant Women⁶ (P₃, R₃)

Group of Regions I

Region	P ₃ (Average 2012–2014) %	P ₃ (2015), %	R ₃ , %	rP ₃ (2015)	rR ₃
Dnipropetrovsk	1.62	1.48	–8.3	4	2
Kyiv	0.78	1.00	28.5	2	5
Kirovohrad	0.97	0.97	0.0	1	3
Mykolaiv	1.62	1.37	–15.3	3	1
Odesa	1.45	1.69	16.0	5	4

Group of Regions II

Region	P ₃ (Average 2012–2014) %	P ₃ (2015), %	R ₃ , %	rP ₃ (2015)	rR ₃
Volyn	0.33	0.42	27.3	1	8
Zhytomyr	0.65	0.65	0.0	5	5
Zaporizhzhia	0.62	0.64	4.5	4	6
Poltava	0.56	0.54	–4.5	2	4

Region	P ₃ (Average 2012–2014) %	P ₃ (2015), %	R ₃ , %	rP ₃ (2015)	rR ₃
Kherson	0.99	1.09	10.4	8	7
Cherkasy	0.85	0.58	–32.0	3	1
Chernihiv	1.04	0.95	–8.9	7	3
City of Kyiv	0.79	0.70	–11.3	6	2

Group of Regions III

Region	P ₃ (Average 2012–2014) %	P ₃ (2015), %	R ₃ , %	rP ₃ (2015)	rR ₃
Vinnitsia	0.47	0.52	12.0	10	8
Zakarpattia	0.11	0.09	–13.4	1	5
Ivano-Frankivsk	0.17	0.14	–20.0	2	3
Lviv	0.29	0.24	–15.3	5	4
Sumy	0.37	0.47	27.7	8	10
Rivne	0.32	0.36	11.1	6	7
Ternopil	0.17	0.18	7.1	4	6
Kharkiv	0.43	0.50	18.2	9	9
Khmelnyskyi	0.49	0.38	–21.9	7	2
Chernivtsi	0.21	0.15	–29.0	3	1

⁶ Based on data from Reporting Forms No. 21, No. 63, this indicator covers the overall number of pregnant women infected with HIV, regardless of the time the subject is tested as HIV-positive)

4. HIV Prevalence Among Pregnant Women Aged 15–24 Years⁷ (P₄, R₄)

Group of Regions I

Region	P ₄ (Average 2013–2014) %	P ₄ (2015), %	R ₄ , %	rP ₄ (2015)	rR ₄
Dnipropetrovsk	0.51	0.57		4	
Kyiv	0.57	0.30		3	
Kirovohrad	2.25	0.03		1	
Mykolaiv	0.56	0.27		2	
Odesa	0.67	0.71		5	

Group of Regions II

Region	P ₄ (Average 2013–2014) %	P ₄ (2015), %	R ₄ , %	rP ₄ (2015)	rR ₄
Volyn	0.14	0.07		1	
Zhytomyr	0.34	0.23		4	
Zaporizhzhia	0.14	0.17		3	
Poltava	0.32	0.24		5	
Kherson	0.39	0.27		6	
Cherkasy	0.24	0.15		2	
Chernihiv	0.28	0.67		8	
City of Kyiv	0.45	0.48		7	

Group of Regions III

Region	P ₄ (Average 2013–2014) %	P ₄ (2015), %	R ₄ , %	rP ₄ (2015)	rR ₄
Vinnysia	0.32	0.25		9	
Zakarpattia	0.045	0.06		4	
Ivano-Frankivsk	0.09	0.01		2	
Lviv	0.24	0.10		6	
Rivne	0.46	0.23		8	
Sumy	0.23	0.26		10	
Ternopil	0.05	0.02		3	
Kharkiv	0.145	0.15		7	
Khmelnyskyi	0.26	0.09		5	
Chernivtsi	0.21	0.00		1	

⁷ Data for appropriate calculations have been collected since 2013 as part of SEM efforts (Codes 109.1.1+109.1.2). The rates of growth of the indicator were not determined due to lack of complete monitoring data over the years

5. HIV Prevalence Among PWIDs⁸ (P_5 , R_5)

Group of Regions I

Region	P_5 (Average 2013–2014) %	P_5 (2015), %	R_5 , %	rP_5 (2015)	rR_5
Dnipropetrovsk	4.0	2.4		2	
Kyiv	10.1	8.1		4	
Kirovohrad	12.5	19.2		5	
Mykolaiv	4.1	2.3		3	
Odesa	12.8	1.1		1	

Group of Regions II

Region	P_5 (Average 2013–2014) %	P_5 (2015), %	R_5 , %	rP_5 (2015)	rR_5
Volyn	1.6	1.2		3	
Zhytomyr	4.0	1.7		5	
Zaporizhzhia	2.5	1.6		4	
Poltava	3.4	3.0		8	
Kherson	1.3	0.6		1	
Cherkasy	1.5	0.8		2	
Chernihiv	5.6	2.9		7	
City of Kyiv	6.4	2.2		6	

Group of Regions III

Region	P_5 (Average 2013–2014) %	P_5 (2015), %	R_5 , %	rP_5 (2015)	rR_5
Vinnysia	5.6	0.7		7	
Zakarpattia	0.2	0.4		3	
Ivano-Frankivsk	3.2	9.6		10	
Lviv	3.9	1.2		9	
Rivne	1.6	0.4		5	
Sumy	1.5	0.9		8	
Ternopil	0.4	0.3		2	
Kharkiv	1.4	0.4		4	

Region	P ₅ (Average 2013–2014) %	P ₅ (2015), %	R ₅ , %	rP ₅ (2015)	rR ₅
Khmelnytskyi	1.6	0.5		6	
Chernivtsi	0.7	0.2		1	

⁸ Data for appropriate calculations are collected as part of SEM efforts (Code 102). The rates of growth of the indicator were not determined due to the number of tests using RDTs and related test results being taken into account during SEM since 2013. P₅ (Average 2013–2014) has been used to determine rating scores when the values of P₅ (2015) are identical in several regions

6. HIV Prevalence Among SWs⁹ (P₆, R₆)

Group of Regions I

Region	P ₆ (Average 2013–2014) %	P ₆ (2015), %	R ₆ , %	rP ₆ (2015)	rR ₆
Dnipropetrovsk	0.1	0.1		2	
Kyiv	1.6	0.0		1	
Kirovohrad	0.0	1.7		5	
Mykolaiv	1.0	0.1		3	
Odesa	0.0	0.2		4	

Group of Regions II

Region	P ₆ (Average 2013–2014) %	P ₆ (2015), %	R ₆ , %	rP ₆ (2015)	rR ₆
Volyn	0.0	0.0		1	
Zhytomyr	0.0	0.0		1	
Zaporizhzhia	1.0	1.0		7	
Poltava	1.9	0.0		4	
Kherson	0.5	0.0		3	
Cherkasy	0.3	0.0		2	
Chernihiv	0.0	0.3		6	
City of Kyiv	0.5	0.1		5	

Group of Regions III

Region	P ₆ (Average 2013–2014) %	P ₆ (2015), %	R ₆ , %	rP ₆ (2015)	rR ₆
Vinnysia	25.0	0.0		3	
Zakarpattia	0.2	0.0		2	
Ivano-Frankivsk	0.2	0.0		2	
Lviv	0.2	0.0		2	
Rivne	0.6	0.5		5	
Sumy	0.0	0.1		3	
Ternopil	0.0	0.0		1	
Kharkiv	0.0	0.0		1	
Khmelnytskyi	0.0	0.0		1	
Chernivtsi	0.1	0.2		4	

⁹ Data for appropriate calculations have been collected since 2013 as part of SEM efforts (Code 105.2). The rates of growth of the indicator were not determined due to lack of complete monitoring data over the years. P₆ (Average 2013–2014) and the rate of growth have been used to determine rating scores when the values of P₆ (2015) are identical in several regions. If there were no HIV-positive persons identified over the course of 2013–2015, the region was assigned the top rating.

7. HIV Prevalence Among MSM¹⁰ (P₇, R₇)

Group of Regions I

Region	P ₇ (Average 2013–2014) %	P ₇ (2015), %	R ₇ , %	rP ₇ (2015)	rR ₇
Dnipropetrovsk	0.8	0.5		2	
Kyiv	21.0	5.4		4	
Kirovohrad	0.0	42.9		5	
Mykolaiv	0.2	0.3		1	
Odesa	37.8	2.6		3	

Group of Regions II

Region	P ₇ (Average 2013–2014) %	P ₇ (2015), %	R ₇ , %	rP ₇ (2015)	rR ₇
Volyn	13.1	1.1		5	
Zhytomyr	38.4	2.8		7	

Region	P7 (Average 2013–2014) %	P7 (2015), %	R7, %	rP7 (2015)	rR7
Zaporizhzhia	1.1	0.6		3	
Poltava	18.8	5.9		8	
Kherson	0.8	0.8		4	
Cherkasy	0.9	0.5		2	
Chernihiv	1.8	0.1		1	
City of Kyiv	11.2	1.3		6	

Group of Regions III

Region	P7 (Average 2013–2014) %	P7 (2015), %	R7, %	rP7 (2015)	rR7
Vinnysia	9.9	1.2		6	
Zakarpattia	3.3	6.3		7	
Ivano-Frankivsk	10.2	33.3		8	
Lviv	1.9	0.4		3	
Rivne	0.0	0.0		1	
Sumy	26.0	0.0		2	
Ternopil	4.3	100.0		10	
Kharkiv	2.4	0.5		4	
Khmelnyskyi	18.4	66.7		9	
Chernivtsi	0.6	0.9		5	

¹⁰ Data for appropriate calculations have been collected since 2013 as part of SEM efforts (Codes 101.2+103). The rates of growth of the indicator were not determined due to lack of complete monitoring data over the years. P7 (Average 2013–2014) and the rate of growth have been used to determine rating scores when the values of P7 (2015) are identical in several regions. If there were no HIV-positive persons identified over the course of 2013–2015, the region was assigned the top rating.

8. Mortality Related to HIV Infection¹¹ (P8, R8)

Group of Regions I

Region	P8 (Average 2012–2014) per 100,000 Population	P8 (2015), per 100,000 Population	R8, %	rP8 (2015)	rR8
Dnipropetrovsk	29.8	29.9	0.4	5	3
Kyiv	5.3	6.2	17.1	1	4
Kirovohrad	5.7	9.3	63.7	2	5

Region	P8 (Average 2012–2014) per 100,000 Population	P8 (2015), per 100,000 Population	R8, %	rP8 (2015)	rR8
Mykolaiv	10.3	9.8	−4.5	3	1
Odesa	14.6	15.4	0.0	4	2

Group of Regions II

Region	P8 (Average 2012–2014) per 100,000 Population	P8 (2015), per 100,000 Population	R8, %	rP8 (2015)	rR8
Volyn	5.4	5.7	5.1	1	7
Zhytomyr	6.8	7.0	1.9	7	6
Zaporizhzhia	7.2	8.8	21.5	8	8
Poltava	7.0	6.6	−5.5	4	3
Kherson	7.1	6.6	−5.4	5	4
Cherkasy	6.7	6.0	−10.1	2	2
Chernihiv	6.9	6.8	−1.6	6	5
City of Kyiv	7.1	6.3	−10.5	3	1

Group of Regions III

Region	P8 (Average 2012–2014) per 100,000 Population	P8 (2015), per 100,000 Population	R8, %	rP8 (2015)	rR8
Vinnitsia	3.4	2.7	−18.7	8	2
Zakarpattia	1.0	1.0	2.3	1	8
Ivano-Frankivsk	2.5	2.2	−11.5	7	4
Lviv	3.3	3.1	−6.3	9	7
Sumy	1.3	1.9	42.4	4	10
Rivne	1.8	2.1	17.7	5	9
Ternopil	1.7	1.6	−6.7	3	6
Kharkiv	2.4	2.1	−10.7	6	5
Khmelnitskyi	4.1	3.4	−17.7	10	3
Chernivtsi	1.8	1.4	−18.9	2	1

¹¹ Data for appropriate calculations are collected as part of REM, i.e., total deaths due to illnesses related to HIV infection (2013–2015) and AIDS (2012) per 100,000 population. P8 (Average 2012–2014) and the rate of growth have been used to determine rating scores when the values of P8 (2015) are identical in several regions.

Summary Ranking by Region Based on Epidemic Intensity Indicators in 2015

Group of Regions I

Region	SR ₁	SR ₂	SR ₃	SR ₄	SR ₅	SR ₆	SR ₇	SR ₈	SR ₁₋₈	2015 Summary Ranking
Dnipropetrovsk	6	7	6	4	2	2	2	8	37	4
Kyiv	6	7	7	3	4	1	4	5	37	3
Kirovohrad	6	3	4	1	5	5	5	7	36	2
Mykolaiv	3	7	4	2	3	3	1	4	27	1
Odesa	8	6	9	5	1	4	3	6	42	5

Group of Regions II

Region	SR ₁	SR ₂	SR ₃	SR ₄	SR ₅	SR ₆	SR ₇	SR ₈	SR ₁₋₈	2015 Summary Ranking
Volyn	4	8	9	1	3	1	5	8	39	2
Zhytomyr	12	9	10	4	5	1	7	13	61	6
Zaporizhzhia	9	12	10	3	4	7	3	16	64	8
Poltava	6	2	6	5	8	4	8	7	46	3
Kherson	8	11	15	6	1	3	4	9	57	4
Cherkasy	12	8	4	2	2	2	2	4	36	1
Chernihiv	13	6	10	8	7	6	1	11	62	7
City of Kyiv	8	16	8	7	6	5	6	4	60	5

Group of Regions III

Region	SR ₁	SR ₂	SR ₃	SR ₄	SR ₅	SR ₆	SR ₇	SR ₈	SR ₁₋₈	2015 Summary Ranking
Vinnysia	8	14	18	9	7	3	6	10	75	8
Zakarpattia	7	4	6	4	3	2	7	9	42	2
Ivano-Frankivsk	14	6	5	2	10	2	8	11	58	5
Lviv	16	12	9	6	9	2	3	16	73	6
Sumy	19	19	18	10	8	3	2	14	93	10

Region	SR ₁	SR ₂	SR ₃	SR ₄	SR ₅	SR ₆	SR ₇	SR ₈	SR ₁₋₈	2015 Summary Ranking
Rivne	17	16	13	8	5	5	1	14	79	9
Ternopil	7	2	10	3	2	1	10	9	44	3
Kharkiv	10	19	18	7	4	1	4	11	74	7
Khmelnytskyi	5	9	9	5	6	1	9	13	57	4
Chernivtsi	7	9	4	1	1	4	5	3	34	1

Regions with the lowest summary ratings are ranked first. The level and growth rate of the integrated indicator, i.e., AIDS-related mortality, were taken into account when determining summary rankings in cases where the overall sums were identical.

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