

PRACA POGLĄDOWA  
REVIEW ARTICLE**EPIDEMIOLOGICAL SUPPORT FOR HIV / AIDS IN THE ARMED FORCES OF UKRAINE: PROBLEM QUESTIONS AND WAYS FOR DECISION-MAKING****Andriy M. Galushka<sup>1</sup>, Olesya M. Ivanko<sup>2</sup>, Irina V. Ogorodniyshyk<sup>2</sup>, Mikolay Yu. Olym<sup>3</sup>, Borys I. Palamar<sup>4</sup>, Vyacheslav P. Pechyborshch<sup>2</sup>**<sup>1</sup>THE CHIEF MILITARY MEDICAL DIRECTORATE, KYIV, UKRAINE<sup>2</sup>UKRAINIAN MILITARY MEDICAL ACADEMY, KYIV, UKRAINE<sup>3</sup>CENTRAL SANITARY AND EPIDEMIOLOGICAL CONTROL, KYIV, UKRAINE<sup>4</sup>BOGOMOLETS NATIONAL MEDICAL UNIVERSITY, KYIV, UKRAINE**ABSTRACT**

The article assesses of the system of epidemiological surveillance of HIV / AIDS in the Armed Forces of Ukraine. It has been established that now the current system of epidemiological surveillance is imperfect. There is a risk of increasing the incidence of HIV infection in organized military groups. Existing gaps in the epidemiological surveillance system create problems in planning and implementing measures to prevent the emergence and spread of HIV among the military.

**KEY WORDS:** HIV / AIDS, Armed Forces of Ukraine, epidemiological surveillance

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**INTRODUCTION**

Every year in Ukraine from two to three thousand newly discovered AIDS patients are diagnosed. The HIV / AIDS epidemic in Ukraine is growing, although in recent years there have been some signs of some stabilization [1, 2]. It is also relevant to establish a valid HIV / AIDS incidence level in the security and defense forces, including the Armed Forces of Ukraine.

The country has mobilized a significant amount of national and foreign donor resources to support the implementation of national anti-infection programs. International support plays an important role in overcoming the epidemic in the country [3, 4, 5].

Priority measures to overcome the HIV / AIDS epidemic in Ukraine, the state recognize the intensification of HIV / AIDS prevention; provision of treatment for HIV / AIDS patients who need it; respect for the rights of people living with HIV, and the formation of a tolerant attitude towards them in society [2, 6, 7].

**THE AIM**

The purpose of the study – to analyze the effectiveness of HIV / AIDS epidemiological surveillance implemented in the Armed Forces of Ukraine (AF of Ukraine).

**MATERIALS AND METHODS**

Methods of investigation – bibliographical, epidemiological, immunochromatographic and statistical.

The epidemiological analysis was carried out on the basis of received daily data on the incidence among the personnel of the Armed Forces of Ukraine with the help of the informational and analytical system for recording infectious, occupational and socially dangerous morbidity of military personnel in the Armed Forces of Ukraine, introduced by the medical service of the Armed Forces of Ukraine. Data on the incidence rate among the civilian population of Ukraine are available on the website of the Center for Public Health. The immunochromatographic method was used for the rapid testing of military personnel of the Armed Forces of Ukraine.

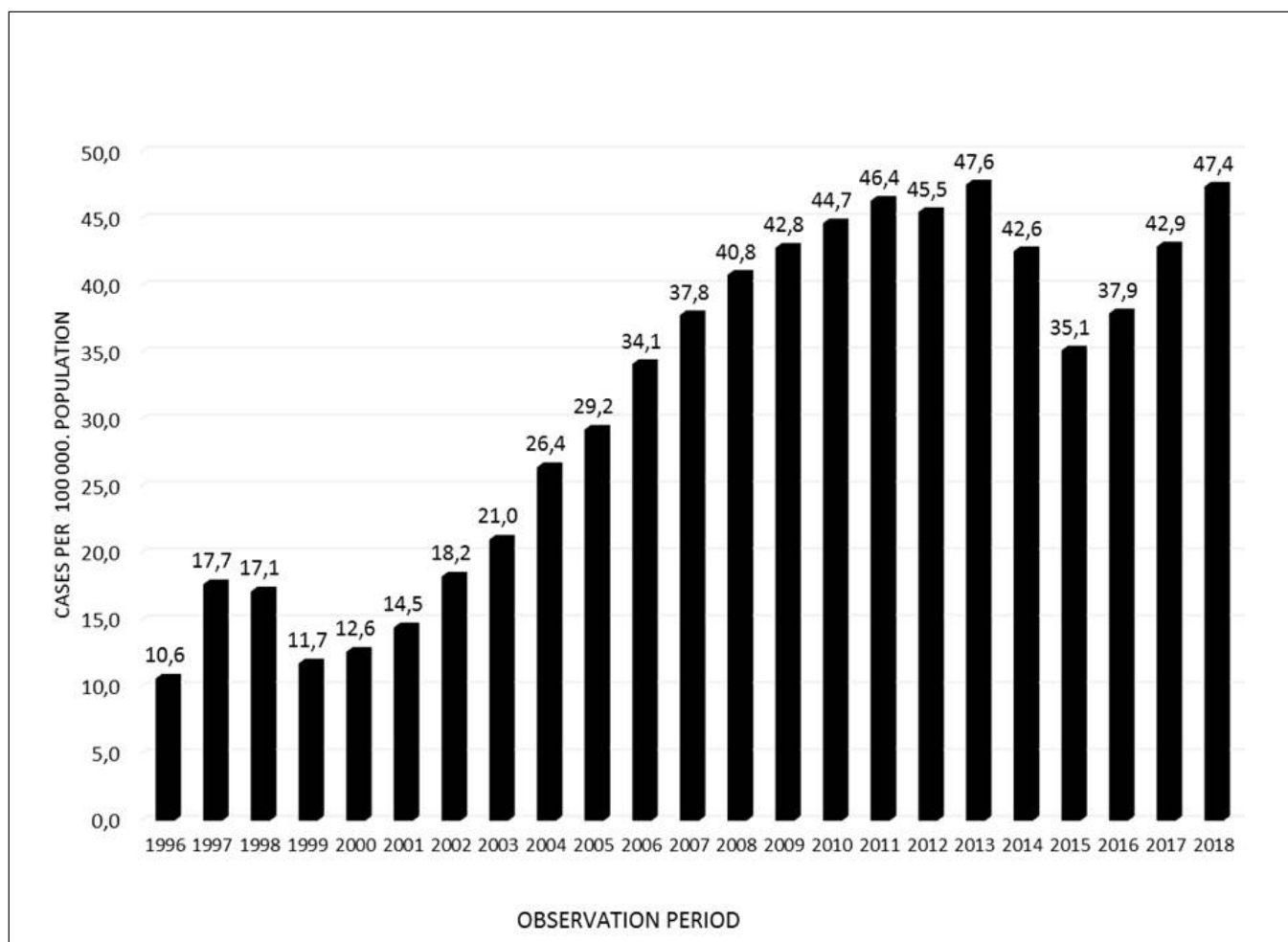
**RESULTS AND DISCUSSION**

The incidence of HIV / AIDS in Ukraine has been gradually increasing since 1996.

The reduction period of morbidity (2014-2017) can be called “imaginary”, which arose due to the exclusion from statistics of part of the population of Donetsk, Luhansk regions and the Autonomous Republic of Crimea, due to annexation by the Russian Federation of part of the territory of these areas that historically had a high level of morbidity.

The main method of HIV transmission in Ukraine, from 1995 to 2007, was the parenteral, mainly for the injection of narcotic substances.

Since 2007, the proportion of transmission pathways has changed - the proportion of parenteral transmission pathways has become below the sexual level.



**Fig. 1.** HIV / AIDS incidence in Ukraine, 1996-2017.

Sexual behavior of HIV-positive persons remains dangerous [2, 4]. It is obvious that sexually transmitted infections mainly occur among people of reproductive age, especially among young people.

It should be borne in mind that a significant part of young people are people who are in military service or work in law enforcement agencies, and they also face similar risks. Additional risk factors for servicemen and law enforcement officers include limited access to information and diagnosis, long periods of sexual retention (which may lead to reckless risky behavior), contacts with representatives of vulnerable groups of the population (primarily in law enforcement agencies) [8].

Now, the regulatory framework of the Ministry of Health of Ukraine (MoH of Ukraine) requires the approval of methods and procedures for both counseling and testing, incl. the instructions on the organization of work of laboratories for diagnosis of HIV infection, methodical recommendations for the use of rapid tests for testing blood for antibodies to HIV, accounting and reporting documentation, etc.

In order to provide medical care to people with HIV in Ukraine, a network of specialized medical and prophylactic institutions – centers for the prevention and control of

AIDS which carry out dispensary supervision of HIV-infected and AIDS patients – diagnose the stage of the disease and determine the treatment tactics, was established.

Medical Service of the Armed Forces of Ukraine operate in a single system of monitoring, state registration and mutual information. To accomplish these tasks, a multi-level infrastructure has been created, which includes medical units of military institutions; voluntary counseling and testing rooms for HIV/AIDS in National Military Medical Clinical Center, Military Medical Clinical Centers (MMCC); establishments of the Preventive Medicine Service; Research Institute of Military Medical Problems.

Information on the detection of the disease among the military personnel of the Armed Forces of Ukraine on HIV / AIDS according to the results of rapid tests is submitted to the Preventive Medicine Service of the Ministry of Defense of Ukraine daily (online). At the same time, it includes long-term studies to confirm the diagnosis at the AIDS Centers that are the basis for further action.

Approximately 15 thousand servicemen are tested annually for HIV/AIDS in the MMCC of the regions. In addition, voluntary counseling and testing (VCT) offices at the MMCC of the regions annually survey and volunteer counseling about 14 thousand servicemen and their fam-



**Fig. 2.** Unified and personalized QR codes for sanitary and educational work

ily members. All military conscripts and contract service members carry out health and education work on HIV / AIDS prevention.

In order to improve the situation on counteracting HIV infection and other socially dangerous infectious diseases among military personnel of the Armed Forces of Ukraine a number of social prophylactic programs with the participation of charitable organizations (CO) and International Charitable Foundations (ICF) were introduced. The aforementioned members include: ICF “Alliance for Public Health”, All-Ukrainian Network of PLWH (People Living with HIV/AIDS), up-to-date name – “100% LIFE” and International NGO “International Institute of HIV/AIDS and Tuberculosis”.

One of the steps to achieve this goal from 2017 to the middle of 2018 was to improve the quality and effectiveness of testing, counseling and improvement of knowledge of medical personnel at the Ministry of Defense of Ukraine (MD of Ukraine) in the implementation of program interventions using testing and counseling on HIV/AIDS.

So, for the purpose of early diagnosis of HIV/AIDS among the military men, 60000 units of immunohromatic one-stage tests (test-cards) for definition of antibodies to

HIV and 25000 various sanitary-educational typographic materials were provided for the health care institutions of the MD of Ukraine by the NGO “International Institute of HIV/AIDS and Tuberculosis”, supported by the project DHAPP PEPFAR.

At the beginning of 2018, 100,000 units of men’s contraceptive barrier type (condoms) were provided by the leadership of the ICF “Alliance for Public Health” for the Armed Forces servicemen who perform assigned tasks in the area of the Combined Forces Operation (CFO). In order to increase the commitment of the personnel of the Armed Forces of Ukraine to a healthy lifestyle and for the collective promotion of hygienic knowledge among the personnel of the Armed Forces of Ukraine, it was introduced a number of unified and personalized QR codes for easier access to sanitary and educational work (Figure 2). With the help of a smartphone, servicemen can scan the corresponding QR-code and immediately go to download (in PDF format) methodical recommendations, combat letters, manuals, samples of information gambling cards and other materials.

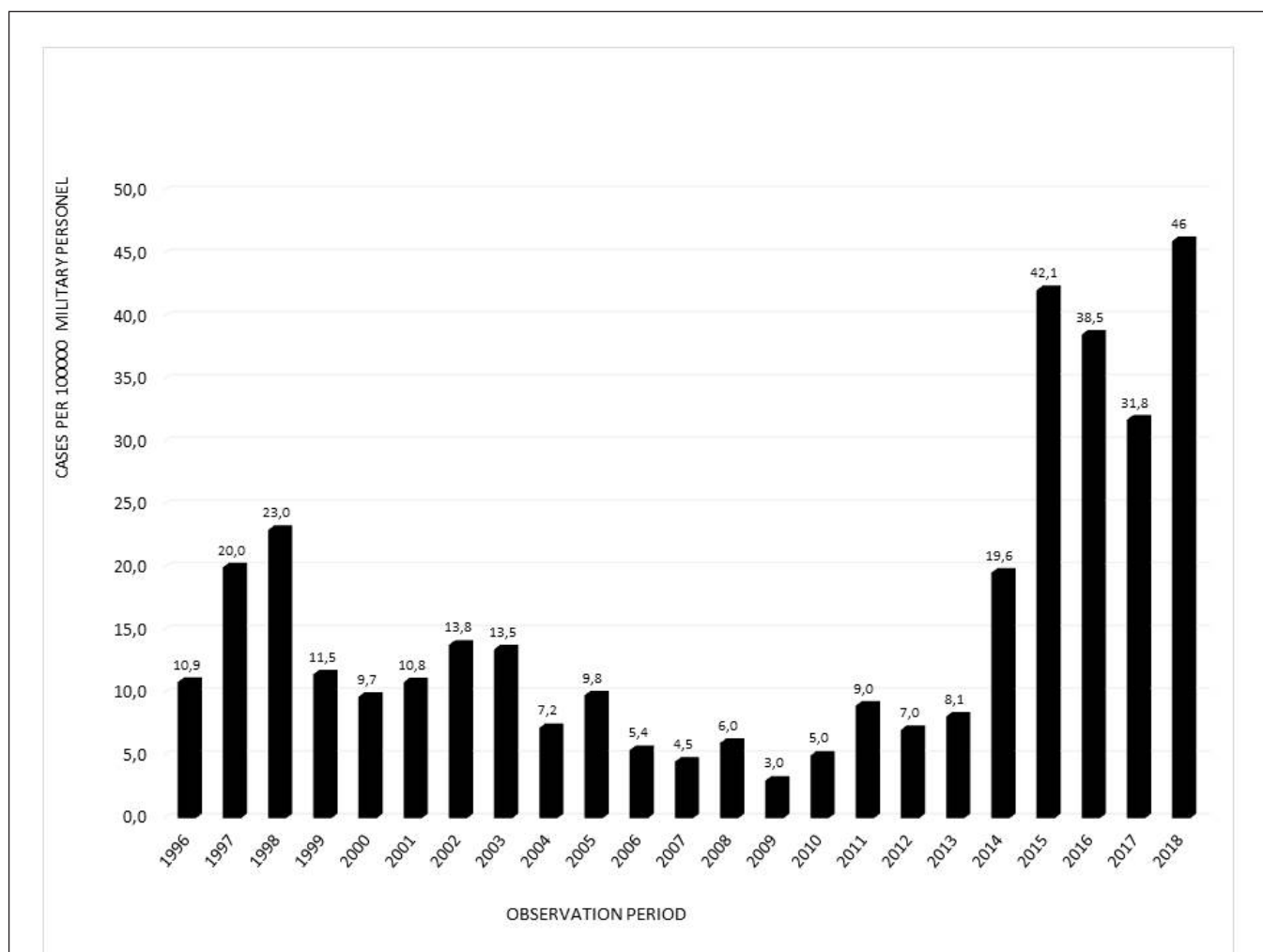
The main preventive measures implemented by the medical service of the Armed Forces of Ukraine on the prevention and reduction of the HIV/AIDS disease among military personnel are: organization of voluntary HIV counseling and testing with the help of express tests; diagnosis and treatment of sexually transmitted infections (STIs); carrying out testing of youth, which is called in the Armed Forces of Ukraine; a system of redirection to specialized specialists in cases where there is a need for highly specialized medical, legal or other consultations; observance of strict anti-epidemic regime in armed and medical establishments, etc.

At the same time, in collaboration with the international non-governmental organization “International Institute of Problems of HIV/AIDS and Tuberculosis”, the Preventive Medicine Service of the Ministry of Defense of Ukraine and the State Institution “Center for Public Health of the Ministry of Health of Ukraine”, 4 GeneXpert systems in the health facilities of the Ministry of Defense of Ukraine in 2018 were installed, due to which timely diagnostics of not only HIV/AIDS, but also tuberculosis is possible.

The timely identification of HIV status not only affects behavioral changes, but should be a guarantee of timely treatment. For this purpose, an HIV-positive person, after receiving VCT services, should go to the regional AIDS centers for medical treatment and receive medical assistance, including antiretroviral therapy (ART).

According to the results of the analysis, it was found that the increase in the incidence rate from 1996 to 1998 is related to the implementation of the Law of Ukraine “On donation of blood and its components” 240/95-BP from 23.06.95, according to which blood, its components and preparations and appropriate preservative solutions are subject to mandatory control, including HIV [9].

After a gradual decrease in 1998, the conscription for regular service and the reduction of planned blood donations in the Armed Forces of Ukraine (mainly servicemen in the regular service were donors) and the introduction



**Fig. 3.** HIV incidence among servicemen, 1996-2018.

of a “barrier to entry of an infection in the Armed Forces of Ukraine”, namely the study of recruits and young adolescents candidates for military service with the help of express tests on the basis of regional military commissariats, the level of general morbidity decreased, and its structural state (morbidity by type of service) has changed (Fig. 3, 4).

In 2008, rapid-fire HIV screening was introduced for recruits, which ensured the identification of infected persons before joining the Armed Forces of Ukraine and HIV-positive persons were not admitted to military service.

The situation has changed dramatically at the beginning of the ATO. In 2014, the mobilization of the population began, with waves of which the Ukrainian Armed Forces received a number of people, which according to the current legislation did not pass HIV testing in the civilian medical institutions and during mobilization in the Armed Forces of Ukraine.

Approximately 50% of these people signed the contract and remained to serve without passing the test and continuing to affect the level of morbidity, which led to an increase in the incidence of HIV among contract servicemen to 91,59% (Fig. 4).

The ways of identifying HIV/AIDS in the Armed Forces of Ukraine are as follows: in accordance with the “Regula-

tion on Military Medical Examination in the Armed Forces of Ukraine”, serological analysis of blood for antibodies to the human immunodeficiency virus (HIV) is carried out at conscripts (pre-conscripts), citizens who wish to study at the Higher Military Institutions (HMI), persons who are enlisted for military service under the contract, reservists, citizens who are recruited for military service for prize-winning officers, soldiers of the Armed Forces of Ukraine in the event of a medical examination [10].

In addition, soldiers of the Armed Forces of Ukraine, after obtaining written consent, conduct voluntary counseling and testing for HIV in accordance with the Order of the Ministry of Health of Ukraine dated August 19, 2005 No. 415 “On Improving Voluntary Counseling and Testing for HIV” [11].

Testing for HIV during mobilization is not carried out.

When HIV/AIDS diagnosis is established, there is the following algorithm for further service (Fig. 5, 6).

According to the Regulations on military medical examination in the Armed Forces of Ukraine, HIV-infected servicemen of temporary service in peacetime are considered unfit for military service and are to be released to the reserve and are limited in time for use in war. Contract

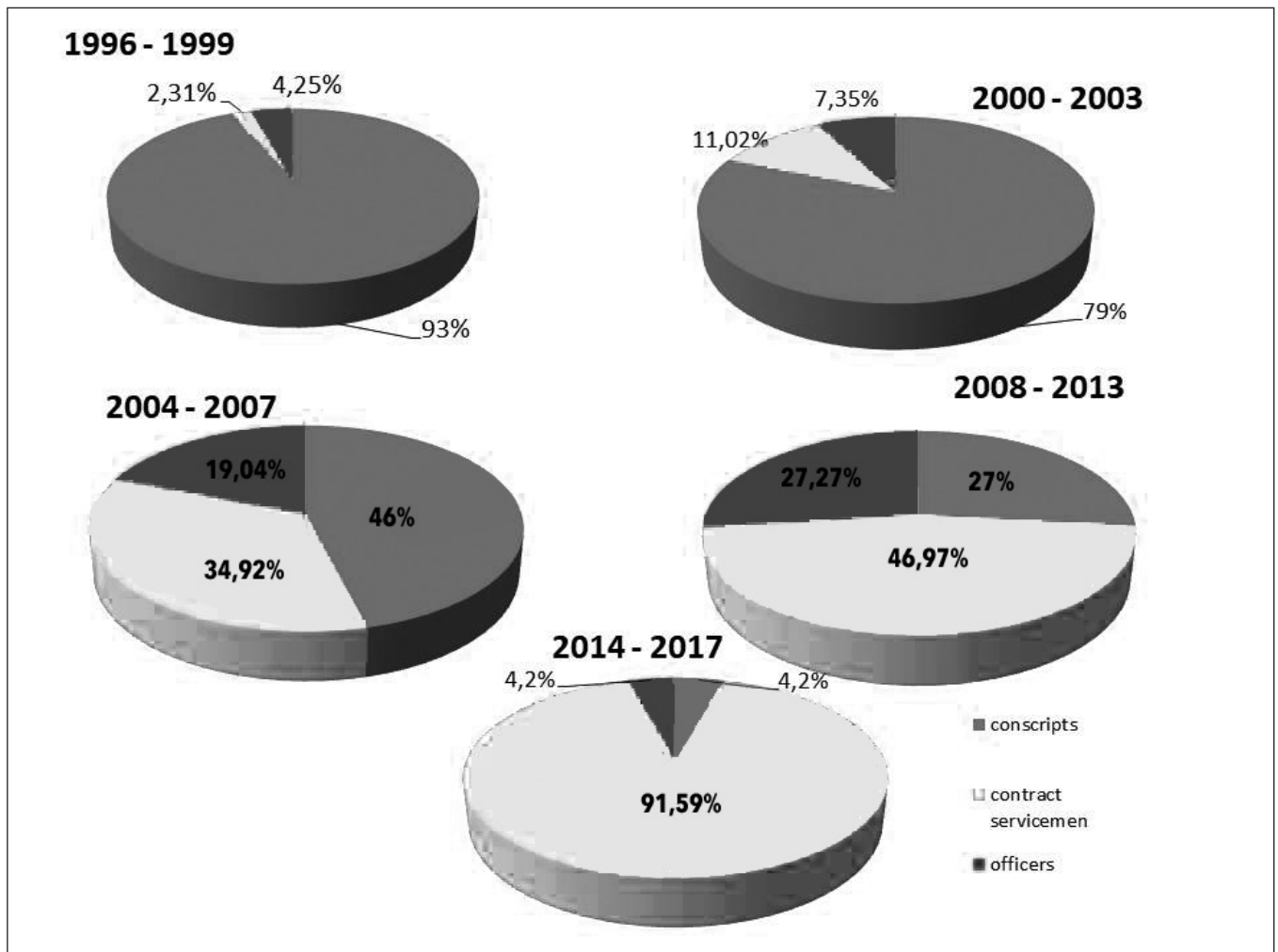


Fig. 4. Structure of HIV-infected servicemen of the Armed Forces of Ukraine, %.

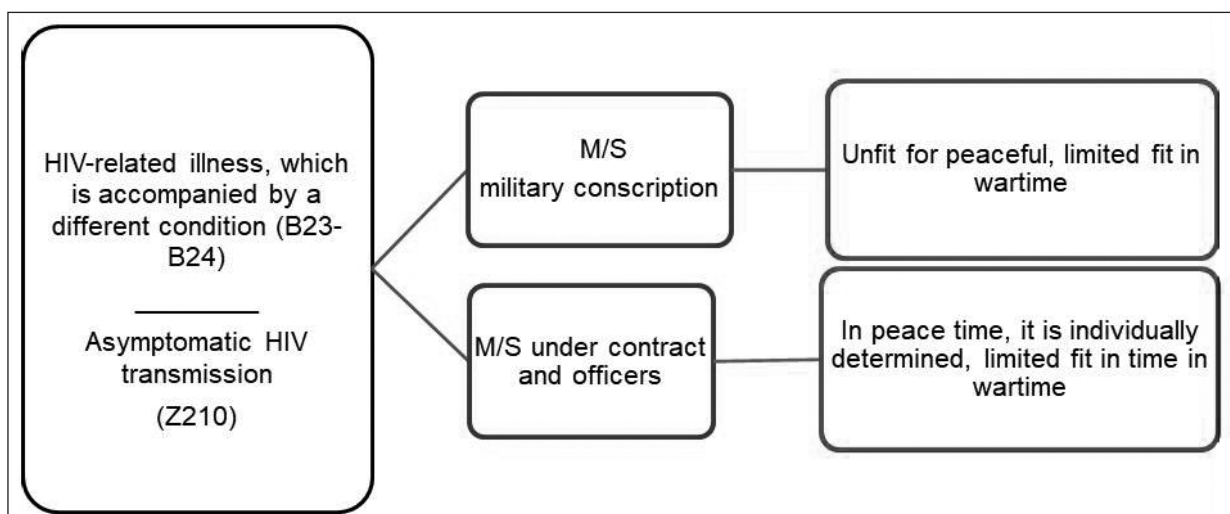
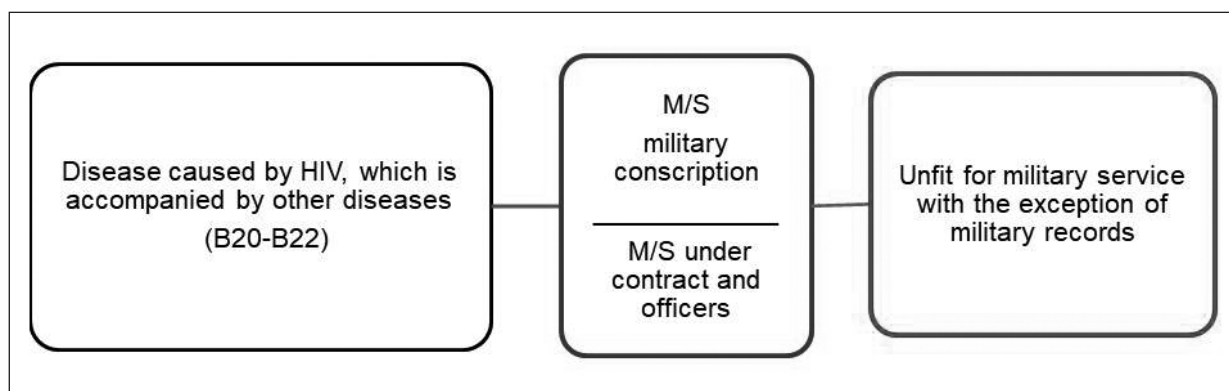


Fig. 5. The algorithm of action for further military service while person has been HIV diagnosed.

servicemen and officers can not be released from military service only on the basis of HIV infection in the asymptomatic stage of the disease. The prospect of passing a further service is solved individually on the conclusion of the Military Medical Commission [10].

In the case of a finding of HIV-positive result in a serviceman of emergency service (with blood donation, serological examination, hospitalization in military medical institutions), data about him are transferred to the territorial centers of AIDS prevention and treatment at the place of residence; the



**Fig. 6.** The algorithm of action for further military service while person has been HIV/AIDS diagnosed

serviceman is sent to the Military Medical Commission for determining eligibility for military service, is deemed unfit under Article 5 of the Schedule of illnesses, conditions and physical defects that determine the degree of fitness for military service and is released from the armed forces of Ukraine. Further treatment is taking place in the health care facilities of the Ministry of Health of Ukraine. In this case, it is difficult to talk about the preservation of medical secrets due to the specifics of military service. The HIV-positive result is known to the command, although Art. 13 of the Law of Ukraine dated 12.12.1991 No. 1972-XII “On the response to the spread of diseases caused by the human immunodeficiency virus (HIV), and the legal and social protection of people living with HIV”, stipulates the right of people living with HIV to information and provides protection of information about the positive HIV-status of a person from disclosure to third parties [12].

An analysis of the international experience of the NATO medical service has shown that, for example, mandatory testing in the United States was introduced in 1985, and is now being conducted once every two years, with newly discovered HIV-infected armed forces not being released and undergoing treatment in military hospitals. If the HIV test turned out to be positive when entering military service, this is the reason for the refusal.

In many countries (according to UNAIDS), the military command is under severe pressure to introduce or maintain mandatory HIV testing before the military conscription, before deploying parts abroad, or at certain intervals. At the same time, for a number of reasons, such an approach is being criticized by various civic organizations. The arguments are made that compulsory testing violates human rights and it is impossible to justify special requirements in force that the testing is economically unjustified, that the positive results of the test in people without asymptomatic stage of the disease do not affect their right to work or “suitability for work” etc. Another argument is that voluntary testing programs that are widely supported and fully funded can be, if not more, no less effective than mandatory testing [13, 14].

## CONCLUSIONS

1. The system of epidemiological surveillance of HIV in the Armed Forces of Ukraine needs improvement in its

adaptation to modern requirements. Existing gaps in the system of epidemiological surveillance create problems in the planning and implementation of measures to prevent the emergence and spread of HIV infection in the Armed Forces of Ukraine.

2. Since the beginning of 2014, the incidence of HIV infection in the Armed Forces of Ukraine has increased due to the entry of HIV-infected mobilized servicemen without proper research.
3. Amendments to the existing legislation through the introduction of annual routine testing in the Armed Forces of Ukraine, which will allow to establish a real level of incidence of HIV infection.
4. It is proposed to introduce a mutual information and integrated reporting system between the MoH of Ukraine and the medical service of the Armed Forces of Ukraine.

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*According to the order of the Authorship.*

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**Conflict of interest:**

*The Authors declare no conflict of interest.*

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