

**HIV INFECTION RATES AMONG LABOR MIGRANTS: SECTOR ANALYSIS  
AND STATISTICS**

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**Annotation:** This article highlights health issues arising during labor migration, specifically cases of HIV (human immunodeficiency virus) infection. It provides statistical data indicating that in 2024, out of more than 68,000 migrants who returned to Fergana region after working abroad, 34,793 underwent laboratory testing, among whom 55 were diagnosed with HIV.

Analyses show that the majority of those infected are men, primarily workers aged 20–49. The main route of virus transmission was through sexual contact. The article also examines in detail the occupations with a high risk of HIV transmission, the countries where migrants worked, the spread of infection by region, and the results of testing among partners.

At the conclusion, recommendations are made to strengthen HIV prevention, testing, education and awareness-raising efforts, as well as to enhance international cooperation. These measures are emphasized as crucial for protecting the health of labor migrants.

**Keywords:** labor migration, HIV infection, migrant health, Fergana region, laboratory testing, infectious diseases, sexual transmission, epidemiological analysis, healthcare, prevention, HIV among youth, sexual partners, migration statistics, working abroad, testing, health policy, risk factors, labor activity, international cooperation, medical assistance.

**Relevance of the Topic:** In today's era of globalization, labor migration has become an integral part of socio-economic development for many countries, including Uzbekistan. Through external labor migration, citizens expand their economic opportunities but also face health and social protection challenges. Particularly, the detection of HIV infection among labor migrants and the risk of its transmission remain pressing public health issues.

HIV affects not only healthcare but also demographic stability, family environment, economic activity, and social stability directly. Therefore, in-depth analysis of the causes of HIV spread among labor migrants, their age-gender composition, geographic factors, and modes of transmission is of great importance for shaping state policy.

Early detection of HIV cases among migrants, effective testing, strengthening awareness and educational campaigns, and developing international cooperation are crucial stages in building a healthy society. Thus, studying this topic is highly relevant both practically and from a scientific-theoretical perspective.

**Research methodology:**

In this study, descriptive-statistical and epidemiological analysis methods were applied to investigate the spread of HIV infection among labor migrants.

The primary sources included official statistical data on HIV infections in the Fergana region for 2023–2024, laboratory test results, and information collected by healthcare organizations and epidemiological services.

The following methods were used during the research:

- **Statistical Analysis:** The number of HIV-infected migrants was analyzed by grouping according to age, gender, place of residence, and types of labor activities performed abroad.
- **Comparative Analysis:** Indicators for 2023 and 2024 were compared to identify dynamic changes in the infection spread.
- **Regional Analysis:** The distribution of HIV cases across different districts of the region was characterized.
- **Epidemiological Survey Data:** An epidemiological analysis was conducted regarding transmission routes, cases related to sexual partners, and migration directions.

Based on the study results, recommendations were developed to improve the effectiveness of preventive measures, identify challenges faced by the healthcare system, and combat the spread of HIV infection among migrants.

Labor migration today has become an important part of the global economy. Many people move from their home countries to other states in search of better jobs and living conditions. However, labor migrants often work and live in difficult and challenging conditions, which negatively affect their health.

The most common health problems during the migration process include:

1. **Infectious diseases** – These often spread due to poor sanitation and weak healthcare systems in the migration areas. Viral infections such as tuberculosis, hepatitis, infectious enteritis, and COVID-19 are widespread.
2. **Chronic diseases** – Labor migrants frequently suffer from chronic conditions such as cardiovascular diseases, diabetes, and hypertension due to stress, improper nutrition, and insufficient medical care.
3. **Occupational diseases** – Working in harsh conditions (e.g., construction, industry, agriculture) leads to various injuries, allergies, and respiratory diseases (bronchitis, asthma) among migrants.
4. **Psychological problems** – Prolonged separation from family, unfamiliar environments, and difficult work and living conditions increase the prevalence of depression, stress, and other mental health disorders.

Therefore, integrating labor migrants into the healthcare system, improving their living and working conditions, and facilitating access to medical care are of great importance for countries.

**Qatar:** The number of labor migrants exceeds 2.5 million (more than the local population). The main countries of origin are India, Nepal, Bangladesh, and the Philippines. Types of labor include construction (especially before the 2022 FIFA World Cup), services, and industry.

**United States:** There are approximately 10-12 million legal and undocumented immigrants. The main countries of origin are Mexico, El Salvador, Guatemala, India, and China. Types of labor include agriculture, construction, services, IT, and other sectors.

**Germany:** The number of labor migrants exceeds 15 million (from various countries). The main countries of origin are Turkey, Poland, Italy, and Russia. Types of labor include industry, construction, services, and healthcare.

Labor migration is currently a socio-economic issue of great importance in Uzbekistan. Many citizens engage in labor activities abroad to improve their economic conditions. However, health-related problems should not be overlooked in this process. Specifically, the spread of HIV infection and its prevalence among migrants remain significant public health challenges for the country.

**Test Results and Comparison with the Previous Year:** In 2024, out of a total of 68,031 labor migrants in the region who returned after working abroad for more than three months, 34,793 (51.1%) underwent laboratory testing for HIV infection. This figure is 12,856 higher than the 21,937 tested in 2023, indicating a significant increase in the number of tests conducted.

In 2024, the number of labor migrants confirmed to have HIV infection was 55, which is 7 fewer than the 62 cases recorded in 2023. This decrease may also reflect the effectiveness of prevention and testing processes.

At the same time, during epidemiological investigations, 70 other patients with confirmed HIV infection were identified through different codes, with a likely transmission of the infection occurring abroad. No cases of HIV infection among victims of human trafficking were recorded.

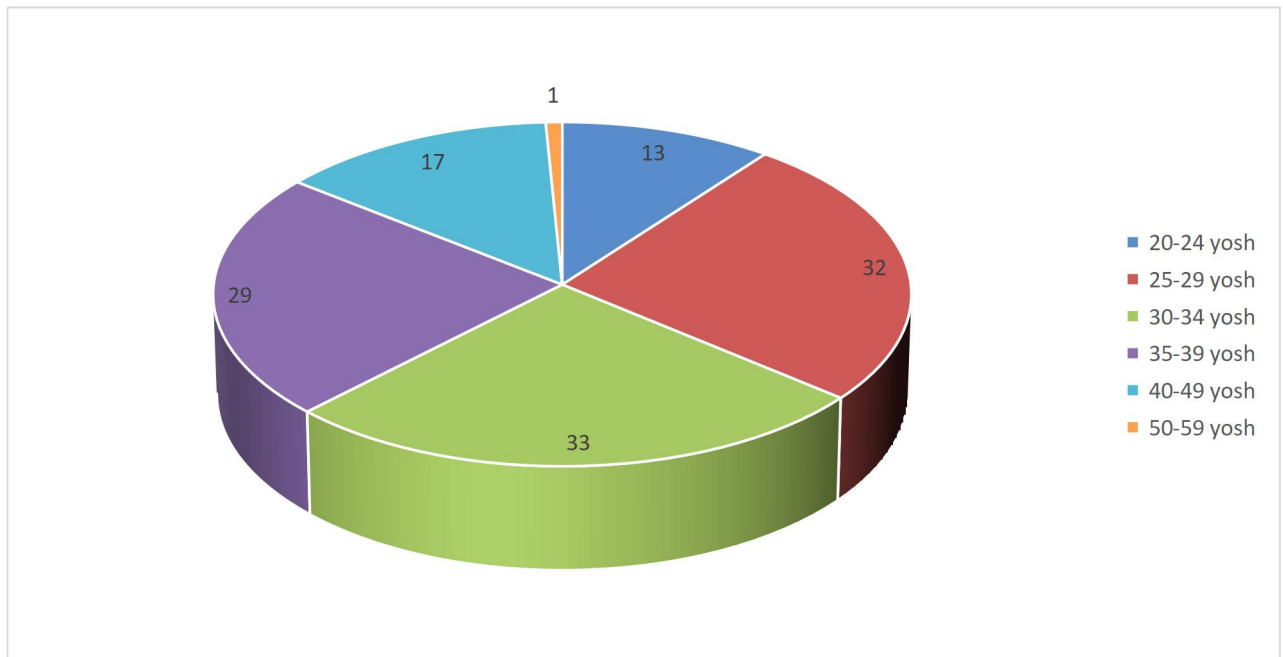
**Regional Distribution:** The distribution of labor migrants infected with HIV by region shows that the disease is more prevalent in certain cities and districts of the region. The highest number of cases was identified in Margilan city (15 cases), Uzbekistan and Quva districts (11 cases each), and Fergana and Kokand cities (10 cases each). Additionally, cases were recorded in Rishton (9 cases), Oltiariq (8 cases), Quvasoy city, Besharik, Qoshtapa, and Fergana districts (7 cases each), Yazyavan (6 cases), Toshloq (5 cases), Bogdod, Dangara, and Uchkoprik (3 cases each), Sokh (2 cases), and Buvayda (1 case).

**Gender and Age Analysis:** Among the total 125 individuals diagnosed with HIV infection related to labor migration, 99 are men and 26 are women. This indicates a higher prevalence of infection among men. Furthermore, 124 individuals (99.2%) fall within the 20–49 age range, representing the active working-age population and the most socially active group.

The age distribution is as follows:

- 20–24 years: 13 individuals (10.4%)
- 25–29 years: 32 individuals (25.6%)
- 30–34 years: 33 individuals (26.4%)
- 35–39 years: 29 individuals (23.2%)
- 40–49 years: 17 individuals (13.6%)

- 50–59 years: 1 individual (0.8%)



These data indicate a high prevalence of HIV infection among young people, clearly demonstrating the need to strengthen public health protection and preventive measures.

**Modes of Transmission:** According to epidemiological investigations, out of a total of 125 cases, 119 (95.2%) were infected with HIV through sexual contact. In one case (0.8%), the virus was transmitted through injection drug use. In the remaining 5 cases, the mode of transmission was not identified.

These findings highlight the necessity to intensify prevention programs focused on sexually transmitted infections.

**Distribution by Type of Labor and Countries:** In 2024, the sectors in which migrants diagnosed with HIV infection worked are as follows:

- Worker: 47 individuals
- Construction worker: 34 individuals
- Craftsman: 18 individuals
- Waiter: 13 individuals
- Laborer: 5 individuals
- Nanny: 4 individuals
- Salesperson: 2 individuals
- Driver: 2 individuals

By country:

- Russia — 97 individuals
- Kazakhstan — 12 individuals
- Turkey — 11 individuals
- UAE — 2 individuals
- Europe — 1 individual
- Kyrgyzstan — 1 individual

These data indicate that labor migrants mostly work in Russia and neighboring countries, where the likelihood of infection is higher.

**Results of Sexual Partners' Testing:** Among the 125 migrants identified this year, 79 sexual partners were tested, of whom 12 were found to be HIV-positive (IB+). The test results of 67 partners were negative. The remaining 46 migrants did not have permanent sexual partners, so testing was not possible.

**Conclusion and Recommendations:** Although the number of HIV infection cases among labor migrants slightly decreased in 2024, the prevalence remains high. The highest infection rates are observed among young people and men, indicating the need to intensify prevention and education efforts. The regional distribution analysis confirms that the disease is more concentrated in certain areas.

Recommendations:

- Expand testing and preventive measures among labor migrants;
- Conduct awareness and educational campaigns about HIV and sexually transmitted infections among youth;
- Strengthen international cooperation and ensure migrants have access to healthcare services abroad;
- Implement measures focused on testing sexual partners and preventing the spread of infections.

These measures will help protect migrant health and reduce the spread of HIV infection.

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