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Knowledge about HIV tests in Poland

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ABSTRACT

The first people were infected with HIV in the early twentieth century. However, due to the non-specific clinical symptoms and long asymptomatic period of infection, the world became aware of the virus only many years later. HIV testing is one of the basic elements of HIV prevention. Other elements include the use of condoms, pharmacological prophylaxis and, in the case of infection, antiretroviral treatment. Knowledge of places where it is possible to get tested for HIV in a free way and basic information about tests seem to be important in reducing HIV transmission. In this work respondents from Poland were asked a few questions about HIV testing.

Keywords: HIV testing, HIV pandemic, AIDS

1. INTRODUCTION

Human immunodeficiency virus (HIV) infection probably spread from non-human primates to humans at the beginning of the 20th century [1, 2]. The HIV pandemic began most probably in the 1970s. In the second half of the 1970s, physicians in the United States, but also in several European countries, observed that young, previously healthy homosexual men in urban centres were ill for diseases that were difficult to diagnose, treat and quickly led to death [3]. Due to the variety of symptoms characteristic of acquired immunodeficiency syndrome (AIDS) and the long period of asymptomatic period, it is easy to understand that the onset of the pandemic has gone unnoticed for a long time [4]. Isolation of the retrovirus in 1983 [5]

initiated a period of intensive research into the virus, its interaction with the host organism, as well as the development of methods of testing and therapy for people infected with HIV [6]. The first cases of HIV infection in Poland were diagnosed in 1985 (6 people with haemophilia, 4 male homosexuals and 1 female sex worker) [7]. The availability of new therapeutic methods allowed to extend the life expectancy of people living with HIV and it has led some people to question whether the end of AIDS is possible. For people who receive antiretroviral treatment AIDS-related illnesses are no longer a priority. With a longer life expectancy, people living with HIV have an increased risk of developing non-AIDS comorbidities (cardiovascular disease, kidney disease, liver disease, malignancy), because treatment does not fully restore complete immunological competence [8, 9].

Table 1. Global summary of the AIDS epidemic (2016).

Number of people living with HIV	Total	36.7 million
	Adults	34.5 million
	Women (15+ years)	17.8 million
	Children (<15 years)	2.1 million
People newly infected with HIV in 2016	Total	1.8 million
	Adults	1.7 million
	Children (<15 years)	160 000
AIDS-related deaths in 2016	Total	1.0 million
	Adults	890 000
	Children (<15 years)	120 000

Table 2. Number of newly registered HIV infections in Poland in 2017.

Transmission route	Number
Homosexual contacts	383
Heterosexual contacts	124
Injection drug use	39
Vertical infections	3
Iatrogenic infections	1
Other/no data	976
All	1526

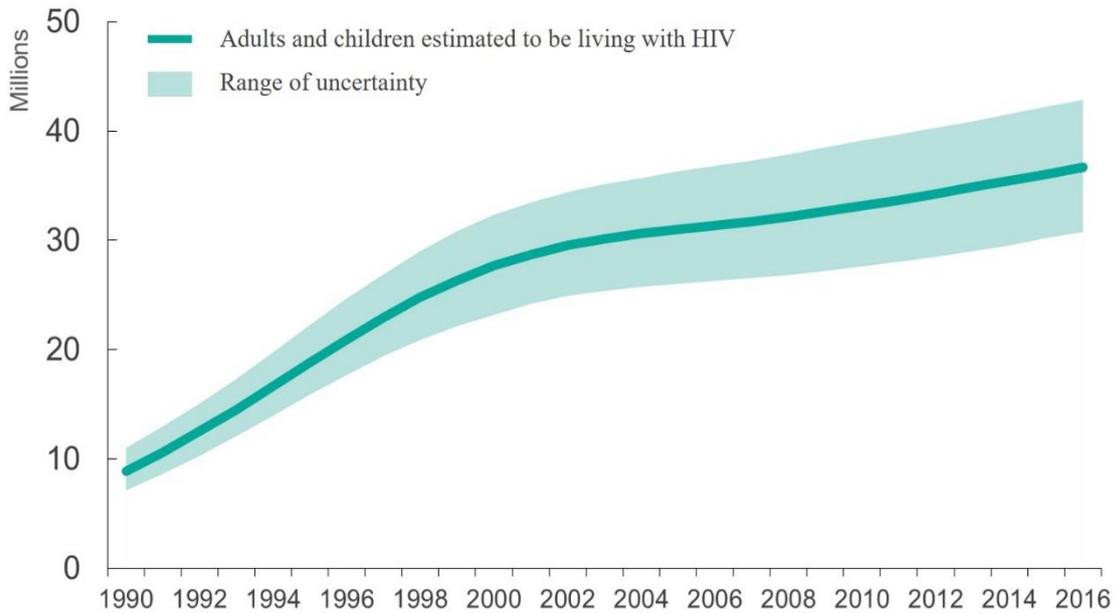


Figure 1. Adults and children estimated to be living with HIV (1990–2016).

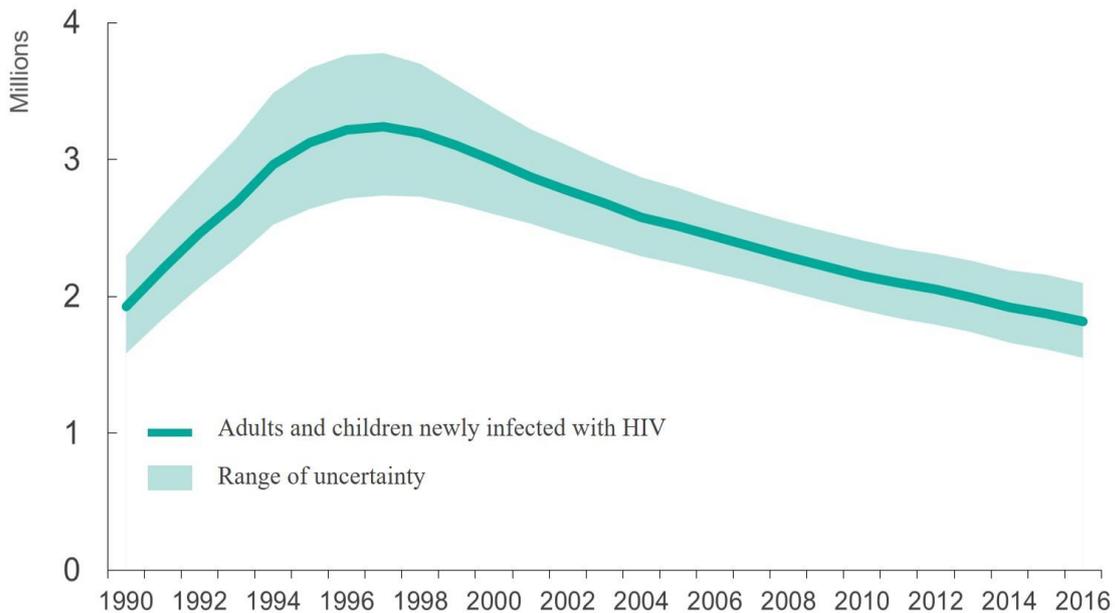


Figure 2. Adults and children newly infected with HIV (1990–2016).

Increasing the frequency of HIV testing, especially among men who have sex with men (MSM), is a key element in the control of the global HIV epidemic [10]. Evidence indicates that when people find out they are HIV positive, they change their sexual practices accordingly [11]. Global summary of the AIDS epidemic in 2016 is presented in Table 1. Adults and

children estimated to be living with HIV and newly infected with HIV between 1990 and 2016 are illustrated in Figures 1-2. Number of newly registered HIV infections in Poland in 2017 is presented in Table 2.

2. AIM OF THE STUDY

The aim of the study was to briefly outline the level of knowledge about HIV tests in Poland, as well as to cite data from the European Centre for Disease Prevention and Control report on the frequency of HIV testing in Poland and other European countries. The level of knowledge was evaluated among three populations in Poland: heterosexuals excluding medical students, non-heterosexuals excluding medical students and medical students.

3. MATERIALS AND METHODS

A Poland-wide on-line survey was conducted between January and March 2019. 2205 anonymous answers were analysed. The research included 1356 (61.5%) women, 681 (31%) men, 46 (2%) trans men, 12 (0.5%) trans women and 110 (5%) non-binary people. 95.4% were aged 16-29. In order to interpret the results, we divided the study group into people who defined themselves as heterosexual persons (heterosexuals) and people who defined themselves in any other way (non-heterosexuals) constituting the LGBT+ community. 1122 (51%) of the respondents described themselves as non-heterosexuals and 1083 (49%) – as heterosexuals. Almost half of the answers (n=1080; 49%) came from students, of which 40% were medical students (n=435). Among medical students most responses came from students of the fourth year (n=95; 4.3%). Nearly half of the respondents (n=1077; 49%) lived in cities with a population of over 250,000. To compare the knowledge of heterosexual and non-heterosexual persons, medical students were excluded from both groups. Finally, three studied populations were identified: heterosexuals excluding medical students [HS] (n=735), non-heterosexuals excluding medical students [non-HS] (n=1035) and medical students [MS] (n=435). The detailed characteristics of the study group is presented in Table 3.

We asked 5 questions about HIV testing: “Do you know where you can get tested in a free and anonymous way?”, “You can have complete confidence in the reliability of the HIV test result, when the test is done...?”, “How many HIV tests do you need to do to in order to confirm the infection?” and “Have you ever received an HIV test result?”.

Table 3. Demographic data and characteristics of the study group (n=2205)

Parameter		Value (n)	Value (%)
Age	16–19	820	37,2
	20–29	1283	58,2
	30–39	79	3,6

	40–49	13	0,6
	50–59	7	0,3
	60–69	3	0,1
Sex	Women	1356	61,5
	Men	681	31
	Trans men	46	2
	Trans women	12	0,5
	Non-binary	110	5
Sexual orientation	Heterosexual	1083	49
	Non-heterosexual	1122	51
Place of residence	Village	331	15
	City with up to 50,000 inhabitants	301	13,5
	City of 50,000 to 150,000 inhabitants	263	12
	City of 150,000 to 250,000 inhabitants	233	10,5
	City of over 250,000 inhabitants	1077	49
Education	Not studying	353	16
	Disciples	772	35
	Medical students	435	20
	• 1 st year	71	3,3
	• 2 nd year	85	3,9
	• 3 rd year	85	3,9
	• 4 th year	95	4,3
	• 5 th year	86	3,9
• 6 th year	13	0,7	
	Non-medical students	645	29
Membership in the International Federation of Medical Students' Associations (IFMSA-Poland)	Yes	60	2,7
	No	2145	97,3

4. RESULTS

4. 1. The question “Do you know where you can get tested in a free and anonymous way?”

58% HS, 49% non-HS and 35% MS do not know where to get tested for HIV in a free and anonymous way (Figures 3-5).

4. 2. The question “You can have complete confidence in the reliability of the HIV test result, when the test is done...?”

The most frequently chosen answer was "I do not know" - 47% HS, 38% non-HS and 15% MS (Figures 6-8). The correct answer ("12 weeks after a risky situation") in the highest percentage was marked among MS, then non-HS and HS (45%, 25% and 23% respectively).

4. 3. The question “How many HIV tests do you need to do in order to confirm the infection?”

The smallest percentage of correct answers (“you always have to do the second test [confirming]”) was given by non-HS (48%). 40% of them think that the second test needs to be done only in special cases (Figure 10). In HS group, the correct answer was marked by 56% of people (Figure 9) and in MS group by 68% (Figure 11). Some of the respondents claim that one test is enough: 10% HS, 12% non-HS, 4% MS.

4. 4. The question “Have you ever received an HIV test result?”

16% HS, 17% non-HS and 23% MS claim they have received an HIV test result at least once in their lifetime (Figures 12-14).

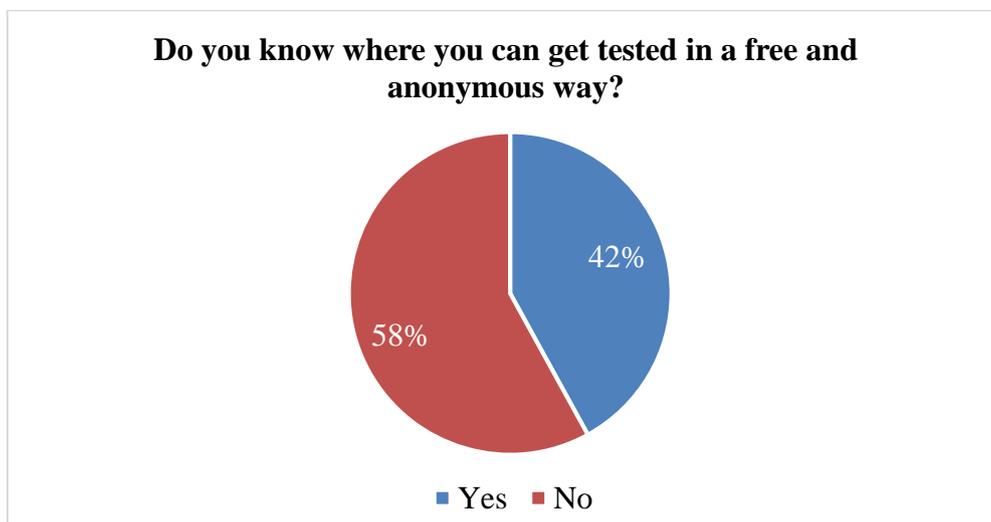


Figure 3. HS group answers to the question: “Do you know where you can get tested in a free and anonymous way?”

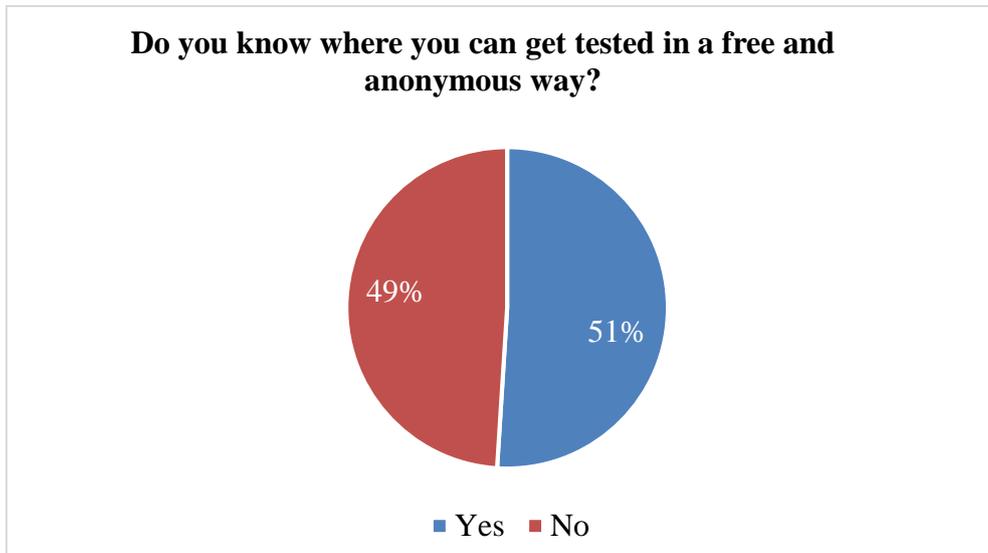


Figure 4. Non-HS group answers to the question: “Do you know where you can get tested in a free and anonymous way?”

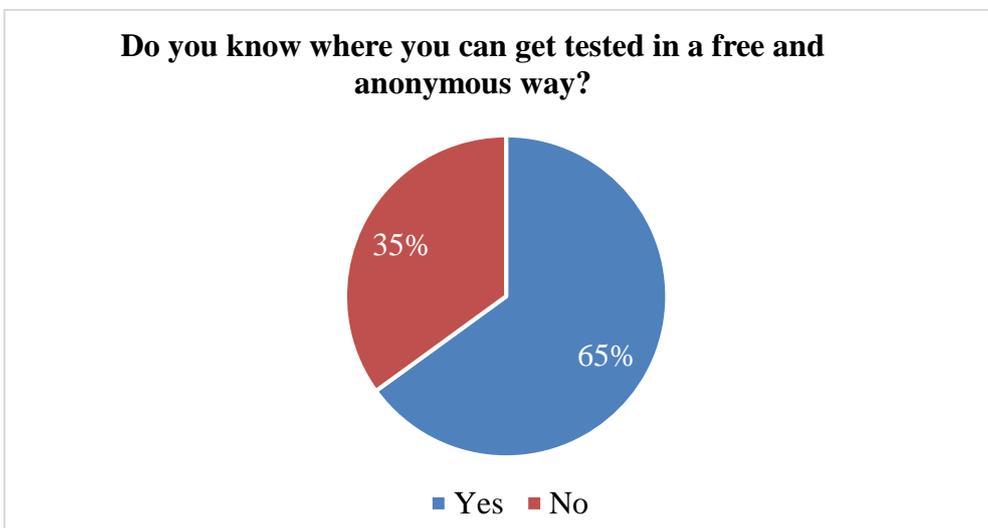


Figure 5. MS group answers to the question: “Do you know where you can get tested in a free and anonymous way?”

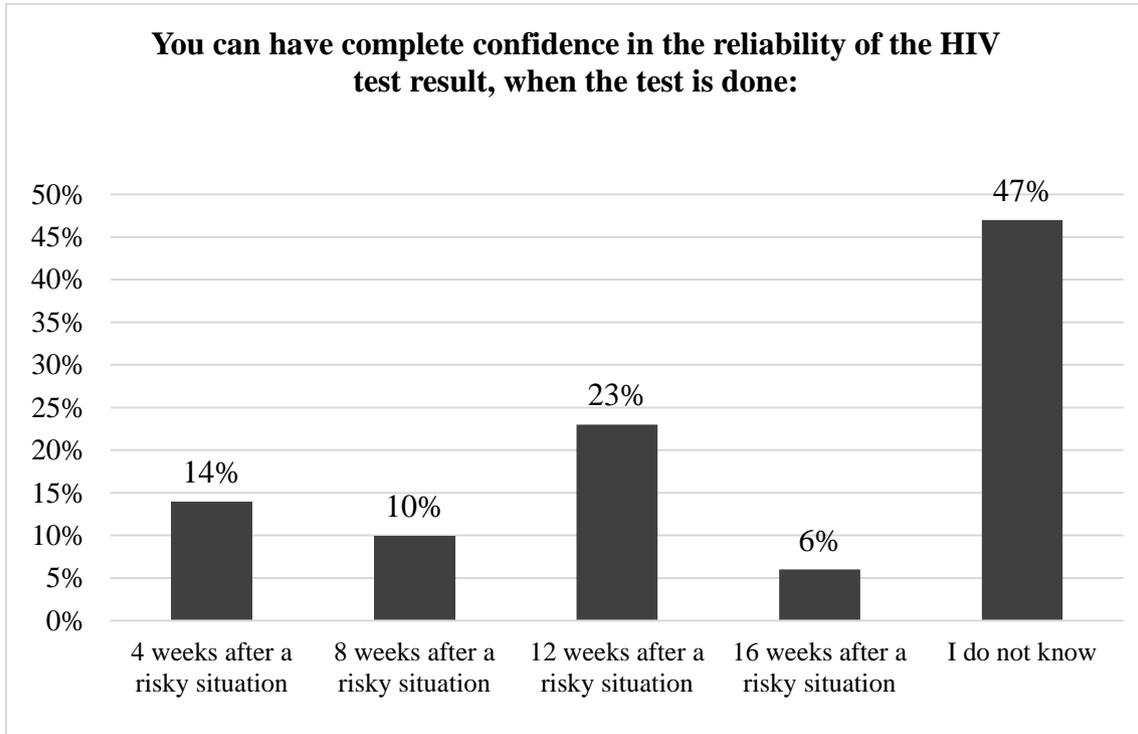


Figure 6. HS group answers to the question: “You can have complete confidence in the reliability of the HIV test result, when the test is done...?”

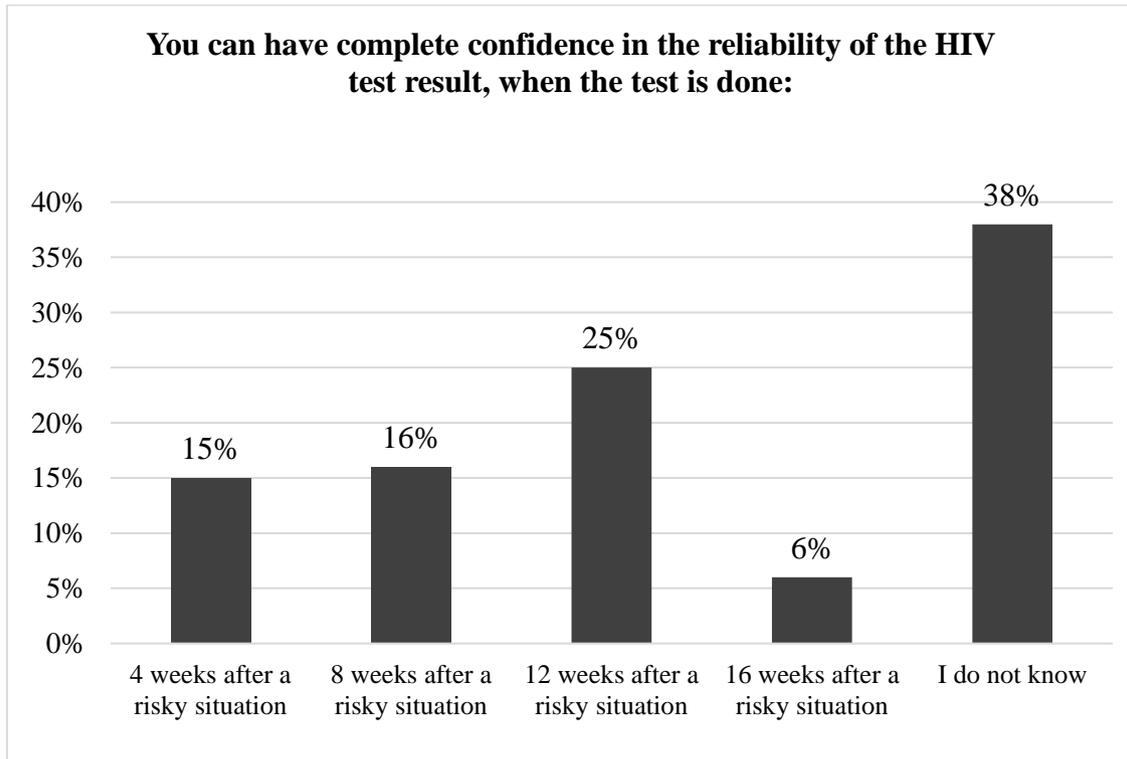


Figure 7. Non-HS group answers to the question: “You can have complete confidence in the reliability of the HIV test result, when the test is done...?”

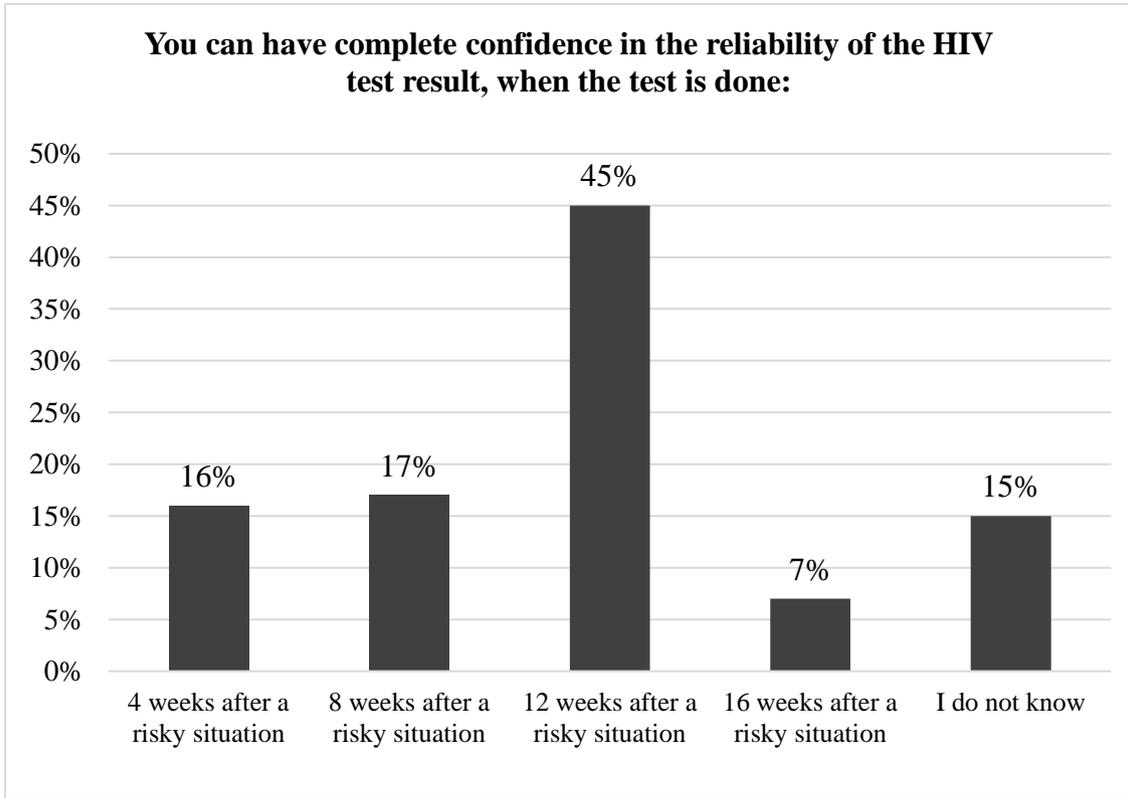


Figure 8. MS group answers to the question: “You can have complete confidence in the reliability of the HIV test result, when the test is done...?”

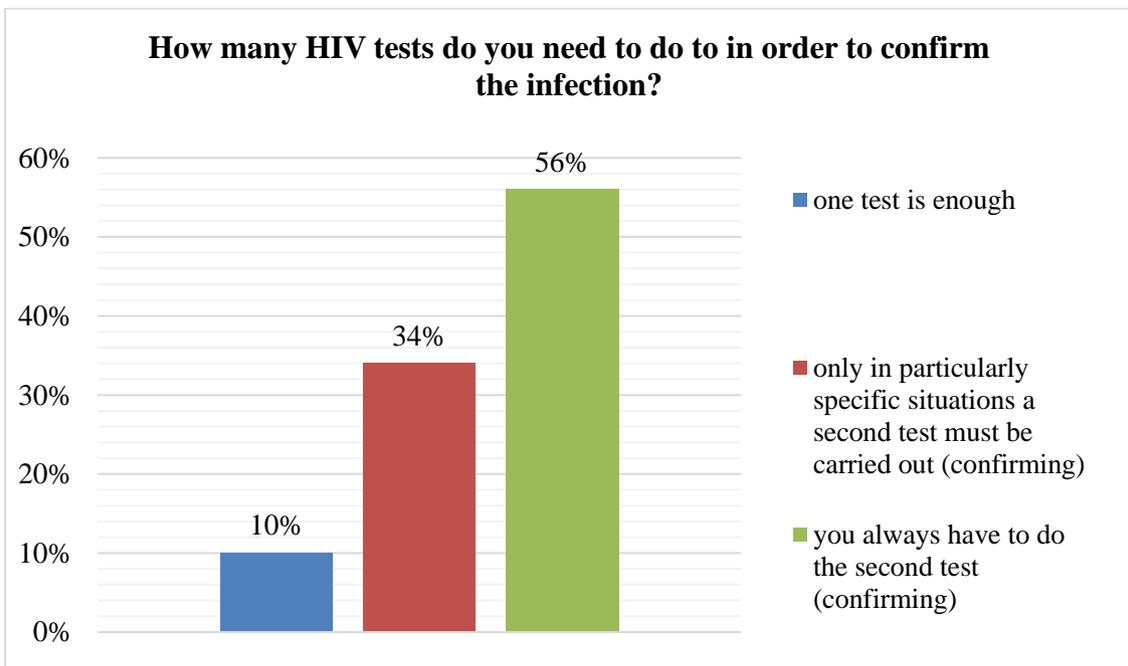


Figure 9. HS group answers to the question: “How many HIV tests do you need to do to in order to confirm the infection?”

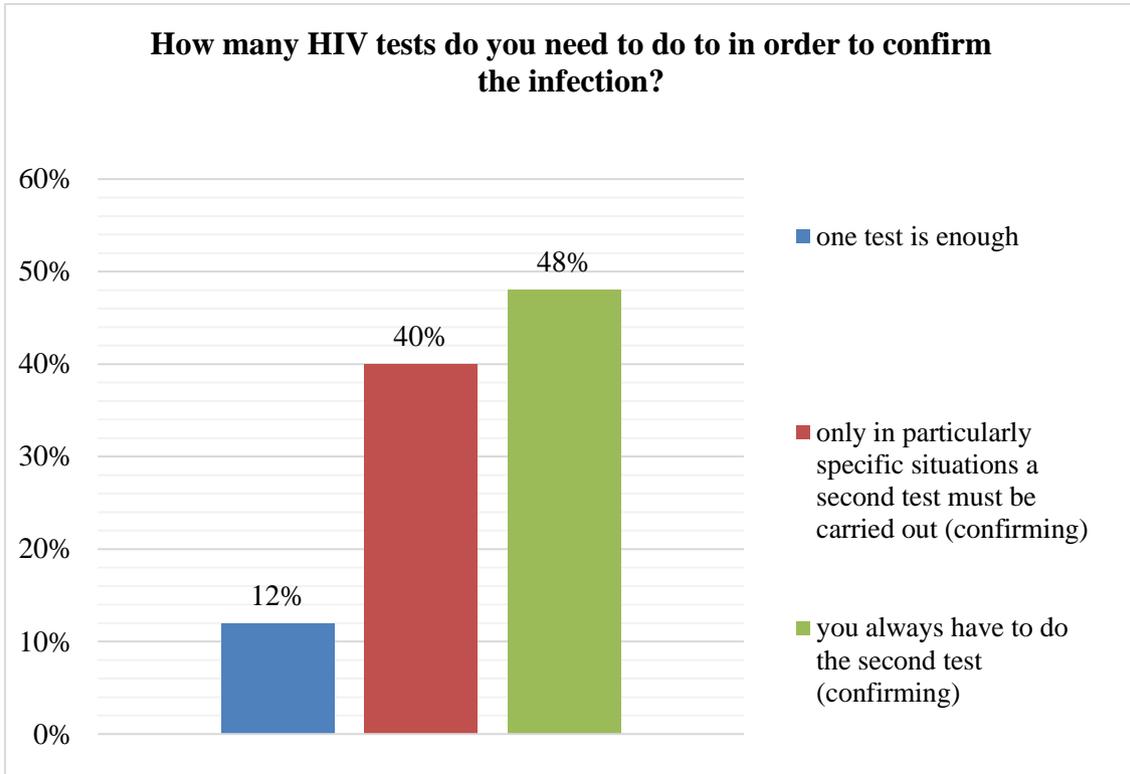


Figure 10. Non-HS group answers to the question: “How many HIV tests do you need to do to in order to confirm the infection?”

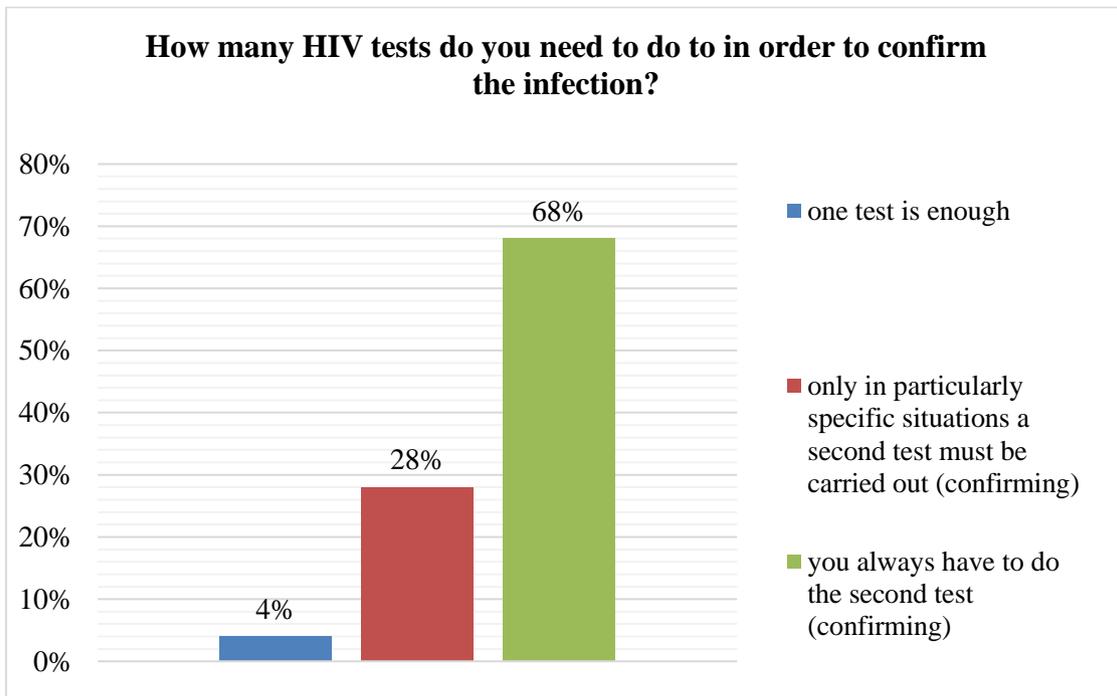


Figure 11. MS group answers to the question: “How many HIV tests do you need to do to in order to confirm the infection?”

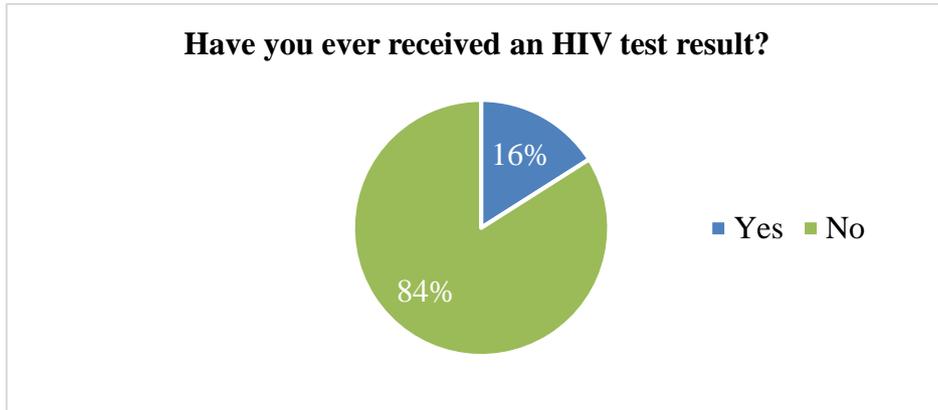


Figure 12. HS group answers to the question: “Have you ever received an HIV test result?”

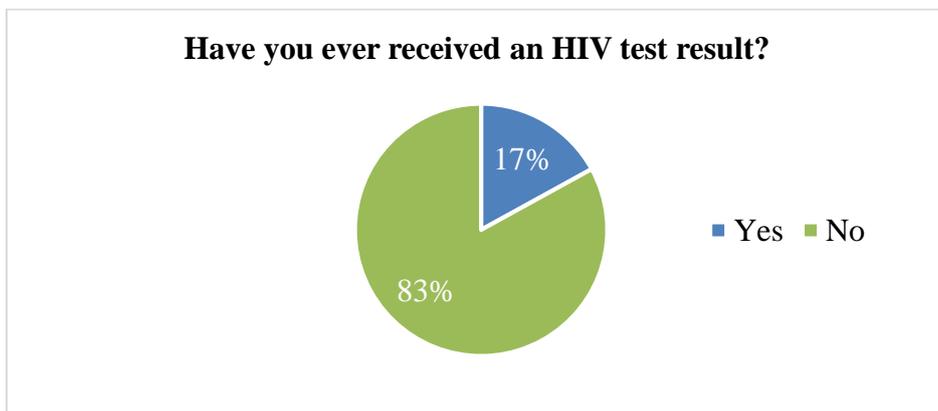


Figure 13. Non-HS group answers to the question: “Have you ever received an HIV test result?”

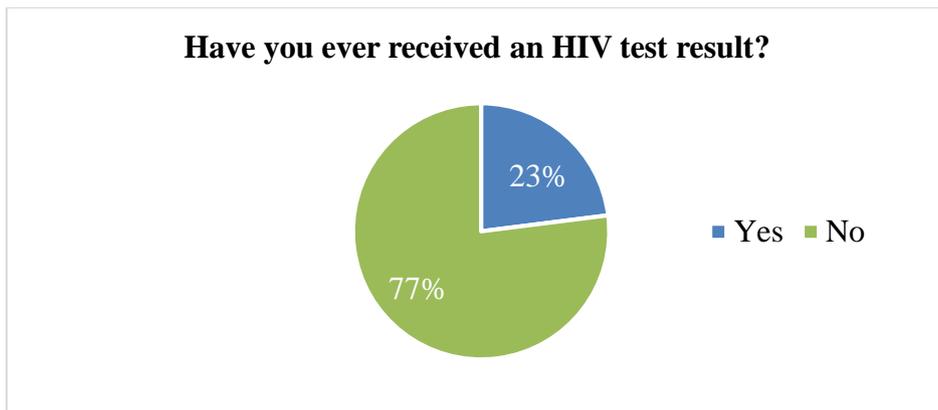


Figure 14. MS group answers to the question: “Have you ever received an HIV test result?”

6. CONCLUSIONS

A large percentage of the analyzed study populations do not know where to get tested for HIV in a free and anonymous way. In addition, knowing about how much time must pass

to be sure about HIV test result is also not well known. It concerns especially to people who are not medical students. Most of the respondents have never received an HIV test in their lifetime.

References

- [1] Faria NR, Rambaut A, Suchard MA, Baele G, Bedford T, Ward MJ, Tatem AJ, Sousa JD, Arinaminpathy N, P  pin J, Posada D, Peeters M, Pybus OG, Lemey P. HIV epidemiology. The early spread and epidemic ignition of HIV-1 in human populations. *Science* 346(6205) (2014) 56-61.
- [2] Keele BF, Van Heuverswyn F, Li Y, Bailes E, Takehisa J, Santiago ML, Bibollet-Ruche F, Chen Y, Wain LV, Liegeois F, Loul S, Ngole EM, Bienvenue Y, Delaporte E, Brookfield JF, Sharp PM, Shaw GM, Peeters M, Hahn BH. Chimpanzee reservoirs of pandemic and nonpandemic HIV-1. *Science* 313(5786) (2006) 523-6.
- [3] Mann JM. AIDS: a worldwide pandemic. W: Current topics in AIDS (1989) vol. 2.
- [4] Sharp PM, Hahn BH. Prehistory of HIV-1. *Nature* 455 (2008) 605-606.
- [5] Barr  -Sinoussi F, Chermann JC, Rey F, Nugeyre MT, Chamaret S, Gruest J, Dauguet C, Axler-Blin C, V  zinet-Brun F, Rouzioux C, Rozenbaum W, Montagnier L. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science* 220 (1983) 868-871.
- [6] Barr  -Sinoussi F, Ross AL, Delfraissy JF. Past, present and future: 30 years of HIV research. *Nat Rev Microbiol* 11(12) (2013) 877-83.
- [7] Rosinska M. Current trends in HIV/AIDS epidemiology in Poland, 1999 -2005. *Euro Surveill* 11 (2006) 94-7.
- [8] Ghosn J, Taiwo B, Seedat S, Autran B, Katlama C. HIV. *Lancet* 392(10148) (2018) 685-697.
- [9] Deeks SG, Lewin SR, Havlir DV. The end of AIDS: HIV infection as a chronic disease. *Lancet* 382(9903) (2013) 1525-33.
- [10] Lui CW, Dean J, Mutch A, Mao L, Debattista J, Lemoire J, Howard C, Whittaker A, Hollingdrake O, Fitzgerald L. HIV Testing in Men who have Sex with Men: A Follow-up Review of the Qualitative Literature since 2010. *AIDS Behav* 22(2) (2018) 593-605.
- [11] Kretzschmar M, Schim van der Loeff M, Birrell P, De Angelis D, Coutinho R. Prospects of elimination of HIV with test-and-treat strategy. *Proc Natl Acad Sci USA* 110(39) (2013) 15538-43.