EPIDEMIOLOGICAL SITUATION ON HIV - INFECTION IN THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

The Human Immunodeficiency Virus (HIV) is an infectious disease that has spread throughout the world and has become one of the most pressing problems of the XXIst century, in the health care system and society. It is registered in almost all countries of the world as a pandemic.

As of the end of 2019, there were approximately 38.0 million people living with HIV-infection worldwide.

In the Republic it was identified and registered from 2017 till 2019. The number of registered HIV infections in 2017 was 4025. In 2019, the prevalence rate was 3983 people, and in 2019 it can be seen that the incidence has slightly decreased.

Among migrant workers, 630 cases of HIV infection were identified in 2018, and 546 cases of HIV-positive workers were identified in 2019, in other words this figure was reduced to 84 cases. However, despite the decrease in the incidence among migrants, in 2019 the highest rate was registered in 2019 in Samarkand-87 cases, and the lowest rate-56 cases in Navoi region.

Among migrant workers, HIV transmission in high rates (87.6%) was mainly through sexual transmission, which led to infection of the other spouse and their family members.

Key words: HIV infection, the incidence of a disease, infection rate, prevalence rate, route of transmission.

I. INTRODUCTION

It is well known that currently HIV infection caused by the human immunodeficiency virus has become a global problem for all countries of the world. According to UNAIDS and WHO, the HIV epidemic in the world has stabilized, but still at a very high level [1, 2, 3, 8, 9].

With nearly 33 million deaths to date, HIV remains a major global problem of public health care. As of 2019, the number of people living with HIV on the planet is 38 million, and the number of new infections is 1.7 [1.2–2.2] million. This data decreased by 2.8 [2.0-3.7] million, than in 1998. The number of deaths from concomitant (opportunistic) diseases of HIV infection is 690,000 [500,000-970,000] people. This indicator decreased by 1.1% compared to 2010 [1,2,9,10].

In Russia in 2019, the number of people infected with HIV reached 1 million. The number of new infections was 94,668, of which 36,868 were fatal. According to statistics, more men aged 30-40 years (4%) were infected with HIV, while women aged 30-40 years (2-3%) were more likely to be infected [1,2,3,8,9].

Currently, in the Republic of Uzbekistan, HIV infection is detected in various groups of the population. Year over year the number of people living with HIV in the country is increasing, taking into account newly diagnosed cases of HIV infection. In the long-term dynamics of the incidence of a disease in 2017-2019, the number of
registered HIV infections in 2017 was 4025, of which 2293 were men and 1732 were women. In 2019, the incidence rate was 3983 people, of which 2291 cases were detected among men and 1692 among women. In 2019, you can see that the incidence rate has decreased slightly. It was revealed that HIV infection is unevenly distributed across different administrative regions and population groups [3,4,5,6,7,10].

II. MATERIAL AND METHODS
The material for the research was the reporting statistical data of the republican and regional centers for the fight against AIDS on the incidence of HIV infection and the HIV testing results of diagnostic laboratories. Epidemiological and statistical research methods were used in the work.

III. RESULTS AND DISCUSSION
As a result of a retrospective analysis of the incidence of HIV infection in the Republic of Uzbekistan over the period of 1987-2018, it was revealed that since 1987, when only 76 people were diagnosed with HIV infection, the incidence has been increasing. Within 12 years (2008-2009), this number has grown up to 3404 and 4016 cases respectively. In 2011, there was a slight decline in the incidence - 3584 registered cases (Fig. 1.).

The current situation with regard to HIV infection is as follows. It was revealed that HIV infection is unevenly distributed in different administrative regions and population groups.

In 2019, high incidence rates were noted in the following administrative territories: in the city of Tashkent - 671 cases, Andijan region - 562 cases, Tashkent region - 554 cases, Samarkand region - 434 cases, the lowest incidence rate was registered in Navoi region - 56 cases.

As of 01.01.2019, 40376 people living with HIV were registered in the Republic of Uzbekistan. The largest number with HIV infection was detected in Tashkent city (10280) and the lowest number was detected in Navoi region (370).
By analyzing the incidence of a disease dynamics for the period from 2017 to 2019 it was revealed that the number of registered HIV infections in 2017 was 4025 cases, and in 2019 the incidence rate was 3983 cases of HIV infection, it can be noted that the incidence rate has slightly decreased in 2019.

By analyzing sexual identity, it was determined that 2293 infected were men and 1732 were women. In 2018 the number of registered HIV infections was 4060, of which 2303 were men and 1757 were women. In 2019, the incidence rate was 3983 people, of which 2291 cases were detected among men and 1692 cases were detected among women. According to our observations, in 2019, the incidence rate of HIV infection in the Republic has slightly decreased.

By analyzing and identifying transmission routes of HIV infection during 2000-2018, it was found that in 2000 the parenteral route of transmission prevailed (from 76.6% in 2000 to 17.5% in 2018) in relation to sexual transmission (from 9.1% in 2000 to 72.9% in 2018). At the modern stage, there is a sharp increase in the sexual route of transmission of HIV infection in comparison with the parenteral one. There is an increase in the vertical transmission route from 2005 (0.5%) to 2014 (0.2-0.1%) and remains at this level until 2018 (Fig. 3.).
Registration of HIV cases among medical workers shows that in 2017, HIV infection was detected in 24 medical workers, in 2018 this quotient was 33 cases, and in 2019, 45 cases of infection were detected among medical workers.

Among labor migrants in 2017, 588 cases of HIV infection were detected, 630 migrants were diagnosed in 2018, the number of cases increased by 42 cases of HIV-positive people. (Fig.4.).
In 2019, 546 cases of HIV-positive labor migrants were identified, i.e. this figure was reduced by 84 cases. However, despite a decrease in the incidence among migrants in the Republic, in 2019 the highest rate was registered in Samarkand region - 87 cases, and the lowest rate was registered in Navoi region - 56 cases. In 2018, the highest incidence rate was observed in Samarkand region - 113 cases, and the lowest rate in Navoi region - 8 cases.

Among labor migrants, the main route of HIV transmission was sexual transmission (87.0%), which led to the infection of the other spouse and their family members (Fig.5.).

![Fig.5. Prospective routes of HIV transmission for labor migrants](image)

The above indicators of the incidence of HIV infection in risk groups indicate the need to strengthen preventive measures, conduct sanitary and educational work among the population and increase the coverage of HIV testing among risk groups.

**IV. CONCLUSION**

Therefore, the incidence of HIV infection is unevenly allocated over the administrative territories of the Republic of Uzbekistan. This phenomenon is explained by the time period (remoteness) of involvement in the epidemic process, socio-demographic characteristics, population density, degree of urbanization, proximity to drug trafficking in a particular territory, the level of involvement in migration processes of young people, and many other circumstances. In the Republic of Uzbekistan the Law “On Counteracting the Disease Communication Caused by the Human Immunodeficiency Virus (HIV Infection)” is in force, as well as other laws and regulations aimed at preventing the HIV epidemic.

**CONFLICT OF INTERESTS AND CONTRIBUTION OF AUTHORS**

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