

rozwiązań tego problemu: podsuwa się m.in. koncepcję „tworzenia w miejscu pracy wspólnych struktur pomocy psychologicznej dla różnych służb” [2]. Oczywiście jest, że różnice organizacyjne w ramach służb ratowniczych (prywatyzacja jednej z nich) przekreśla takie rozwiązanie, zaś sytuację dodatkowo utrudnia fakt minimalizowania problemu przez samych ratowników.

Powyższe względy obligują do uwagi dla zagadnienia pomocy psychologicznej w pracy ratowników medycznych. Konieczne jest zdecydowane odniesienie się do stresu w działalności służb ratunkowych i dostępności pomocy psychologicznej, m.in. na płaszczyźnie edukacji – w systemie kształcenia ratowników medycznych. Jest to jedna z możliwości na uwrażliwienie środowiska ratowników na jego własne potrzeby. Wsparciem tak określonych zadań może być również podjęcie badań na temat stresu i strategii w jego opanowywaniu. Wyniki takich badań byłyby pomocne w rozeznaniu omawianych potrzeb i mogłyby zmotywować do otwartej dyskusji w środowisku ratowników oraz poza nim. Brak takich bądź innych inicjatyw nastawionych na identyfikację problemu i jego rozwiązania nakazuje postawienie pytania o konsekwencje obecnego stanu rzeczy: na ile sprzyja on sprawnym działaniom ratowników medycznych i na ile akcentuje znaczenie tych działań? Albo inaczej: na ile potrzebni są nam ratownicy przystępujący do zadań z pełnym zaangażowaniem i wrażliwością...?

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YU. I. KUNDIEV¹, D. V. VARYVONCHYK¹, A. M. NAHORNA¹, S. O. RYKOV², N. A. OBUKHOVA², A. V. BASANETS¹, T. D. KHARCHENKO¹

¹ SI Institute for Occupational Health of AMS of Ukraine, Kyiv, Ukraine

² Kyiv City Clinical Eye Hospital Center for Eye Surgery, Kyiv, Ukraine

HIV/AIDS prevention at workplace in the health system of Ukraine

Zapobieganie zakażeniom HIV/AIDS w miejscach pracy ukraińskiej służby zdrowia

Abstract:

Risks of occupational and non-occupational HIV/AIDS infection, adequacy, access and efficiency of preventive measures for workers (health and engineering-technical personnel) of preventive treatment establishments of the health system of Ukraine have been defined in the study. Recommendations have been developed for adapting of the system for organization of preventing HIV/AIDS infection at workplace in the health system of Ukraine to international standards, proposed by ILO, WHO and UNAIDS.

Streszczenie:

Badania dotyczyły określenia zawodowego i niezawodowego ryzyka zakażenia wirusem HIV/AIDS a także adekwatności i skuteczności metod zapobiegania tym zakażeniom wśród pracowników (personel opieki zdrowotnej oraz inżyniersko-techniczny) ośrodków profilaktycznych w ramach ukraińskiego systemu opieki zdrowotnej. Opracowano zalecenia dla dostosowania systemu zapobiegania zakażeniom HIV/AIDS w miejscach pracy ukraińskiej służby zdrowia do standardów międzynarodowych w tym zakresie zaproponowanych przez ILO, WHO i UNAIDS.

Key words: HIV/AIDS, prevention, labour sector, health system, workers

Słowa kluczowe: HIV/AIDS, zapobieganie, sektor zatrudnienia, system opieki zdrowotnej, pracownicy

The HIV/AIDS pandemic during the last decade has turned to be one of the most serious problems of the society. In countries, where this disease is widely spread, the epidemic undermines the economics, making a threat for safety and stability of the society [1].

The development of HIV/AIDS pandemic needs adoption of the combined and urgent measures in all branches of the vital activity. The pandemic causes heavy consequences both for demographic and social and economic situations in all countries of the world. Taking into account that people of able-to-work age are mostly involved in the epidemic process the sphere of labor incurs large losses because of the epidemic. In view of the loss of the ability and high mortality of working people in countries as well as due to the loss of the work force in the labor sector and the need to look after AIDS patients by family members, the problem of HIV/AIDS prevention in the labor sector is seemed to be expedient. Also, HIV/AIDS can result in violation of main rights to labor, causing discrimination and stigma of workers and people, who live with HIV/AIDS or those who suffer from it. Actions undertaken at workplace can help to control HIV/AIDS spreading and mitigate their effect. These can be achieved through saving employment and labor rights, providing social defense, care, assistance and treatment, as well as by support in prevention of HIV by informing, education and communication at work place [2-5].

The highest risks of occupational HIV infection are observed among workers of the health system, because of a large number of occupational traumas and accidents, recorded among medical workers and due to direct contacts with blood.

Studies have been conducted on risk assessment of infection in medical staff who have constant contacts with blood of patients, when making injection with a needle, or due to other traumatic skin damages, causing danger of hepatitis B infection – 10-30%, hepatitis C – 4-7%, HIV – 0,3% [6-8].

In the world, by the present time (2008), HIV as an occupational disease, has been officially documented in nearly 350 medical workers, the number of those with virus hepatitis B and C makes ten thousands individuals. By the present day, in the Russian Federation 2 approved cases of occupational infection of medical workers with HIV have been recorded. However, only in 2007, more than 1000 russian nurses and doctors went through chemioprevention using ART after accidental situations [9]. In Ukraine, over the period of 1987-2008, 3 cases of occupational HIV infection of medical workers were recorded (for the period before 1997 – 1 case, 2004 – 1 case, 2005 – 1 case, thus making 2,1 per 100 infected persons [10].

Main causes of HIV infection in medical workers are: injections, using needles and injuring by instruments and

equipment, contaminated with blood or other biological materials, containing probably an AIDS pathogen. Such factors as stress, fatigue and mistakes, occurring during in manipulations are results of work-related accidents due to HIV infection [11].

Annual number of causal injections and other skin micro-traumas in medical workers in the USA makes 600-800 thousands [12]. The majority of studies show that such traumas occur mostly among nurses [13].

The studies conducted in East Africa according to “GERES” Program showed that 30-40 work-related accidents per year fall to 100 nurses. The studies carried out in US hospitals showed that accidents or traumas at workplace were recorded in 52% nurses and physicians. Causal injuries with injections make 72% all accidents [14].

In 1997 the Centre for Disease Control and Prevention of the USA received information on 6498 cases of skin injuries in medical workers, caused by instruments contaminated by HIV-infected blood. The development of the infection was observed in 21 cases, contributing to the average probability of contamination – 03%. The following persons have the highest risk to be infected: middle medical personnel – nurses working in out-patient departments, who have contacts with HIV-infected patients; operating surgeons and operating nurses; obstetricians-gynecologists; pathoanatomists [15].

The studies conducted by the EU showed that among 23212 HIV-infected workers of the health system 196 (0,8%) supposed that they had been infected in the process of their occupational activity, however only 41% cases were confirmed by documents. In this, the highest risks of occupational infection have been recorded in surgeons (4,9%), in paramedical workers (policemen, rescuers) (2,5%), dentists (1,2%), auxiliary personnel in clinics (1,2%), nurses (1,1%) and general practitioners (1,0%) [16].

The combined medical and social studies on the assessment of risks of HIV infection in medical workers and estimation of the efficiency of preventive measures at work place in the health system have not been conducted earlier in Ukraine [11].

Also, one of important problems related to HIV/AIDS are stigma and discrimination of HIV-infected persons and those with AIDS diseases. They are associated with infringement of main human rights, restriction of their access to social and medical care, loss of job and social role in the society, etc. [3-5]. In Ukraine there are no available data on the level of stigma and discrimination of health care workers.

The mentioned problems have been a prerequisite for conducting a pilot study, the purpose of which was to raise the efficiency of HIV/AIDS prevention at workplace in the health system of Ukraine.

Tasks of the pilot study were as follows:

1. To analyze the national legislation of Ukraine on protection of health workers from HIV infection at workplace.
2. To define risks of HIV-infected individuals in staff of model therapeutic and prophylactic establishments (TPE) of the health system and to assess quality of risk management, following the international standard: «*Joint ILO/WHO guidelines on health services and HIV/AIDS*» (2005).
3. To assess the conformity to the WHO standards (*Clinical protocols for the WHO European Region. HIV/AIDS treatment and care: 13. Post-exposure Prophylaxis for HIV Infection, 2006*) and efficiency in realization of actions on HIV prevention in health workers at workplace in medical establishments.
4. To define the level of readiness to discrimination and stigma in people infected with HIV and individuals with AIDS (workers, patients), following recommendations of *UNAIDS/07.32E / JC1420E: Reducing HIV stigma and discrimination: a critical part of national AIDS programmes: a resource for national stakeholders in the HIV response (2007)*.
5. To develop scientifically grounded recommendations on realization of the policy and programs on HIV/AIDS prevention at workplace in establishments of the health system of Ukraine, based on the directive document “Collection of practical rules of the ILO “*HIV/AIDS and a workplace*”» (2001) and on the International Guide «*Joint ILO/WHO guidelines on health services and HIV/AIDS*» (2005).

Materials and methods

The pilot study covered two therapeutic and prophylactic establishments (TPE) of the city Kyiv:

- State Institution «Institute for Occupational Health of National Academy of Medical Sciences (NAMS) of Ukraine (SI «IOH AMSU») with Clinic for Occupational Diseases, including administration board, consultation outpatient department, 3 inpatient departments (therapeutic, neurological, rehabilitation), laboratory, general curative and engineering staff (number of workers by the staff schedule by the moment of the pilot study – 96 persons);
- Kyiv City Clinical Eye Hospital “Center of Eye Surgery” (KCCEH «CES) – including administration board, information-analytical department, two consultation outpatient departments (for adults and children), one department for ambulatory treatment (laser methods of treatment), one reception department, ten ophthalmologic departments for in-patient patients, three operation units, one department for anesthetization and rehabilitation, three departments of diagnostics and cure and two engineering-technical departments (number of workers by the staff schedule – 374 persons).

Studies were conducted using a questionnaire, providing collection of the following information:

- I. Information about a worker: sex, age, profession, general work experience in the health system, qualification level, membership in the branch-related trade union, reference to administrative personnel.
- II. Risks of HIV infection: non-occupational and occupational.
- III. Prevention of HIV infection: keeping to work safety regulations, related to his/her occupational duties; providing actions on prevention of HIV infection in therapeutical – prophylactic establishments (TPE), keeping to measures for preventing HIV infections in the case of an occupational accident; realization of measures on personal prophylaxis of non-occupational HIV infection.
- IV. Stigma and discrimination of HIV- infected people: stigma of HIV- infected people (fear, shame, charge and blame), discrimination of HIV-infected people (physical and social isolation), verbal stigma, loss of his/her social role, loss of the access to means of subsistence and services), discrimination of HIV-infected health workers at workplace.

The total number of filled questionnaires in the study, included in the statistical processing and analysis was 470, making 81,0% of the total number of individuals working by the staff schedule in the examined TPE by the moment of the study, providing for high probability of the obtained data in the epidemiological study of the working contingents.

Women were prevailed (73,4%) among the examined individuals, average age of workers was $44,9 \pm 0,6$ years (from 18 to 84). The largest examined group included individuals of 30–59 years old (73,4%). Health care workers prevailed (74,7%), among them – physicians and nurses (63,8%). The average length of service in the health system for the examined people made: for health care workers – $20,0 \pm 0,7$ years, for technical-engineering workers – $8,1 \pm 0,6$ years.

Almost all examined people (97,0%) were members of the branch-related health trade union. 12,3% took leading positions in TPE of various level: among health workers these were chief doctor and his/her deputies, heads of departments, senior nurses, matrons; engineers and technicians (managers of different services) – 4,9%.

The study shows that there are correlations between the age and length of service of workers as well as between the length of service, level of qualification and occupational groups. In view of the above, the level of qualification of workers, specified by other medical and social indices (length of service and occupation) was not taken into account in the study.

The study was performed according to the International Contract on collaboration with the International Labour Office (Project ILO/GTZ No. 53060900916/9105297).

Results and discussion

Analysis of the national legislation on protection of medical workers from HIV infection at workplace. “Instruction on prevention of occupational HIV-infection” is in force in Ukraine (Order N. 120 of the Ministry of Health on 25 May 2000”, further – “Instruction”). In item 1.1 it is mentioned: “The control over safety of HIV-infected medical workers in the process of their professional activity is laid down on a special Commission of the TPE, the membership of which is approved by a corresponding Order of the Chief Doctor”. However, its staff is not regulated, the presence of its representatives of the trade union and in other social occupational associations is not specified.

In Item 1.2 the need to provide workplaces of TPE with instructive and methodical documents is underlined (lists, content and place of which are not indicated), first-aid kits for emergency situations (content is specified), necessary sets of medical instruments for a single use (content and number are specified), means of disinfecting (list and number are not specified). The lack of specification does not allow to standardize organizational measures in realization of primary prevention of occupational HIV infection.

In Item 1.3. it is mentioned that “... medical instruments, including laboratory glassware, bed-clothes, apparatus, polluted with blood, biological fluids... and things contaminated with mucus, should be immediately disinfected after using...”. However, in this item it is mentioned that disinfecting takes place, excluding urine, saliva, cleaning in the case of small number of viruses”. However, there is a lot of situations in clinical practice, when the mentioned biological fluids can contain a large number of blood or excretions from genitals, which can contain HIV. Such exclusion decrease the efficiency of primary measures of occupational HIV infection in workers of medical establishments.

Items 2.1-2.10 of the Instruction includes all necessary regulations directed at prevention of traumas by medical instruments. However, the need of the constant training of medical staff in such regulations is not underlined. Also, it is mentioned that only “brigades of ambulance and first aid should be provided with containers made of materials for collection of the disposed syringes, which cannot be punctured (item 2.1.). This fact can mislead that all other medical services don not require availability of hermetic containers for collecting disposed syringes and other medical instruments. In Item 2.3. the use of the following

argument is used not soundly: “before putting on rubber gloves the skin near nails should be treated with 5% iodine alcoholic solution”.

Item 3 of the Instruction presents measures concerning “preventive measures in cases of injuring, contacts with blood, biological fluids and biomaterials of HIV-infected or AIDS patients” are mentioned. However, a modern strategy of medical care is based on a high probability of HIV infection for any person.

In accordance to Item 4.1. of the Instruction “An accident – it can be an injection, cut, contamination of mucous and skin surfaces and other biological fluids”. In actions, laid down in Instruction, directed at rendering first medical aid in the case of a probable contact of a medical worker with materials, containing HIV (accident) availability of some old conceptions, which do not correspond to actual WHO Recommendations on post-contact prevention of HIV-infection for the European Region.

The study revealed that, in general, national policy and legislation of Ukraine provide for prevention of occupational HIV-infection and the control of stigma and discrimination at workplace and in the society. However, the following measures require further improvement: national registration of cases of HIV infection of the population with due account of branches of economic activity (by UN Classification – ISIC-2), employment (ISCO), level of education (ISCED-76); adaptation of the acting Instruction of the Ministry of Health of Ukraine on prevention of occupational HIV infection to WHO standards; development and implementation of the system of the national monitoring of cases of work-related accidents, where there is a threat of HIV-infection. Measures should be undertaken in order to prevent their occurrence; elaboration of a branch-related instruction on prophylactic actions, using antiretroviral (ARV) therapy.

Risks of non-occupational HIV-infection of the TPE personnel in the health system. It is established that among TPE workers non-occupational risks of HIV-infection are developed due to sexual route (men 56,8%, women 27,8%, $p < 0,0001$) and probable infection as a result of invasive medical interventions, made in other TPE (64,8%).

The implementation of measures on prevention of sexual HIV infection is far from being efficient. Only 56,8% workers always use condoms in sexual relations, 21,8% examined are ashamed to propose his/her sexual partner to use condoms (women – 23,1%, men – 18,1%, $p < 0,01$). With the increase of the age and because of low level of general education, the use of condoms by workers in sexual relations decreases. The level of voluntary and anonymous HIV examination of TPE workers is not high. By the last year only $\frac{1}{4}$ health workers of TPE were subjected to voluntary consulting and testing on HIV at least once in their life.

Only 11,1% men and 16,3% women, working in TPE, were subjected to voluntary examination on HIV in the last year. Health care workers were tested more frequently in comparison with the engineering staff. The relationship of testing on HIV between men and women was almost equal.

Risks of occupational HIV-infection for the TPE personnel. The study showed the availability of high risks of occupational HIV infection in nearly 16% medical workers. Such risks are occurred because of the following factors: wounding with non-sterile needles, ampoules, cutting or pricking instruments (15,4% examined persons), direct skin or mucous membrane contacts of workers with patients' blood or other biological liquids (sperm, vaginal excretion) – 12,0%, as well as directly in the process of health care of HIV-infected individuals, patients with AIDS – (11,6%) (Fig. 1).

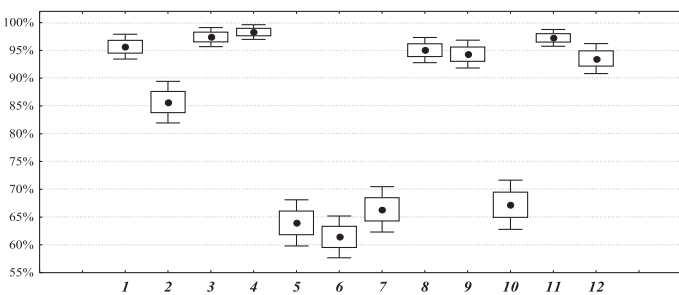


Fig. 1. Risks of occupational HIV infection among examined TPE workers:

1 – injuring with non-sterile needles, ampoules, cutting or pricking instruments; **2** – direct contact of skin or mucous membranes of a worker with blood of patients or other biological fluids; **3** – direct contact of the damaged skin of a workers with biological fluids of patients (blood, sperm, vaginal excretion); **4** –direct medical care of HIV/AIDS-infected individuals.

Risks of occupational HIV infection are more expressed in male workers and are formed due to: injuring by non-sterile needles, ampoules, cutting instruments (male – 22,9% of the examined persons, women – 13,3%, $p < 0,001$); directly rendering medical care of HIV-infected individuals, AIDS patients (men – 17,9%, women – 9,9%, $p < 0,001$); in cases of direct contacts of skin or mucous membranes of workers with the blood of patients or other biological fluids (sperm, vaginal secret) (men – 15,7%, women – 11,0%, $p < 0,05$). Occupational risks of HIV are recorded more often in physicians (19,0-16,0%) and nurses (8,8-12,0%). All occupational risks of HIV infection are mostly recorded in workers aged more than 50 and with 11 years length of service.

Assessment of the correspondence to WHO standards and efficiency of realization of measures in prevention of HIV infection at workplace in medical establishments.

It is found that the larger part of health workers (95%) constantly keep to the following safety regulations, directed at prevention of occupational HIV infection and, also, prevention of HIV transmission to TPE patients: they always use only disposable needles and syringes (98,3%); make qualified disinfecting and sterilization of medical instruments, equipment (97,4%) and linen (93,5%); wash their hands with soap before and after manipulations (95,7%); always throw out the used needles and instruments into hard water-proof containers, filled with disinfecting solutions (95,0%); keep to safety regulations, when using sharp and cutting medical instruments (94,3%).

However, 1/3 medical workers of TPE do not always keep to safety measures. 14,3% health workers, when doing their job, being in direct contacts with blood, do not always use individual protective means (overalls, aprons, rubber gloves, masks and protective eye-glasses, shields, etc.). They do not always properly dispose the used needles or take them off from syringes without using any instruments (66,4%), take off the used needles from syringes before being disinfected. Cases of infringement are recorded more often in men (Fig.2).

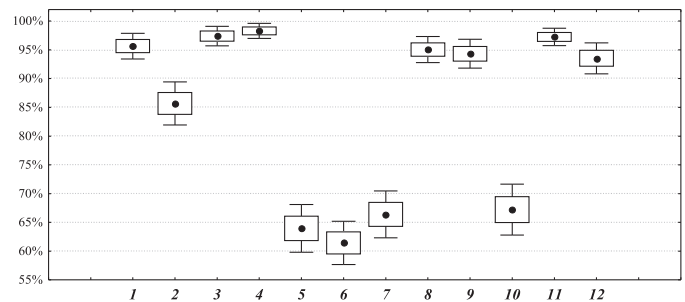


Fig.2. Keeping to measures of HIV- infection prevention in the examined TPE workers:

1 – workers, who, as a rule, wash their hands with soap before and after manipulations; **2** – workers, who, as a rule, use individual protective means in direct contacts with blood (gloves, overalls, aprons, rubber gloves, masks, protective eye-glasses, shields, etc.); **3** – workers, who, as a rule, make a qualified disinfecting and sterilization of medical instruments or equipment, which can be HIV infected; **4** – workers, who always use only new disposable needles and syringes; **5** – workers, who take many-times used instruments only in cases of lack of disposable ones; **6** – workers, who, as a rule, throw away the used needles; **7** – workers, who, as a rule, take off needles from syringes after usage before disinfecting; **8** – workers, who, as a rule, throw away the used needles or instruments into hard water-proof containers, filled with disinfecting solutions; **9** – workers, who, as a rule, keep to methods of safe use of sharp and cutting medical instruments; **10** – workers, who, as a rule, in the case of extreme situations, take off or cover the used needles using instruments or caps; **11** – workers, who took part in special training on prevention of HIV

infection at workplace; 12 – workers, who after using medical instruments or linen, contaminated with blood, do their disinfecting.

The TPE are often not provided with sufficient equipment for prevention of occupational HIV infection: there is a need in disposable instruments, lack of disposal needles, means of disinfecting, containers for keeping the used needles, syringes, instruments and personal protection equipment. As a result, almost 20,0% health workers with skin damages or skin hand diseases, rendered medical care to patients without any protection (adhesive plasters, etc.), so having a high occupational risk of HIV infection.

The majority of health care workers highly appreciate the combination of prophylactic measures, aimed at prevention of occupational HIV infection and their implementation in TPE (93,6%). Including training in work safety (97,1% workers), availability of a first-aid-kit for urgent cases of occupational traumas or accidents (94,7%), recording such accidents, when there is a threat of a HIV infection (94,0%). Women assess the organization of preventive actions to HIV infection more positively.

However, the study revealed significant shortcomings in realization of measures in TPE, related to post-contact prophylaxis of HIV infection in health care workers. It was defined that only 16,2% health workers, in such cases when there was a threat of a HIV infection at workplace, used a first-aid kit in urgent cases. As a result of using the Instruction on the first aid in cases of traumas or accidents, acting in Ukraine at present and being not properly developed, health care workers can be HIV infected at workplace: they aspirate blood from wounds (24,9%), squeeze or rub a damaged place (85,9%), treat it with such antiseptic, which can irritate skin or mucous membrane (ether, iodine, chlorohexidine, chloroamine) (96,4%), cover the damaged place with a hermetic dressing (89,3%). And in this, only 6,4% medical workers have recorded cases of their occupational traumas or accidents and only 2,3% medical workers have addressed City Centre for AIDS Prevention and Control for prophylaxis of HIV infection, using ART (80,0% of them went through that procedure).

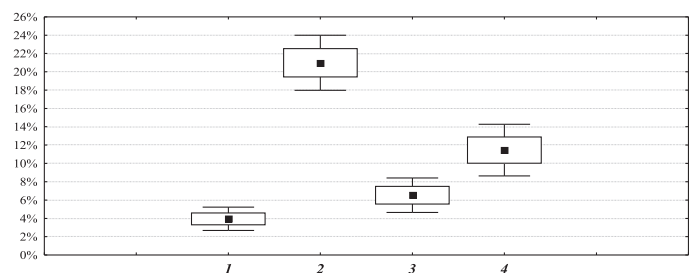
Determination of the level of evident social and psychological discrimination and stigma in HIV-infected individuals and those with AIDS in workers of medical establishments (collaborators, patients). Among 1/4 workers examined in TPE, high level of readiness to stigma and discrimination of HIV-infected patients and collaborators has been stated. Main reasons of such situation are: insufficient knowledge on that it is impossible to be infected via saline, sweat, tears, urine, faces from HIV-infected individuals – 51,7%; when they together with HIV-infected people, visit swimming-pools, bath, sports facilities, toilets – 40,0%; when they visit a house of a HIV-infected individual, use foods prepared

by a HIV-infected person, play with a HIV-infected child – 40,2%). They take the fact of HIV-infection psycho-emotionally (they are shamed when a health worker is infected with HIV – 56,8%, when members of their families are infected – 50,2%). They consider that individuals with HIV infection should be ashamed of their behavior – 58,4%). 17,9% health workers are fully convinced that HIV- infected people should be isolated. The higher levels of willingness to stigma of HIV-infected people have been recorded in members of the staff which has no medical education (junior assistants, engineers and technicians), and this level increases with workers' age.

Almost 20,0% examined workers mention their negative life experience concerning discrimination of HIV-infected individuals from other members of the society, among them: concerning physical isolation, – 14,9%, verbal stigma – 18,08%, loss of their social role and means of subsistence – 17,6%, social and medical support – 16,5%. Men more often mentioned that negative experience.

3,9% examined mentioned that there were HIV-infected workers in their TPE. However, the rate of occupational discrimination of HIV-infected individuals in the examined TPE, is negligible. No less than 3/4 health workers mentioned the need to keep work places for HIV-infected workers in the establishments, providing, however, their withdrawal from doing manipulations in the process of which other health workers or patients could be infected. Nearly 21,0% examined workers expressed negative attitude to HIV-infected collaborators (among them: junior nurses – 25,6%, engineers and technicians – 13,8–55,6%. 6,5% workers mentioned facts of revealing medical secrets on the HIV status of health care workers or patients in their establishments. Such tendency prevailed among female health workers. The discrimination of collaborators by the forced testing on HIV was not found on the side of the administration. The study shows that the tendency to discrimination in respect of the obligatory testing of health workers, when they address for medical care as patients to other medical establishments, is still exist (11,5% workers) (Fig. 3). The mentioned facts contribute to formation of prerequisites for continuation of discrimination of HIV-infected individuals, because of the support of the collective thinking on the need of their isolation.

Fig. 3. Discrimination of the examined TPE workers at workplace:



1 – workers, who know that there are of HIV-infected collaborators in their TPE; 2 – workers, who have a negative attitude to HIV-infected individuals; 3 – workers, who know about cases when medical secrets, concerning HIV-infected collaborators or patients in their TRE, have been revealed; 4 – workers, who are forced to undergo examinations on HIV, when they address for medical care.

Conclusion

The results of the undertaken studies showed the need for implementation of further actions, aimed at raising the efficiency of HIV-infection/AIDS prevention at workplace in Ukraine in establishments of the health system and in the labor sector, in general. They should be directed to overcoming the following available problems and main shortcomings through:

1. monitoring of the progress of HIV/AIDS epidemic, with due account of economic activity of the population and development of purposeful programs on prophylaxis of HIV/AIDS in the labor sector;
2. development and introduction of the system of national monitoring of occupational accidents, when there is a threat of HIV infection and taking measures in order to avoid them;
3. improvement of the system of stage-by-stage and constant training of TPE workers on work safety, directed at prevention of HIV infection and intensification of the control over their quality and efficiency;
4. adaptation of acting Ministry of Health instructions to the WHO standards on prophylaxis of occupational HIV infection in establishments of the health system and in other occupational groups;
5. development and wide use of information with the purpose to promote workers with high risk of occupational HIV infection to voluntary and anonymous testing on HIV;
6. raising the resource provision of TPE (material and technical base, staff, finances) for implementation of measures on prevention of occupational HIV infection in TPE;
7. providing implementation of the system of the first aid for workers, who received trauma or injury with high risk of HIV infection at TRE, based on evidence principles; improvement of the control of full and objective record of cases of occupational traumas or injuries with a high risk of HIV infection in TPE.
8. developing, implementation and control of the efficiency of programs on prevention of stigma and discrimination of HIV-infected individuals and workers in public health establishments;
9. improvement of regulating, legal and organizational instruments on recording cases of HIV infection as an occupational disease.

It is planning to direct further scientific studies in Ukraine to:

developing a system of national monitoring of HIV/AIDS epidemic progress with due account of the level of education and employment of the population; grounding standards on preventive measures concerning occupational HIV-infection; developing indicative indices for assessment of the access and quality of measures, aimed at prevention of occupational HIV infection.

The results of the pilot study showed the need to conduct further wide-scale studies on prevention of occupational HIV infection in the labor sector.

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