



Research Article

## PREVENTING HIV INFECTION AMONG HEALTH-CARE WORKERS

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### ABSTRACT

The constant exposure of health care workers to a wide range of infectious agents multiplies the risk of infection for both workers and patients. The issue of HIV prevention among health care workers is particularly acute. More than twenty infectious agents are now known to be transmissible by parenteral routes of transmission. This number is rather approximate, as most viral infections provoke pathological processes. However, the concentration of viruses in the blood can vary, as can the length of time the virus is present from the time of entry until the first signs of illness appear. It is these factors that determine the degree of risk of infection. The article examines the epidemiological situation of HIV infection in Samarkand region, outlines the regulatory documents on the prevention of HIV infection and the necessary preventive measures among health workers.

## KEYWORDS

AIDS, HIV infection, prevention, emergency, prophylaxis, post-exposure prophylaxis.

## INTRODUCTION

The high prevalence and steady growth of HIV infection in the population is one of the current and serious problems of modern medicine. Currently, more than 35 million people in the world are living with HIV infection, 1.7 million people per year. The population of Uzbekistan is also affected by the disease, with over 45,000 people living with HIV, including more than 4,000 in Samarkand province. The number of people registered with HIV infection among medical personnel has reached 49.

## PURPOSE OF THE STUDY

Analysis of HIV infection by medical personnel (2005-2021) in a case study in Samarkand Region aimed at implementing weight reduction and prevention measures.

## MATERIALS AND METHODS OF THE STUDY

Data on medical personnel and research work was conducted at the AIDS Centre in

Samarkand. The study data was based on annual summary reports, and HIV infection was recorded among medical personnel and analysis was recorded

## RESULTS

There are more than 38000 health workers in the region, of whom 49 (0.13%) are infected with HIV. 14.32% (7 of them) of those infected were doctors, 53.1% (26 of them) were nursing staff, 32% (16 of them) were paramedical staff. Therefore medical staff must be very careful in hiring or accepting a client as someone with HIV infection. Medical staff working with Crohn's disease, dentists, gynaecologists, blood and body fluids are at greater risk of HIV infection. The risk of infection arises when medical staff do not observe technical safety, in cases of medical accidents, when handling body fluids and sharp-cutting medical equipment. It must be emphasised that in the vast majority of cases, medical staff are infected with HIV because of

their low awareness of the infection and lack of good knowledge of post-exposure prophylaxis. There are specific and non-specialised methods of protection against HIV infection in the protection of health care personnel.

### Special prevention methods

In the case of HIV infection, special prophylaxis methods are administered to the health care worker in the event of a medical accident while handling medication, or during surgical or mining procedures, in which case the health care worker must take antiretroviral medication based on a standard regimen, without a delay of 2 hours to 72 hours. Post-communication prophylaxis (MCP) is administered to the healthcare worker through a temporary observation card in which the results of all laboratory tests, the letter of consent, the name of the medication to be prescribed for MCP, and the quantity are entered. The duration of MCP is 4 weeks (28 days).

A course of post-exposure prophylaxis is given according to the following regimen:

- Lopinavir/ritonavir 2 tablets 2 max one day + zidovudine/lamivudine 1 tablet 2 max one day.

- Zidovudine should be taken at 300 mg twice daily with a meal.
- Atazanavir (atu) should be taken with a meal from 300 mg 1 time.
- If the above drugs are not available, antiretrovirals are available locally: Timazid (zidovudine) and epivir (lamivudine) are used.
- When communicating with gi medical staff, it is mandatory to meet at the "Regional AIDS Centre" and get tested for HIV infection.

### Non-specialised prevention methods:

- See each patient as an individual with HIV;
- Observing the rules of disposal of medical waste;
- Proper use of personal protective equipment (goggles, mask, gown, apron) during biological disorders and medical procedures;
- Observance of safety rules during acute and parenteral treatment;
- Use of medications that are taken orally instead of parenteral treatment.
- Medical personnel must work in cases of medical accidents during treatment based on the following applicable regulations..:

- Compliance with the preventive measures indicated in the Ministry of Health Order No. 206 of August 19, 2021, "On the implementation of clinical guidelines adapted to national conditions for human immunodeficiency virus infection".
- It is necessary to comply with the rules specified in the Order of the Ministry of Health of the Republic of Uzbekistan No. 219 of September 6, 2021 "In the implementation of measures to prevent HIV infection in the Republic of Uzbekistan and further improvement of the organization of medical care".

When providing first aid in cases of accidents at work, the following medicines are mandatory:

1. 70% li 100 ml of alcohol (for treatment of skin and mucous membranes).
2. 5% iodine solution li.- Bottle.
3. 5 pieces of cotton and gauze swabs.
4. Adhesive tape.
5. 5pc of a wearable rubber band on the finger.
6. Scissors.
7. Atvt preparations and rapid tests

#### **Observation of those who communicate:**

The health care worker reports to the department head after providing first aid during his or her professional contact with biological materials while on duty and notes in the "Medical Staff Incident Log at DPM" in the judge that an accident has occurred. Those who come in contact with an infected source of HIV infection are monitored regardless of whether they are infected through professional or non-professional contact. The MCP application opens a temporary monitoring card for those who are in contact for the necessary examinations, which requires the consent of the person who discovered the potential source of infection to be examined for HIV, the results of all laboratory tests, preventive measures and the name of the medication prescribed by MCP, all communicators will be advised, HIV will be tested and must undergo a medical examination.

If the health care worker who communicates with an HIV-infected person has syndromes of acute retroviral infection, an HIV test will be performed, which is not as important as the communication. If seroconversion is observed in an employee who is in contact after the transfer of ICP, he or she is taken under the control of the dispensary. In these cases, the treatment facilities in CPP should

be submitted to the Extradition Center to account for professional and other forms of communication. In turn, the regional AIDS Center must send the report to the Republican AIDS Center.

### Recommendations made based on the results of the study:

1. Train all medical personnel based on safe injection tomography;
2. To increase the knowledge of medical personnel about the types of medical accidents, the causes of accidents, compliance with the rules of a special course of prevention in the event of a medical accident.

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