MEDICO-PREVENTIVE AND EPIDEMIOLOGICAL STUDIES OF SOCIALLY DANGEROUS DISEASES IN UKRAINE: UNDER HIV/AIDS

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Abstract: The article aims to review the present condition of the state approach and corroborate suggestions for enhancing circumstances constraints. The analysis of research studies showed that international organizations among the ways to overcome the HIV/AIDS epidemic, pay considerable attention to information and educational work among the population, especially young people. Prevention strategies must be developed and adopted, adapted to national circumstances, considering gender, cultural, social, and economic aspects. The problem of HIV/AIDS has been a pandemic that has already affected 40 million people worldwide, and the number of people infected with the human immunodeficiency virus is constantly growing. Such scales of the spread of the human immunodeficiency virus are becoming global and pose a real threat to the socio-economic development of most countries of the world. According to experts and research findings, HIV/AIDS is a difficult challenge for the international community. The HIV epidemic has become one of the most dangerous factors negatively affecting the development of the individual and society, causing a decrease in life expectancy, an increase in the demand for medical services, and an exacerbation of poverty and social inequality. The fight against this disease is one of the state's priority tasks in the public health field. And the successful implementation of this task requires proper legal support and consistent and transparent public policy.

Keywords: AIDS, Combating HIV/AIDS, Dangerous diseases, Epidemiological studies, HIV infection, Medico-preventive studies.

1 Introduction

HIV infection and AIDS, which are rapidly spreading in Ukraine, pose a threat harms the country's national security, economic growth, and social development [22]. Therefore, the policy of countering the epidemic should provide for the prevention, overcoming, and reduction of its consequences. One of the directions of the social policy of any civilized state is public health because the preservation and promotion of health is an integral part of state building, social policy, and the national security system [15], as well as one of the essential tasks and functions of the state.

Solving the problem of the spread of HIV/AIDS has become a criterion that determines the level of democracy [21]. Yet, even though the strategy to combat these ailments has been recognized as one of the state policy priorities, it has not been possible to stabilize the epidemic. This provides grounds for revising the mechanisms for forming and implementing state policy in this area and determining its effectiveness.

In relevant areas involved in response to HIV/AIDS, the effectiveness of public policies can be assessed using criteria such as effectiveness, efficiency, and cost-effectiveness [6]. However, the peculiarity of this process is that the primary attention in evaluating these indicators is paid less to obtain specific results with the least expenditure of resources.

2 Literature Review

A well-grounded choice of policy tools to counter the HIV/AIDS epidemic and assessing their use results are significant because of the problematic epidemiological situation [30]. In Ukraine, scientific publications are devoted to the problems of public administration and policy regarding HIV/AIDS. Among them, one can note, in particular, the works of Krysko, Khozhylo, Yakobchuk [19, 35] , and others.

Some aspects of the formation and development of a modern system of counteracting HIV/AIDS in Ukraine are covered in the works of Ariaev, Balakirieva, Boiko, Dub, Kotov, Starets, Zhylka [2, 4, 5, 12]. The issues of standardization of public services and the relationship of social services with general and administrative research: Buromenskyi, Hubar, Bohan, Boiko, Vasylkova, and Kyselov [9, 10, 18].

A feature of the current state of the domestic healthcare system is a deep managerial crisis, most clearly identified in the prevention of socially dangerous diseases, particularly HIV/AIDS [27]. Today in Ukraine, in the system of forming an effective mechanism for the prevention of HIV/AIDS, local governments are objectively given one of the leading roles [16].

The local level is the basis on which the system of cooperation between state and public institutions is formed and further effectively develops who are responsible executors of preventive programs. However, we note that the problem of delimitation of powers between the executive authorities of the central level and local governments on the issues of ensuring the implementation of program tasks for the prevention of HIV/AIDS remains unsettled by legislative and regulatory legal acts.

Despite the research of scientists and practitioners today, the problem of state regulation of socially dangerous diseases [13]. HIV/AIDS in Ukraine, remains a specific subject of complex scientific and practical analysis [7, 15, 22]. Hence, there is an objective need to substantiate theoretical approaches to improving the mechanisms of state-public interaction in combating HIV/AIDS, monitoring and determining its effectiveness, and developing practical recommendations on using state-public cooperation in the field under study.

Socially dangerous diseases in Ukraine significantly impact the nation's demographic and labor potential, economic and political stability, and security of the state as a whole. Considering the importance and diversity of this socio-medical problem, it is possible to influence the prevalence of socially dangerous diseases and organize prevention and control of them through the cooperation of local governments, executive authorities, and international and domestic non-governmental organizations [33].

The decisive role in solving this socio-medical problem is played by the improvement of the mechanisms of state regulation of socially dangerous diseases [31], which is of particular importance against the background of the demographic crisis [19], social transformations in society [14], and the marginalization of a specific part of the population of the state [23].

3 Materials and Methods

The *purpose of the study* is to review the current state of state policy and substantiate recommendations for improving state regulation. Furthermore, it is necessary to overcome socially dangerous diseases in Ukraine, particularly HIV/AIDS, based on domestic and international experience to improve the provision of medical and social services to the population [1, 4, 20, 21].

The following tasks were set to achieve the goal:

- To determine the nature and role of socially dangerous diseases as a medical and social problem in Ukraine, in particular, an acquired immunodeficiency syndrome (HIV/AIDS);
- To study the international and domestic experience of legislative and regulatory regulation on combating HIV/AIDS and conduct a comparative analysis;
- To analyze the characteristics of HIV/AIDS in Ukraine as an epidemic process and its monitoring;
- To explore the role of specialists and public organizations in the state regulation of combating HIV/AIDS in Ukraine;

- To substantiate the use of international experience in improving state regulation on combating HIV/AIDS in Ukraine based on decentralization.

The *research subject* is the state regulation of counteracting HIV/AIDS in Ukraine. The *object of the study* is the social relations that have developed in combating HIV/AIDS in Ukraine.

Research methods. To achieve specific goals and objectives in the research process, a complex of general scientific and unique methods was used, including:

- Abstract-logical (analysis of scientific sources, legal framework on the research topic);
- Structural-functional and systemic (comprehensive study of state-public cooperation in the field of combating HIV/AIDS in Ukraine, its components, the coordination mechanism between them, the relationship between the subjects of collaboration, their powers and features of the functions they perform);
- Historical (historical retrospective, the evolution of the domestic system of state-public cooperation in the field of combating the spread of HIV/AIDS in Ukraine was studied);
- Analogies and comparisons (the possibility of introducing elements of foreign experience and mechanisms for the provision of medical and social services into domestic public administration practice was assessed);
- Synthesis and modeling, with the help of which recommendations were formed to improve the mechanisms of public administration in cooperation with the public to combat HIV/AIDS in Ukraine;
- Prognostic and abstraction (formation of provisions of scientific novelty, conclusions and practical recommendations for improving the mechanisms of public administration in cooperation with the public to combat HIV/AIDS in Ukraine).

Analytical review in work consists of the following:

- Analysis of international and Ukrainian legislation and scientific publications on review tasks;
- Interviews with experts (which included social and medical specialists, civil servants, practitioners of public organizations, lawyers, and social analysts, workers in the social services system for families, children, and youth);
- Analysis of the experience of other countries [36];
- Holding round tables to discuss problems and develop recommendations.

4 Results

Despite significant progress in counteracting HIV/AIDS, in the context of the transformation of all spheres of life, the economic crisis, and the military conflict in the east of the country, HIV infection in Ukraine continues to spread. The main negative consequence of HIV/AIDS is its impact on the demographic situation, which is due to the high mortality rate of the population for reasons related to HIV/AIDS [28].

For the period 1987–2021, 306 295 HIV-infected persons were registered among citizens of Ukraine, including 97 584 cases of AIDS and 43 206 deaths from diseases caused by AIDS. As of December 31, 2021, 136 965 HIV-infected citizens of Ukraine were under control in the AIDS service, of which 41 524 patients were diagnosed with AIDS. The prevalence rate of HIV infection was 323.7 per 100 thousand of the population and was 5.5% higher than the intensive indicator for the corresponding period of the last 2016 (306.8). The prevalence rate of AIDS was 98.1 per 100 thousand of the population and increased by 14.4% against the indicator of the corresponding period of 2016 (85.8).

According to seroepidemiological monitoring data, the incidence of HIV infection in Dnipropetrovsk, Kyiv, Kirovohrad, Mykolaiv, Odesa, Kherson, Chernihiv regions, and the city of Kyiv exceed the national average [34].

The increase in the incidence of AIDS, for example, for six months of 2021 against the corresponding indicators for the same period last year, occurred in 15 regions. The highest growth rates were registered in Vinnytsia and Sumy regions (+126.2% and +109.4%, respectively). The incidence rates of AIDS in Dnipropetrovsk, Odesa, Mykolaiv, Kherson, Zaporizhzhia, Kirovohrad, and Donetsk regions exceed the average for Ukraine. In the structure of transmission routes of HIV infection among persons with a newly diagnosed HIV infection, the sexual (homo- and heterosexual) route predominates [31].

In one the year of 2021, 1 496 deaths from AIDS were registered (3.5 per 100,000 population) against 1,428 cases (3.3 per 100,000 population) for the corresponding period of the previous year. The growth rate of the mortality rate from SNDA was 5.2%. High rates of increase in the mortality rate from SNOD were registered in Sumy (101.7%), Kyiv (79.0%), Kharkiv (77.0%), Odesa (55.8%), Zakarpattia (50.1%), Ivano-Frankivsk (45.7%) regions and Kyiv (55.6%).

In 10 regions of the country in 2021, a decrease in the incidence of AIDS was registered, and the most significant decrease was registered in the Ternopil and Chernivtsi regions (41.3% and 44.3%, respectively). Dnipropetrovsk, Kyiv, Kirovohrad, Mykolaiv, Odesa, Kherson, Chernihiv regions, and Kyiv remain the leaders regarding HIV incidence. The highest growth rates of AIDS incidence were registered in Vinnytsia and Sumy regions (+126.2% and +109.4%, respectively). In addition, high rates of AIDS incidence have been registered in Dnipropetrovsk, Odesa, Mykolaiv, Kherson, Zaporizhzhia, Kirovohrad, and Donetsk regions.

For the period 1994–2021, in the Kirovohrad region, 9 640 positive HIV test results were obtained according to seroepidemiological monitoring of the spread of HIV; 2 974 cases of HIV infection were officially registered among citizens of Ukraine, including 640 cases of AIDS, and 640 cases of AIDS caused by AIDS. Among all detected and reported HIV-positive persons for the entire observation period, 33.2% were identified and officially registered [35].

According to medical records, as of 01.01.2022, 136 945 HIV-infected citizens of Ukraine were under observation in a healthcare institution in the Kirovohrad region (323.7 per 100 000 population), including 41 524 AIDS patients (indicator 98.1 per 100 thousand population).

Analysis of cascade data (Figure 1) reflects the sequence of services provided in connection with HIV and the gradual reduction of the number of persons receiving such services.

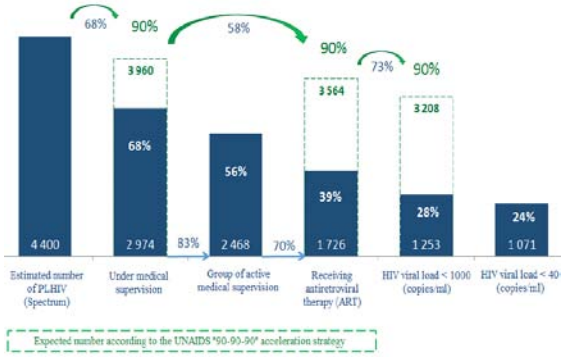

Figure 1 – Analysis of cascade data for the Kirovohrad region as of January 1, 2022

The construction of the cascade makes it possible to determine the extent of cuts in the number of people living with HIV and to draw attention to the main obstacles to ensuring universal access to antiretroviral therapy on the scale necessary to control the HIV epidemic.

The cross-sectional cascade in the Kirovohrad region is shown in Figure 1. It reflects the implementation of preventive and treatment programs as of January 1, 2022. It is built into account for all adults and children under medical supervision in a healthcare facility of the AIDS service and based on the indicators of monitoring testing, treatment, laboratory support, evaluation, statistical, and calculation data.

When analyzing the cascade, you need to pay attention to the following:

- The percentage of patients who are lost at each stage of the cascade, compared to the previous stage, with further analysis of the reasons for their withdrawal;
- The percentage of patients out of the total number of people living with HIV – cascade inputs with an undetermined level of viral load (suppressed viral load).

The estimated number of people living with HIV in the region at the beginning of 2022 (all age categories) is 4 400 persons. Evaluation data was obtained using Spectrum/EPP software; 2 974 people living with HIV – the number of people who are aware of their HIV-positive status and are under medical supervision in the health care facility of the AIDS service in the region as of January 1, 2022. In order to achieve the first 90% of the Fast-track strategy, another 1 492 people living with HIV must be identified and placed under medical supervision. Also, 2 468 people living with HIV (56% of the estimated number of people living with HIV) are an active dispensary group, namely the number of HIV-infected patients who underwent a medical examination at least once in 2018 [34].

Likewise, 1 726 people living with HIV (39% of the estimated number of people living with HIV) – the number of people receiving antiretroviral therapy as of January 1, 2022. It is necessary to involve another 1 838 people living with HIV in antiretroviral treatment to achieve the second indicator of 90% of the Fast-track strategy by 2023. The number of 28% of people living with HIV – the estimated amount who received antiretroviral therapy and, as of January 1, 2022, reached an undetectable HIV viral load. To achieve the third goal of 90% of the Fast-track strategy, it is necessary that by 2022, an additional 1 955 people living with HIV and receiving antiretroviral therapy will have an undetectable viral load.

Statistics by sex in 2021 are as follows: men – 326 (57.6%); women – 239 (42.3%); against 245 (56.8%) and 186 (43.1%), respectively, in 2018. The main route of transmission of HIV infection in 2021 is sexual, which was identified in 367 HIV-infected persons, which is 64.9% of the total number (Table 1). Parenteral route (through injection of narcotic substances) – in 119 people (21.0%), vertical route of transmission – in 79 children (13.9%) [34].

Table 1: Ways of HIV infectioning

According to the intended route of infection	2016		2018		2021	
	people	%	people	%	people	%
Sexual way:	303	58,3	267	61,9	367	64,9
Including homosexual	-	-	3	0,6	1	0,1
Parenteral way	98	18,8	75	17,4	119	21,0
From mother to child	118	22,9	88	20,4	78	13,8
Not specified	-	-	1	0,2	1	0,1
Total:	519	100,0	431	100,0	565	100,0

As of January 1, 2021, 640 HIV/AIDS patients registered in the region, compared to 490 in 2018; according to these data, the regional HIV/AIDS prevalence rate for 2021 is 58.8 per 100,000 people (for 2018 – 50.5 per 100,000 people).

During the reporting period, 228 AIDS patients were registered, and the AIDS incidence rate was 23.7 per 100,000 population. During the same period last year, 162 AIDS patients were taken, which was 16.7 per 100,000 population. Of them, 173 persons (75.8%) were sexually infected, and 55 (24.1%) were by injection [29].

According to the results of seroepidemiological monitoring in 2021, 618 HIV-positive persons were identified, and the overall infection rate was 1.1%. The prevalence rate of HIV among people from groups at increased risk of infection is 4.9% compared to the same period last year – 2.7%, an increase of almost two times. However, the prevalence of HIV among persons diagnosed with sexually transmitted diseases (code 104) remained at the same level as last year. The priority of state policy in combating socially dangerous diseases is to ensure equal access of representatives of groups at increased risk of HIV infection and the general population to treatment and preventive services.

The National Targeted Social Program carries out the organization of medical care for HIV-infected and AIDS patients for Combating the HIV/AIDS Epidemic for 2014–2021 with the participation of state institutions/health care institutions, the public, and a wide range of international partners. 37 AIDS prevention and control centers, including 24 regional Kyiv city AIDS centers and 12 city AIDS centers in regions with a high HIV prevalence. Inpatient departments with 296 beds are operating in 9 regional AIDS centers (from now on referred to as RCCs) (Figure 2).

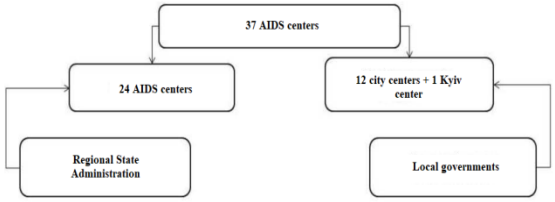

Figure 2 – Specialized network of subjects to combat HIV/AIDS (state sector)

As can be seen from Figure 2, medical services in the field of combating HIV/AIDS as a tool of state-public interaction remain at present entirely under the control of the state as a management entity. Even in the conditions of decentralization of management, the specialized network of medical and preventive institutions at the level of territorial communities is represented by a much smaller number, which limits patients' access to medical services of a specialized network and needs to be resolved in favor of the needs of the territorial community.

Therefore, 61 beds have been allocated to provide quality and palliative care. All RCSs have laboratories for the diagnosis of HIV infection. A vital component of the RCS activity is establishing HIV infection, dispensary supervision of AIDS, and their treatment using ART.

From 2015 to the present, AIDS centers have provided access to the population of the regions to integrated services for counseling and testing for HIV infection, prevention of HIV transmission from mother to child, post-contact prevention, diagnosis, prevention, and treatment of opportunistic infections, ARV therapy, laboratory monitoring of the course HIV infection and the effectiveness of ART, diagnosis and treatment of STDs, viral hepatitis B and C, counseling on family planning, social support for people with HIV/AIDS [5].

5 Discussion

Management will be effective only when based on a solid, comprehensive, evidence-based information base [17]. In recent years, experts in the field of countering HIV/AIDS have increasingly used the term "strategic information.

Strategic information in the field of HIV/AIDS is information suitable for making managerial decisions, clarifying global issues in the context of planning measures to combat HIV/AIDS, and assessing the state of development of the epidemic and the effectiveness of influencing it. A significant amount of data has

been accumulated in the field of combating HIV/AIDS both at the national and local levels. However, processing these data to obtain the necessary information, and providing access to information for all interested parties, especially decision-makers, requires more technical capabilities [24], knowledge [11], skills [3], and time from specialists and forms a request for improving the quality of information preparation.

The type of information needed to monitor and evaluate a program, project, or intervention is best described by a logic model that shows the sequence of inputs, processes, results, consequences, and impacts in a continuum of the so-called "results chain" (Figure 3).

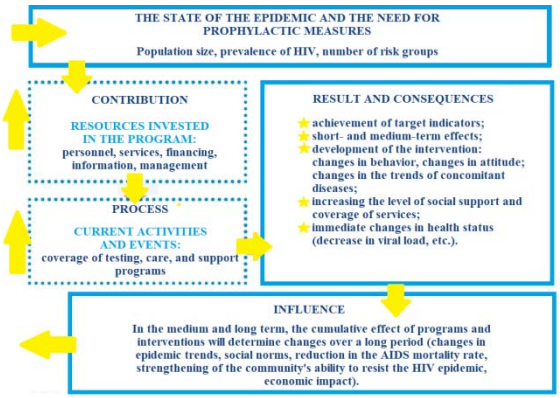

Figure 3 – Logical model: type of information on monitoring and evaluation of the program in the field of combating HIV/AIDS

The logic of the necessary strategic information is consistent with the indicators of the national monitoring and evaluation system.

Information in the field of combating HIV/AIDS can be conditionally divided into six main components that correspond to the global structure [36] and levels of the monitoring and evaluation system [37]:

1. Assessment and planning – analysis of the situation, analysis of the response, needs of participants, analysis of resources, cooperation plan.
2. Contribution – regulatory and legislative framework, budget, material and technical resources.
3. Process – any activity aimed at fulfilling the set tasks (number of trained specialists, conducted events, produced/distributed materials, etc.).
4. Result – the range and quality of services provided to achieve the results, and the degree of their coverage of different population groups (number/percentage of those covered).
5. Consequences – changes in knowledge, attitude, and behavior affecting the health of the population and the spread of the epidemic.
6. Impact – significant changes in the population's health and the economic situation resulting from the effectiveness of measures to combat the HIV/AIDS epidemic. Strategic information in combating HIV/AIDS can be obtained from various sources (Table 2).

Table 2: Sources and forms of presentation/dissemination of strategic information

Sources of strategic information	**Information resources (form of submission/dissemination of strategic information)**
Epidemiological surveillance of HIV/AIDS	Reporting documentation of organizations/institutions
Program monitoring, program evaluation	Informational and analytical publications
Evidence-based research based on factual data	Analytical reports
Expert evaluations	Evaluation results
Information management systems	Materials for seminars, conferences, meetings
Routine healthcare information systems	Normative and legal acts
Statistics of demographic indicators of the population	Protocols, standards, methodological recommendations
	Electronic databases, etc.

Epidemiological surveillance of HIV/AIDS involves a comprehensive assessment of the dynamics of the epidemiological process in space, time, and among defined population groups. The purpose is to plan and timely implement scientifically based preventive measures for combating the HIV epidemic, evaluating effectiveness, and developing an epidemiological forecast. The second generation of epidemiologic surveillance is a component of the national monitoring and assessment of measures' effectiveness, ensuring control of the HIV epidemic.

The purpose of surveillance is to track the trends of changes in the spread of HIV infection and obtain information about potential behavioral factors that cause the spread of HIV among the population and the use of this information for educational activities, planning, monitoring, and evaluation of the effectiveness of preventive programs among target groups.

To plan effective prevention measures and determine the stage of the epidemic, the second-generation surveillance system combines the following methods:

- Biological surveillance for HIV/AIDS (sentinel serological surveillance for target population groups; regular screening of donor blood; regular screening of persons from high-risk groups for HIV infection; screening of samples obtained during special population surveys, etc.);
- Monitoring of behavior (regular cross-sectional studies among the general population; regular cross-sectional studies in target groups);
- Other sources of information (epidemiological surveillance of registered cases of HIV infection and AIDS; registration of fatal cases; epidemiological surveillance of other diseases that have a high level of spread among patients with HIV infection, such as tuberculosis, parenteral viral hepatitis, etc.).

Program monitoring and evaluation. Program monitoring is tracking the progress and results of implementing programs/projects and their comparison with the previously developed action plan. Such information is used to make informed decisions about further deployment and improvement of the program [26].

The evaluation of the program, which both direct implementers and external experts carry out, reflects the results of the implementation of the program (coverage of services, the level of capacity development), behavioral changes, or the overall impact on the situation (for example, reducing the level of HIV transmission). Thus, in 2012, an external evaluation of the implementation of the National Program for HIV prevention, treatment, care, and support of HIV-infected and AIDS patients for 2009–2021 was carried out in Ukraine. Based on the results of this assessment, achievements, and shortcomings in response to the epidemic, problematic aspects that require strengthened actions, were identified. The developed recommendations were taken into account during the preparation of the National Targeted Social Program for combating HIV/AIDS for 2014–2018, approved by the Law of Ukraine, dated October 20, 2014, No. 1708-II.

At the local level, the responsible implementer of the program (as a rule, this is the department/department of health care of the local state administration) once a year prepares the generalized information on the state of program implementation (submitted to the structural unit on economic issues of the local executive body). The information should contain data on the planned and actual volumes and sources of program financing, the fulfillment of performance indicators in dynamics since the beginning of the program, and an explanatory note on the work of co-executors of

the program regarding its implementation. In case of the program's failure, it is required to justify the reasons. The information is used for:

- Analysis of program effectiveness;
- Providing suggestions on expediency;
- Continuation of its financing and implementation;
- Informing about the progress of the program;
- Reporting about the point of the activities carried out (at meetings of the local government, which sets the deadlines and frequency of reporting and establishes them in its decision to approve the program).

The active development of the Monitoring and Evaluation system (M&E) in the field of combating HIV/AIDS in Ukraine today gave an opportunity to collect a vast array of diverse information about the course of the epidemic process at the national and regional levels, about certain groups of the population, their behavior, needs, volume services provided, volume and structure of costs for epidemic prevention, etc.

Monitoring the HIV epidemic and the response to the epidemic provides the necessary information base for analyzing and forecasting the situation, forming strategic goals, developing priorities, and determining M&E indicators at national and regional levels. Without this information, it is tough to ensure the success of management decisions and the effectiveness of measures to prevent HIV infection among the general population and high-risk groups, treatment, care, and support of people living with HIV.

The Center of Medical Statistics of the Ministry of Health of Ukraine ensures the functioning of the Ukrainian medical and statistical information database and the European Database of Statistical Information "Health for All." The databases contain a powerful array of fundamental statistical indicators on health care of the regions of Ukraine (Ukrainian database) and European countries (WHO) and software for presenting these data in a convenient graphic form (maps, diagrams, tables). These databases are valuable tools for comparative assessment, analysis of the state, and trends in the development of the health care system.

National and regional M&E centers also use other electronic information systems:

- Electronic monitoring tool for Antiretroviral (ARV) drugs is intended for monitoring the movement and use of ARV drugs, which is the main element of the automated management system for tracking the volume of stocks and consumption of ARV drugs (implemented at the regional and national levels);
- Monitoring of replacement maintenance therapy programs is carried out under the determined indicators and the developed software product in all regions of the implementation of these programs within the performance of the 10th round of the Global Fund (GF) and other partners' support;
- The e-TB Manager system is an electronic register of tuberculosis patients: in one tool based on Web technologies, all data (cases of the disease, anti-tuberculosis, and other medical drugs) necessary for the implementation at various levels of the National Program for combating tuberculosis, and for providing the necessary information online, for making urgent decisions and epidemiological control in situations where intervention is required.

M&E is often seen as a reporting, oversight, and control tool to find performance deficiencies [10]. However, this perception of M&E hinders the full development of this system, targeted use of data, and establishment of constructive interaction between specialists, experts, and decision-makers. The M&E system provides an understanding of the trends in the development of the epidemic process and the level of adequacy, sufficiency, and effectiveness of HIV/AIDS countermeasures. Also, it indicates the need for their strengthening and improvement. A fully functional M&E system ensures that relevant and high-quality information is available at the right time, place, and format to manage prevention, care, treatment, and support activities.

In Ukraine, the monitoring and evaluating the response to the epidemic provide strategic information for analyzing the achievement of the set goals and decision-making at the regional and national levels [15]. Monitoring and evaluation are carried out by forming a single list of indicators, developing methods for collecting and processing such hands, conducting an analysis of the necessary data, and using the monitoring and evaluation results to make management decisions. Official documents must approve the critical indicators of the M&E system.

The most comprehensive document on strategic information in combating HIV/AIDS is the Plan for monitoring and evaluating the effectiveness of implementing the National targeted social program for combating HIV/AIDS for 2014–2018. It is approved by order of the State Service of Social Diseases of Ukraine dated 15.01.2015 No. 2. The Plan contains M&E indicators (Figure 4), their collection, and calculation methodology.

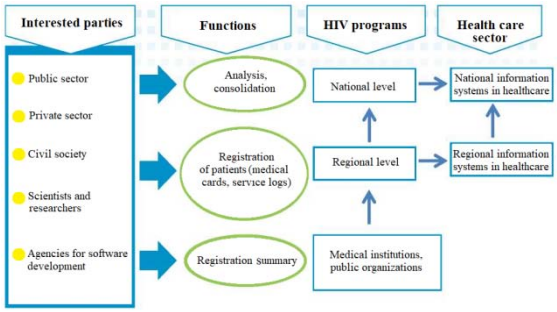

Figure 4 – The main components of effective data movement in combating HIV/AIDS

The content and numerical values of these indicators are a clear example of strategic information, which, thanks to the regular group, captures the dynamics of changes in hands for prevention, treatment, care, and support at the national and regional levels and also allows comparison of these data between regions.

Regional M&E indicators are formed based on national indicators and approved by local executive authorities. They reflect the state of implementation of tasks and measures of regional targeted social programs to combat HIV/AIDS and provide a generalized picture of the region's response to the HIV epidemic.

The list of regional indicators contains the following:

- Mandatory indicators included in the Monitoring and Performance Evaluation Plan;
- Particular indicators that reflect the region's peculiarities when determining the results, consequences, and impact of the implementation of regional programs. A list of M&E indicators of the effectiveness of the National Targeted Social Program for Combating HIV/AIDS for 2014–2018.

Ensuring an efficient data flow is carried out to:

A. Ensure adequate data flow; it is vital to determine what information is collected and used at each level of the M&E system and how it is transferred to the next level. Furthermore, it is necessary to ensure verification, continuity, and complementarity of information at all levels to avoid duplication. Figure 4 shows the main components of practical information flows in combating HIV/AIDS.
B. Provide various sources and partner data for M&E and the health care system coordinates. The data exchange and reporting procedure are defined and agreed upon by all interested parties and fixed in the M&E plan.
C. Create prerequisites for adequate data flow, including, in particular, an agreed list of mandatory indicators (with data

distribution by gender and age), which relevant partners collect at each level; approved report periods and reporting deadlines; interaction and organizational and technical consistency of information systems.

Since one of the main tasks of regional M&E centers is collecting and analyzing information on regional indicators, these centers are a critical organizational structure that ensures the organization of compelling data flows, forms, and disseminates strategic information on HIV/AIDS at the regional level.

6 Conclusion

HIV/AIDS is a leading healthcare problem in many world countries. The epidemic of HIV infection in Ukraine is one of the most severe among the countries of Eastern Europe. This problem is particularly acute among young people.

The spread of socially dangerous diseases among the population and the intensity of the epidemic process as an indicator of the quality of management activities in combating HIV/AIDS is a pandemic that has already affected 40 million people worldwide. Moreover, the number of people infected with the human immunodeficiency virus (HIV) is constantly increasing. Today, it is undeniable that the HIV/AIDS problem is not purely medical but represents one of the biggest threats to social and economic progress in the world.

According to the research, it is determined that this is one of the most difficult challenges for the international community. It poses a threat to the national security of the countries of the world. The HIV/AIDS epidemic continues to spread in Ukraine and the world. At the same time, measures taken by state institutions and authorities to prevent the spread of the epidemic are insufficient to overcome the outbreak.

State-public interaction in combating HIV/AIDS in Ukraine is an actual direction of state social policy – one of the measures of the active state policy of Ukraine's integration into the European space. The process of state-public interaction is considered from the perspective of the stages of its development and correlated with the characteristics of the interaction subjects, their main features, functions, and properties. The normative-legal mechanism of interaction needs further improvement in terms of qualitative changes in the content of legislative and normative-legal acts, including departmental ones, regarding interaction in conditions of decentralization of management, other classification, periodization, and systematization of the national normative-legal framework for the purpose of its development and bringing it into line with the norms of international law (standardization of services in the field of HIV/AIDS).

The effectiveness of prevention management is ensured by integrating prevention measures with treatment, care, and support to meet the needs of clients from different groups. Foreign models of interaction between state bodies and institutions of civil society in the fight against HIV/AIDS are based on the principles of: partnership (all those involved in the implementation of the programs must have common goals, strong motives for action, tools for work that do not conflict with the interests of partners and at the same time strengthen their ability to perform essential functions); multilevel (representatives of all levels – central, regional, local) are involved in the implementation of programs; interdisciplinary (work can be maximally practical under the condition of joint efforts of different industries). Only the interaction of decision-makers, professionals, and stakeholders in decision-making based on evidence-based data ensures an appropriate level of response to the dynamics of the HIV epidemic in all components: prevention, treatment, care, and support.

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Primary Paper Section: F

Secondary Paper Section: FN, FQ