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Stigmatization of people living with HIV among obstetricians and gynecologists: a pilot study

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BACKGROUND: The stigma of people living with HIV (PLHIV) remains an urgent problem of modern science. Meanwhile, it can be stated that there is a lack of methods used to study stigmatization.

AIM: The aim of this study was to evaluate the stigmatization of PLHIV among healthcare workers of the obstetric and gynecological service.

MATERIALS AND METHODS: The study included 232 doctors and nurses of the obstetric and gynecological service and was conducted from April to November 2018. We adapted the Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS and the Comprehensive Health Staff Questionnaire (for sentinel surveillance) for this study.

RESULTS: We have studied the current level of awareness of healthcare workers of the obstetric and gynecological service regarding the ways of HIV transmission and methods of treatment. The contradictory attitudes of medical workers towards PLHIV were considered. On the one hand, medical professionals believe that, regardless of their status, the patient deserves qualified assistance. On the other hand, they find it difficult to assess the moral aspect of HIV infection. Dependences of the level of awareness and the peculiarities of attitudes towards PLHIV on sociodemographic characteristics were established.

CONCLUSIONS: This article analyzes the results of the pilot study of stigmatization of PLHIV among healthcare workers of the obstetric and gynecological service. We compared our own results with the data obtained by domestic and foreign authors and discussed the similarities and differences in the conclusions. The limitations of this pilot study were analyzed, with the probable ways of further work proposed and outlined.

Keywords: HIV; stigma; stigmatization of people living with HIV; healthcare workers; obstetric and gynecological service.

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Пилотное исследование стигматизации лиц, живущих с ВИЧ, со стороны акушеров-гинекологов

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Обоснование. Стигматизация лиц, живущих с ВИЧ, остается актуальной проблемой современной науки. При этом можно констатировать недостаток методик, используемых для исследования стигматизации.

Цель — изучить уровень стигматизации пациентов, живущих с ВИЧ, со стороны медицинских работников акушерско-гинекологической службы.

Материалы и методы. Выборку составили 232 испытуемых — врачей и медицинских сестер акушерско-гинекологической службы. В работе использованы «Опросник отношения к лицам, живущим с ВИЧ, со стороны медицинских работников» (Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS) и «Опросник медицинского персонала по отношению к лицам, живущим с ВИЧ» [Comprehensive Health Staff Questionnaire (for sentinel surveillance)] в адаптации авторов. Исследование проведено в период с апреля по ноябрь 2018 г.

Результаты. Изучен актуальный уровень информированности медицинских работников акушерско-гинекологической службы о путях передачи ВИЧ и способах его лечения. Рассмотрены установки медицинских работников акушерско-гинекологической службы к пациентам с ВИЧ, выявлен их противоречивый характер. С одной стороны, медицинские работники считают, что вне зависимости от своего статуса пациент заслуживает квалифицированной помощи. С другой стороны, медицинские работники затрудняются в оценке морального аспекта заражения ВИЧ. Установлена зависимость уровня информированности и особенностей установок к пациентам с ВИЧ от социodemографических особенностей.

Заключение. В статье проанализированы результаты пилотного этапа исследования уровня стигматизации пациентов с ВИЧ со стороны медицинских работников акушерско-гинекологической службы. Авторы сопоставили полученные в ходе исследования результаты с данными как отечественных, так и зарубежных авторов и проанализировали причины сходства и различия в выводах. Представлены ограничения пилотного исследования и намечены пути дальнейшей работы.

Ключевые слова: вирус иммунодефицита человека; стигма; стигматизация лиц, живущих с вирусом иммунодефицита человека; медицинские работники; акушерско-гинекологическая служба.

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BACKGROUND

The spread of human immunodeficiency virus (HIV) infection in the Russian Federation and some of its regions poses a problem to the health care system [1, 2] and to society. The prevalence of HIV is forcing society not only to improve preventive measures, legal regulation on prevention of HIV infection, organization of activities, materials, and technical and staffing of specialized medical organizations but also to implement activities for the rehabilitation and re-socialization of people living with HIV (PLHIV). These activities are complicated by the peculiarities of attitudes toward PLHIV in society and by their discrimination or stigmatization by various segments of the population.

The majority of research is related to the study of various aspects of the stigmatization by PLHIV themselves [3–6] or the adaptation of methods to study this problem [7, 8]. Few works focused on the attitude toward HIV-infected people not only on the part of the patients themselves but also by other categories of the population. These works only considered small groups of the population and employed insufficiently developed methodologies. For instance, N.G. Neznanova et al. considered the stigmatization of HIV-infected patients by medical workers [9]. More studies focused on stigmatization by PLHIV themselves. For example, O.A. Chernyavskaya and E.A. Ioannidi [10] and D.A. Lioznov et al. [11] focused on the coping behavior of HIV-infected patients in a situation of stigmatization.

The study of stigmatization of PLHIV by doctors and medical workers is relevant. HIV infection, being associated with various metabolic processes [12] or the functioning of various systems [13], affects the approach of treatment and the attitude toward the patient. Health care workers in obstetric and gynecologic services interact directly with HIV-infected patients. Their attitude to the situation, in which HIV-infected women find themselves, largely determines the self-awareness of PLHIV and their attitude to the problem. Any form of discrimination by medical workers in obstetric and gynecological services exerts the most detrimental effect on HIV-infected patients and their postpartum rehabilitation.

In other countries, studies focused on PLHIV stigmatization by medical workers at various levels [14, 15]. However, such studies in Russia are insufficient [16] and usually performed in the European part of Russia; they do not cover remote regions. The Irkutsk region is characterized by a high prevalence of HIV infection, being one of the regions of the Russian Federation with the highest rate of the disease per 100 thousand people [2]. Workers in obstetric and gynecological services of regional medical institutions often interact with HIV-infected patients. Thus,

establishing the level of their stigmatization by medical workers is of theoretical and practical interest.

The **work aimed** to analyze the level of stigmatization of HIV-infected patients by medical workers in obstetric and gynecological services of the Irkutsk region.

MATERIALS AND METHODS

The study was conducted by the staff of the laboratory of socially significant problems of reproductive medicine of the Research Center for Family Health and Human Reproduction from April to November 2018 at the medical unit of the Irkutsk Aviation Production Association, Irkutsk City Perinatal Center, Irkutsk Regional Clinical Hospital, Irkutsk Regional Clinical Hospital No. 6, Shelekhovskaya Regional Hospital, Bodaibinskaya Regional Hospital, Irkutsk City Clinical Hospital No. 5, Irkutsk City Clinical Hospital No. 8, and Bratsk Perinatal Center of Irkutsk and Irkutsk region. The study involved 212 medical workers in obstetric and gynecological services at various levels.

To study the level of stigmatization, we used the questionnaires "Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS" and "Comprehensive Health Staff Questionnaire (for sentinel surveillance)" [16]. Statistical processing of the data obtained was performed using the Mann-Whitney *U*-test (normalized *z*-value was indicated) and the χ^2 test. All calculations were performed using SPSS Statistics 23.0.

STUDY RESULTS

The average age of the surveyed workers was 34.5 years (standard deviation 12.2 years). The study was dominated by women (188 people, 89.6%) than men (23 people, 10.9%). Christianity was professed by 78.77% (167 people), Islam by 1.42% (3 people), Buddhism by 5.66% (12 people), and the rest belonged to other confessions or were atheists (14.15%; 30 people). Only 2.83% (6 people) consider themselves to be national minorities.

Of the respondents, 40.9% (85 people) obtained vocational secondary education, and 59.1% (127 people) obtained higher education. In addition, 2.36% (5 people) completed postgraduate studies, and 3.32% (7 people) PhD. The majority of respondents (59.91%, 127 people) were married at the time of the survey, 26.89% (57 people) were single, 8.49% (18 people) were divorced, and 4.72% (10 people) were widows or widowers. Among the surveyed workers in obstetric and gynecological services, specialist doctors and personnel with secondary medical education had approximately equal shares, namely, 57.14% (120 people) of doctors and 42.86%

(90 people) of nurses. In addition, up to 9% (20 people) were managers.

The majority of them had professional experience of 21 years or more (35.1%, 73 respondents). However, almost the same number of respondents (28.37%, 59 people) indicated that they have been working in the healthcare sector for less than 5 years. Finally, a little more than a third of the respondents (75 people) had 6–20 years of work experience.

Answering a pool of questions characterizing the interaction of medical workers with PLHIV, most of the subjects reported that they had to contact with HIV-infected patients (93.8% of respondents, 198 people). The average interaction time was 3.8 months. The distribution of answers by the place of interaction among those workers who disclosed it (84 people) turned out to be 35.71% of medical workers (30 people) interacting with PLHIV within the medical institution, 42.86% of workers interacted with them outside it (36 people), and 21.43% of the respondents interacted with PLHIV in a medical institution and in other places (18 people). Moreover, 59.3% of the respondents indicated that they had never received training in working with such patients. или подготовку по работе с такого рода пациентами.

Results of a survey of medical workers in obstetric and gynecological services according to the Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS

At stage 1 of the study, we analyzed the results of answers to the information block of questions character-

izing the degree of awareness of medical workers about the modes of HIV transmission and methods of its treatment (Table 1). The following results are noteworthy.

Table 1 reveals the low awareness level of health workers about the modes of HIV transmission and methods of its treatment. More than 20% of healthcare workers either believe that HIV is curable or are unsure about it. From 3.78% to 15.09% of the respondents are unaware of the ways of HIV transmission from mother to child. Up to 8.49% consider that mosquitoes transmit HIV. Up to 4.25% of the respondents assume that HIV can be transmitted through everyday contacts.

On average, nurses more often give the answer "I don't know," but we did not manage to find significant differences in the awareness level between medical personnel with higher and secondary education. Moreover, we did not reveal differences in the awareness level depending on the length of employment declared by medical workers with secondary and higher education.

When analyzing the awareness level of medical workers with different experiences of interaction with HIV-infected patients, the following tendency was noted. The more (months) the experience of interaction of medical workers with HIV-infected people, the more aware they are about HIV transmission during childbirth and breastfeeding ($\chi^2 = 20.9$, $p < 0.01$) and through food ($\chi^2 = 16.8$, $p < 0.01$).

Finally, an analysis of the awareness level of health care workers, depending on whether or not they received special training on care to PLHIV, showed the following. Health care workers who claim to have received such training are generally more competent in HIV

Table 1. Information block of the Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS

Questions	Yes		No		I don't know	
	quantity	share, %	quantity	share, %	quantity	share, %
Do you think HIV/AIDS is curable?	23	10.8	167	78.77	22	10.3
Can HIV/AIDS be transmitted during pregnancy	188	88.6	20	9.43	4	1.89
Can HIV/AIDS be transmitted during childbirth?	195	91.9	12	5.66	5	2.36
Can HIV/AIDS be transmitted through breastfeeding?	199	93.8	10	4.72	3	1.42
Can mosquitoes transmit HIV/AIDS?	18	8.49	181	85.38	13	6.13
Can HIV/AIDS be transmitted through casual contact (for example, going to the toilet)?	9	4.25	197	92.92	6	2.83
Can HIV/AIDS be stopped by food?	2	0.94	199	93.87	11	5.19
Can physical exercise stop the transmission of HIV/AIDS?	0	0.00	212	100.00	0	0.00
Is there a vaccine against HIV/AIDS?	5	2.36	195	91.98	12	5.66
Do you think HIV/AIDS is most likely to be sexually transmitted?	200	94.34	11	5.19	1	0.47

transmission through household contacts ($\chi^2 = 3.8$, $p < 0.05$) and insect bites ($\chi^2 = 4.8$, $p < 0.05$), but they commonly believe that a vaccine against HIV is available ($\chi^2 = 6.8$, $p < 0.02$).

Analysis of the information block revealed the low awareness level of medical workers in obstetric and gynecological services about HIV transmission and treatment. In addition, neither the length of employment nor belonging to top or nursing medical personnel is a decisive factor of high competence in this subject. The latter is higher in workers who interact with PLHIV more often during their direct working activities and, although not to the full extent, in people who have received special training.

The answers to the questions of the pool reflecting the evaluative component of the attitude of medical workers toward PLHIV are presented in Table 2.

In general, the subjects provided conflicting answers to questions reflecting their attitude toward PLHIV. On the one hand, interviewed doctors and nurses do not refuse care to PLHIV. On the other hand, in terms of condemning PLHIV, the subjects rather do not know how to behave toward them.

Men are more tolerant of PLHIV who contracted HIV during uncontrolled sexual behavior or prostitution ($\chi^2 = 7.1$, $\chi^2 = 7.4$, respectively, $p < 0.01$), and women are more tolerant of PLHIV who contracted HIV through drug use ($\chi^2 = 5.8$, $p < 0.03$). At the same time, we did not find significant differences in attitudes toward PLHIV, depending on whether the employee belongs to the top or nursing staff. Moreover, no differences were observed in attitudes depending on the length of employment of a medical worker or experience of working directly with PLHIV, as well as on the availability of certain training.

Thus, in general, the attitudes of medical workers in obstetric and gynecological services toward HIV-infected patients are contradictory. On the one hand, medical professionals believe that the patient deserves qualified assistance regardless of his or her status. On the other hand, they find assessing the moral aspect of HIV infection difficult. Moreover, their position does not depend either on the length of employment in general or on the work experience with PLHIV or the presence/absence of special training.

Finally, the behavioral aspect of the subjects' attitude toward PLHIV was analyzed (Table 3).

The results obtained enable us to draw a conclusion about the conflicting behavioral attitudes of doctors toward PLHIV. As in the case of the emotional component of the attitude, healthcare workers do not refuse care to PLHIV. In addition, the study participants generally do not want to interact with PLHIV outside the context imposed on them by medical duty.

Table 2. Evaluation of attitudes toward people living with the human immunodeficiency virus according to the Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS

Questions	Strongly agree		Agree		I don't know		Disagree		Strongly disagree	
	quantity	share, %	quantity	share, %	quantity	share, %	quantity	share, %	quantity	share, %
Did people infected with HIV/AIDS through sex or drugs get what they deserve?	9	4.25	15	7.08	41	19.34	113	53.30	34	16.04
Do HIV/AIDS prostitutes deserve sympathy?	9	4.25	17	8.02	87	41.04	67	31.60	32	15.09
Do people infected with HIV/AIDS through drugs deserve sympathy?	5	2.36	9	4.25	59	27.83	92	43.40	47	22.17
Should people with uncontrolled sexual behavior be blamed for the spread of HIV/AIDS?	57	26.89	105	49.53	22	10.38	25	11.79	3	1.42
Do HIV/AIDS-infected women in prostitution deserve qualified medical care?	66	31.13	120	56.60	21	9.91	3	1.42	2	0.94
Do people infected with HIV/AIDS through drugs deserve qualified medical care?	63	29.72	124	58.49	12	5.66	12	5.66	1	0.47
Do people infected with HIV/AIDS through blood transfusions deserve qualified medical care?	145	68.40	61	28.77	4	1.89	0	0.00	2	0.94

Table 3. Behavioral aspect of attitudes toward people living with the human immunodeficiency virus according to the Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS

Questions	Strongly agree		Agree		I don't know		Disagree		Strongly disagree	
	quantity	share, %	quantity	share, %	quantity	share, %	quantity	share, %	quantity	share, %
Would you mind working with PLHIV?	21	9.91	82	38.68	60	28.30	41	19.34	8	3.77
If you were working with PLHIV, would you provide them with the same care or assistance as for ordinary patients?	84	39.62	110	51.89	15	7.08	2	0.94	1	0.47
If you were asked to examine PLHIV in a hospital, would you agree to do this?	73	34.43	116	54.72	16	7.55	6	2.83	1	0.47
If you worked with an HIV patient, would you communicate with him the same way as with others?	87	41.04	108	50.94	13	6.13	4	1.89	0	0.00
Are you afraid of getting infected HIV from a patient?	76	35.85	78	36.79	24	11.32	23	10.85	11	5.19
Would you buy food from PLHIV?	8	3.77	33	15.57	69	32.55	80	37.74	22	10.38
Would you rather not eat/use cutlery with (next to) PLHIV because you are afraid of getting infected?	21	9.91	48	22.64	53	25.00	72	33.96	18	8.49
If you worked with PLHIV, would you like to change your job so as not to contact such a person?	16	7.55	16	7.55	56	26.42	89	41.98	35	16.51
Would you feel embarrassed if you found out that someone you know has (contracted) HIV/AIDS?	9	4.25	36	16.98	52	24.53	86	40.57	29	13.68
Would you feel embarrassed if someone from your family was PLHIV or contracted HIV/AIDS?	17	8.02	42	19.81	51	24.06	74	34.91	28	13.21

Note. PLHIV — people living with the human immunodeficiency virus.

On this group of issues, significant differences were found between medical workers at various levels. Top-level medical workers would rather agree to conduct a medical examination of PLHIV ($z = 3.1, p < 0.02$). They have fewer prejudices about buying food from PLHIV ($z = 3.1, p < 0.02$) and using cutlery shared with PLHIV ($z = 2.4, p < 0.03$). Persons who have undergone specialized training in caring for PLHIV do not mind working next to PLHIV ($z = 2.1, p < 0.05$) or caring for them ($z = 2.3, p < 0.03$). At the same time, we did not reveal any peculiarities in the behavioral aspect of attitude toward HIV-infected patients, depending on the length of employment and work experience with PLHIV.

Results of a survey of medical workers of obstetric and gynecological services according to the Comprehensive Health Staff Questionnaire (for sentinel surveillance)

Results obtained when answering the questions of the Comprehensive Health Staff Questionnaire (for sentinel surveillance) are presented in Table 4. This methodology is aimed at studying the aspects of direct interaction of medical workers with PLHIV in the workplace.

Table 4 shows that among the procedures performed for HIV-infected patients, the medical staff is the most anxious about blood sampling. Up to 52% of all respondents in aggregate indicated that they feel “worried” and “anxious” when touching the clothes of HIV-infected patients, and changing their bandages worries 13% and 40% of workers, respectively.

At the same time, a significant statistical difference was found between doctors and nurses; the latter are significantly more concerned about the performance of these procedures ($z = 3.4, p < 0.01$).

As for the protective measures that medical personnel use when interacting with HIV-infected patients, 73.2% of employees wear double gloves and 67.4% use additional control measures. A significant statistical difference was also revealed between doctors and nurses who frequently perform these procedures ($z = 2.8, p < 0.04$).

Regardless of the length of employment, age, and status in a medical institution, medical workers deny the fact of refusal to provide services to PLHIV and the provision of poor-quality care to them, with 91.5% and 96% of workers, respectively, answering “never” to these questions. This practice is not caused by any specific sanctions for refusing to work with PLHIV, and less than half (48%) of the respondents in aggregate stated that they would have problems when discriminating against PLHIV. This behavior may also be due to the fact that 90% of health care workers are confident that their institution is taking adequate measures to prevent HIV infection from patients.

The medical workers themselves take contradictory positions in relation to HIV-infected patients (Table 5).

Only 27.36% of healthcare workers believe that PLHIV are irresponsible and do not care about infecting others. Up to a quarter of medical workers responded that PLHIV should be ashamed of their status, and HIV

Table 4. Direct interaction assessment of medical workers with people living with the human immunodeficiency virus according to the Comprehensive Health Staff Questionnaire (for sentinel surveillance)

Answer	Indicators	Touched clothes, bedding of a HIV patient	Changed the dressing for a HIV patient	Performed blood sampling from a HIV patient
Indifferent	Quantity	142	63	51
	Share, %	66.98	29.72	24.06
A little worried	Quantity	29	58	42
	Share, %	13.68	27.36	19.81
Worried	Quantity	24	66	70
	Share, %	11.32	31.13	33.02
Anxious	Quantity	7	21	44
	Share, %	3.30	9.91	20.75
No answer	Quantity	10	4	5
	Share, %	4.72	1.89	2.36

Table 5. Attitude of health care workers toward people living with the human immunodeficiency virus according to the Comprehensive Health Staff Questionnaire (for sentinel surveillance)

Questions	Indicator	Most PLHIV do not care that they can infect others	PLHIV should be ashamed of their status	People become infected with HIV because they behave immorally	HIV women should be sterilized, regardless of their choice	HIV women should be allowed to have children if they want
Absolutely agree	Quantity	11	14	7	93	64
	Share, %	5.19	6.60	3.30	43.87	30.19
Agree	Quantity	47	39	13	65	129
	Share, %	22.17	18.40	6.13	30.66	60.85
Disagree	Quantity	134	133	144	54	14
	Share, %	63.21	62.74	67.92	25.47	6.60
Strongly disagree	Quantity	20	26	48	0	5
	Share, %	9.43	12.26	22.64	0.00	2.36

Note. PLHIV — people living with the human immunodeficiency virus.

infection is associated with immoral behavior. Almost 75% of workers support the sterilization of women with HIV, but only 8.96% believe that such women should be prohibited from having children. Obviously, medical professionals answer a number of questions based on their professional role, and others answer them as ordinary people.

For this group of issues, significant differences were also found between medical workers at various levels. Top-level medical workers disagree that PLHIV do not care about the possibility of infecting others ($z = 2.9$, $p < 0.03$) and believe that they should not be ashamed of their status ($z = 3.1$, $p < 0.02$). People who have received specialized training in caring for PLHIV are more likely to disagree with the idea that women with HIV should be sterilized ($z = 2.4$, $p < 0.04$).

DISCUSSION

The following conclusions can be drawn from a pilot study conducted using our adapted Questionnaire for Doctors and Nurses' Views on People Living with HIV/AIDS and Comprehensive Health Staff Questionnaire (for sentinel surveillance).

First, the awareness level of obstetric and gynecological health workers about HIV transmission routes and methods of treating HIV-infected patients is low. Neither the length of employment nor belonging to higher medical personnel or nursing staff is a decisive factor of high competence in this matter. The latter increases in people who meet PLHIV more often in their direct work and, although

not to the full extent, in people who have undergone special training.

Second, the attitudes of health care providers toward HIV-infected patients are controversial. On the one hand, medical professionals believe that regardless of their status, the patient deserves qualified assistance. On the other hand, they find assessing the moral side of HIV infection difficult. Moreover, their position does not depend on the length of employment, the duration of work with PLHIV, or the presence/absence of special training.

The results are mostly consistent with those reported by Vorasane et al. [15] in connection with the analysis of the results of medical workers in general. The author noted the tendency to stigmatize PLHIV by medical workers and proved that this finding is directly related to the lack of training in working with HIV-infected patients and the lack of experience of direct interaction with them. Similarly, N.G. Neznanov [9] showed that direct experience of interaction with PLHIV reduces the level of stigma. However, in our study, even with the relative tolerance of medical workers who have received specialized training toward dealing with PLHIV while performing their professional duties at the household level, they still have a prejudice toward HIV-infected people.

The conclusions made by A.V. Golenkov and A.A. Shcherbakov [16], according to the results of a survey of medical workers, were not confirmed in our study. We did not reveal any differences in discrimination of HIV-infected patients by health care workers with long and short work experience. The level of tolerance in our study was higher than that declared by the authors (4.4% of nurses).

CONCLUSION

A pilot study of stigmatization of PLHIV by employees of obstetric and gynecological services established that the low awareness level of medical workers about the modes of HIV transmission and methods of treating HIV-infected patients among medical workers can be improved.

The attitudes of health care providers toward HIV-infected patients are controversial. Medical professionals believe that regardless of their status, the patient deserves qualified assistance, but also find difficulty in assessing the moral aspect of HIV infection.

The data obtained suggest the need for further research with the coverage of a larger number of medical workers

in obstetric and gynecological services and the implementation of measures to reduce their stigmatization of HIV-infected patients.

ADDITIONAL INFORMATION

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