HEALTH INDEX UKRAINE – 2020

RESULTS OF A NATIONAL SURVEY

KYIV, 2021

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The research report is available in electronic form on the website health-index.com.ua

UDC

This report is based on the results of the fifth wave of the sociological survey "Health Index. Ukraine", organized and conducted by the International Renaissance Foundation, the data were collected by the Kyiv International Institute of Sociology in cooperation with the Center "Social Indicators" during August-October 2020. Data from previous survey waves conducted in 2016–2019 were used for comparison. The report was prepared by the group of researchers. It presents the results of a nationally representative sociological survey on people's health, behavior related to it, and seeking medical assistance in Ukraine. The report is intended for a wide range of readers.

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CONTENT

INTRODUCTION

In 2020, the "Health Index. Ukraine" study marked its fifth anniversary. During these years, a powerful circle of international partners of Ukraine, who support it on the path of democratic reforms, rallied around the study. These years, 2016-2020, saw the most extensive and significant changes in the field of health care of our country since its independence. As part of the medical system transformation, fundamental changes took place in the mechanisms of its functioning, in particular financial ones. Now the patient has the right to freely choose a doctor and medical institution, and the state finances the provided medical service. At the same time, the unprecedented pandemic of coronavirus infection in 2020 posed not only new complex obstacles to the implementation of medical reform but also new challenges to the Ukrainian medical system in general.

Results of the "Health Index. Ukraine" study are unique data that help us understand how the aforementioned conditions have affected the attitudes, experiences, and behaviors of health care users and non-users. In addition, they record the satisfaction level of medical services' users – in particular, in the dynamics of years and geographical diversity of regions. These data are already used to justify decision-making by the National Health Service of Ukraine, the Center for Public Health, the Ministry of Health of Ukraine, as well as national experts, scientists, representatives of civil society and our international partners. In addition, data from the "Health Index. Ukraine" study act as an incentive to carry out further research on certain topics, in particular at the level of regions.

The research data will remain relevant in the future. Their assessment will certainly contribute to better planning of the development of the Ukrainian health care system in the future – both at the national and regional levels. Taking into account the research data will contribute to the adoption of informed strategic decisions by all parties involved in the formation of policies in the field of health care. The study will be useful in the work of civil servants, managers of the medical field, public activists and everyone who is interested in the transformation of the health care system of Ukraine in the interests of its citizens.

Victoria Tymoshevska
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ABOUT THE STUDY

"Health index. Ukraine" is a series of surveys to study satisfaction with medical care, attitudes to health care system reform, healthy behavior, experiences of seeking help, and costs of medical care in Ukraine. The first study in the series was conducted thanks to the initiative and financial support of the International Renaissance Foundation in 2016; it involved the implementation of a large-scale survey of the population of Ukraine, representative for the country as a whole and for each region (all regions and the city of Kyiv). During 2016–2020, a total of five waves of research were conducted, data collection for which was carried out by the Kyiv International Institute of Sociology (KIIS) in cooperation with the "Social Indicators" Center. The total sample for each year was more than 10,000 people (approximately 400 people in each region).

The purpose of the study is to investigate people's attitude to medical care, their satisfaction with it and health-related aspects, in particular:

- self-assessment of personal health by the adult population of Ukraine and the experience of patients in case of illness;
- barriers faced by the population when seeking outpatient and inpatient medical care;
- availability of medicines;
- satisfaction with medical care and functioning of the health care system;
- certain preventive measures used in Ukraine.

"Health Index. Ukraine" study has several characteristics that distinguish it from other studies devoted to the research of issues related to the use of medical care.

First, it is a **large sample (over 10,000 respondents),** which makes it possible to study not only the population's perception of the health care system functioning, but also the experience of seeking medical assistance at various levels.

Second, the **sample is representative for each region**. The research sample is constructed in such a way that it makes it possible to analyze the collected data on issues relevant to all respondents, not only at the level of Ukraine as a whole, but also at the level of each individual region (region, city of Kyiv).

Third, the research is **longitudinal** (repeated), using identical methodology and tools, which makes it possible to track changes in attitudes and experiences over time. In other words, we have the opportunity to observe the dynamics of health behavior and other researched processes during 2016–2020.

In the process of preparing the research methodology, we used the experience of the European Index of Health Care Consumers[1], which allows us to compare the development of the health care system of the European Union countries over a long period of time (since 2006) and determine the most optimal way for further development, and also took into account the Canadian experience of conducting such research.

[1] Healthy Canadians: A Federal Report on Comparable Health Indicators 2012 [Electronic resource]. — Resource access mode: http://www.healthycanadians.gc.ca/index-eng.php.

Methodology of the study

The field phase of the fifth wave of the study ran from August 17 to October 6, 2020, and was delayed due to quarantine restrictions imposed in connection with the COVID-19 pandemic (previous waves were usually conducted during May and July). Considering the epidemiological situation, interviewers were provided with protective masks and disinfectants before arriving to the interview site, and a portion of disinfectant was provided for each respondent.

General characteristic of the study sample

The sample developed for the study is representative for the adult population (aged 18 and older) in Ukraine as a whole, as well as for each region of Ukraine and the city of Kyiv. The research was conducted by multi-stage sampling, random at each stage of selection. At the first stage of sample formation within each region, settlements were randomly selected in proportion to the number of their residents. The second stage involved the random selection of polling stations on the territory of selected settlements from the list of all polling stations presented by the Central Election Commission of Ukraine. Streets, houses, and apartments were selected at random on the territory of each of the selected precincts. The last stage was the selection of the respondent within the household and the direct conducting of the survey. The obtained data were compared with the estimated data of the State Statistics Service regarding the specific weight of individual gender-age groups in the structure of the population of Ukraine (as of January 1, 2020).

A total of 10,229 respondents were interviewed. The theoretical sampling error for the array as a whole is 1.0%.

Field work was carried out in 476 settlements of Ukraine (in the territories under the control of the government of Ukraine). The survey was conducted using tablets. In 2020, the response rate was 44.2%.

The sample unit is a household representative (and not the patient), because the survey in households makes it possible to identify key barriers to accessing medical care or seeking alternative methods of treatment, including among those who do not seek medical care. In addition, it is crucial to reform the industry to consider the opinions of a wide range of individuals, and not just patients with significant health care experience (i.e., those who already understand how to overcome existing barriers). Therefore, the research makes it possible to study the attitudes and experiences of those who, for various reasons, do not seek medical care.

The 2020 survey questionnaire was supplemented with a new section on HIV, tuberculosis, and hepatitis C (the data in this section do not have a basis for comparison with previous years). This report only contains results for those questions that were included in the 2020 survey.

Data collection method and research tool

Surveys of household representatives were conducted through a personal interview.

Depending on personal experience, respondents were asked questions related to the assessment of problems in the health care system, the importance of various aspects of medical care; satisfaction with the work of different levels of medical care; a person's behavior in case of feeling unwell; the experience of seeking outpatient and inpatient medical care, as well as assessing personal health. The survey mostly includes closed questions.

263 interviewers participated in the field research of the project. The interviews were conducted at the place of residence of the respondents in Ukrainian or Russian, at the choice of the respondent.

The year 2020 will go down in history with the global pandemic of COVID-19. The restrictive quarantine measures taken by the authorities and the information support of the epidemiological situation could affect both the health-related behavior of the population (for example, contacting a medical professional for the slightest ailment or preventive visits to a doctor) and the functioning of these institutions themselves (for example, cancellation of non-emergency hospitalizations). This should be taken into account when interpreting the results of the study.

Demographic characteristics of the interviewees

The division of survey respondents by key demographic characteristics corresponds to the data of official statistics[2]. Among the total number of respondents, 54.8% were women, 45.2% were men (**Table 1**). Persons aged 60 and older make up 29.2%.

A third (30.2%) of the respondents lived in villages, the rest (69.8%) – in cities and urban-type

[2] State Statistics Service of Ukraine: http://www.ukrstat.gov.ua/

settlements. These figures coincide with the socio-demographic characteristics of the samples of the previous waves of the 2016-2019 survey.

About half of the respondents (53.1%) work, of which 5.2% are self-employed and 2.0% are working pensioners. The category of the unemployed population (together it is almost another half) consists of pensioners (27.8%), unemployed (6.0%), housewives and other unemployed people who are not looking for work (8.5%), students (2.7%) and disabled persons (1.6%).

The average size of the households represented by the respondents was 2.7 persons.

Table 1

Distribution of respondents by key demographic characteristics (*N* = 10 229)

		Surveyed in the "Health Index" (weighted data)		**National indicators (statistical)**	
		N	**%**	**N**	**%**
Age groups	18–29 years old	1 621	16,2	5 546,1	16,2
	30-44 years old	2 923	29,2	10 001,4	29,2
	45–59 years old	2 535	25,4	8 673,2	25,4
	60 and older	2 916	29,2	9 978,2	29,2
Gender of the respondents	women	5 476	54,8	18 735,7	54,8
	men	4 519	45,2	15 463,2	45,2
PLACE OF RESIDENCE	urban	6 980	69,8	23 883,9	69,8
	rural	3 015	30,2	10 314,9	30,2
Освіта	primary/incomplete secondary	248	2,5	—	—
	complete secondary general education	1 828	18,3	—	—
	vocational and technical	2 014	20,2	—	—
	secondary specialized/ incomplete higher education	2 979	29,8	—	—
	basic higher education	645	6,5	—	—
	complete higher education	2 265	22,8	—	—
Average household size		9 995	2,7	—	2,584

SECTION 1.
ASSESSMENT OF PERSONAL HEALTH AND EARLY DISEASE DETECTION

Key findings:

- more than half (54.3%) of adult residents of Ukraine rate their health as good, and 9.4% consider their health to be very good. About a third (36.1%) described their health as average, and 9.6% as bad or very bad;
- half of adults in Ukraine (54.8%) are overweight. The average value of the body mass index (BMI) in 2020 in Ukraine is 26 (the overweight category according to the WHO classification) and has not changed during all five years of the study;
- the average number of main stroke symptoms that an adult resident of Ukraine can name in 2020 is two out of five, and residents of the Chernihiv region demonstrate the highest level of awareness;
- indicators of population coverage with basic preventive examinations as a whole either did not change over the last year, as is the case with the number of fluorography visits (57.3% in 2019 and 2020), or decreased, which is observed for cardiogram visits (from 44.4% in 2019 to 40.9% in 2020) or visiting a dentist for a check-up (from 41.0% in 2019 to 38.0% in 2020). Fluorography remains the most common form of preventive examinations from among the proposed list, which was reported by more than half of the adult population;
- almost half of the interviewed women (48.6%) visited a gynecologist for preventive purposes during the last 12 months, 34.8% of the interviewed women submitted a smear for cytological examination and 20.3% did a mammographic examination. According to all these indicators, this year's survey shows a certain decrease compared to 2019. Men visit a urologist for preventive purposes almost half as often (21.3%) as women visit a gynecologist, and this indicator also slightly decreased compared to the results of 2019 (23.7%);
- 75.9% of respondents who have children under 18 years of age in their household and have information about their health status express positive attitude towards vaccination. In 2020, the study recorded the cessation of the increase in positive attitudes towards vaccination seen in 2019, along with the increase in the group with neutral attitudes. At the same time, the share of vaccination opponents practically did not change. On average, the level of support for vaccination increased from 3.8 points out of 5 in 2016 to 3.9 points in 2017 and 2018, 4.1 points in 2019 and 4.0 points in 2020;
- self-medication remains the most common behavior of the population in case of illness, it is practiced by almost half (46.8%) of the surveyed adults (32.7% use medications, another 14.1% treat themselves with folk remedies). However, there is a gradual increase in the share of those who seek help from a medical professional in case of illness (from 29.0% in 2017 to 33.8% in 2018, 37.4% in 2019 and 41.2% in 2020) due to an increase in visits to the family doctor;
- the main reason why the population of Ukraine does not seek professional medical help in case of illness was that in most cases they had familiar symptoms of diseases that had already been treated before (48.4%). This reason for "not consulting" a doctor remains the most mentioned during the entire observation period, but its specific weight has significantly decreased over the past five years: familiar symptoms and experience of previous treatment were indicated by 57.5% in 2016, in 2017 – 55.5%, in 2018 – 54.8%, in 2019 – 47.7%, and in 2020 – 48.4% of respondents.

There have long been calls for a reorientation of public health policy in the field of health care from the treatment of diseases to their prevention because it is known that treatment is usually more expensive than prevention, both for the individual and for the state. Thus, a study of the frequency of the population's visits to medical professionals for the purpose of preventive examination, as well as timely visit in case of illness instead of independent treatment with the help of pharmacology or folk methods, can be used as an indicator of the implementation of such a policy. Studying the barriers to medical care makes it possible to respond in time to gaps in the system and develop mitigating strategies for the most vulnerable categories of the population. Equally important is the promotion of vaccination support among the population as one of the most effective ways to prevent the most dangerous diseases.

Another direction of the permanent work of the public health system is educational activities aimed at informing the population as widely as possible about the importance of healthy behavior to ensure the maximum quality and duration of everyone's life and about the factors that shape such behavior.

1.1. Self-assessment of health status

According to the 2020 survey, most adult residents of Ukraine (54.2%) call their own health "generally good", with 9.4% rating it as "very good". 9.6% of respondents gave a negative assessment of their own health (at the same time, 1.3% called their health "very poor"). The remaining 36.1% consider their health to be "neither good nor bad", i.e. average (**Table 1.1**).

Luhansk region (71.6%) and Kyiv (63.6%) are the leaders in the number of positive assessments of personal health by residents. On the contrary, residents of Kirovohrad (16.7%) and Kyiv (16.6%) regions gave their health the most negative ratings.

Table 1.1

Division of respondents based on self-assessment of health status by region, %

Region	*N*	Very poor	Poor	Average	Good	Very good
Ukraine	**10158**	**1,3**	**8,3**	**36,1**	**44,8**	**9,4**
Vinnytsia	407	2,0	11,9	35,1	42,6	8,5
Volyn	415	0,4	8,2	39,2	45,7	6,4
Dnipro	407	0,6	5,8	33,7	53,7	6,2
Donetsk	407	1,4	11,8	47,2	37,4	2,1
Zhytomyr	407	2,3	12,2	29,5	46,4	9,7
Zakarpattia	408	0,4	5,6	33,2	49,2	11,7
Zaporizhzhia	402	1,1	9,6	48,3	34,3	6,6
Ivano-Frankivsk	411	1,1	5,6	41,8	43,2	8,3
Kyiv	407	3,0	13,7	36,0	44,4	3,0
Kirovohrad	409	2,9	13,8	35,4	41,6	6,4
Luhansk	405	0,2	2,4	26,0	53,6	17,8
Lviv	409	0,6	7,1	33,2	54,7	4,4
Mykolaiv	379	0,4	6,1	41,7	44,9	6,9
Odesa	416	1,3	6,7	32,2	52,8	7,0
Poltava	414	1,2	7,3	32,6	51,3	7,6
Rivne	408	1,0	9,3	32,5	45,3	11,9
Sumy	404	0,8	6,8	52,1	35,6	4,8
Ternopil	407	2,7	7,5	36,0	37,5	16,3
Kharkiv	411	1,9	9,7	25,7	41,9	20,9
Kherson	408	1,6	11,0	39,0	34,5	14,0
Khmelnytskyi	406	1,8	9,8	34,2	38,2	16,1
Cherkasy	403	0,7	9,7	44,0	37,8	7,7
Chernivtsi	401	0,7	6,6	37,3	47,8	7,5
Chernihiv	401	2,7	9,0	36,3	44,8	7,3
The city of Kyiv	406	1,2	4,5	30,8	45,2	18,4

Men in Ukraine are more optimistic about their health: 63.2% consider their health to be good (compared to 46.9% among women). Instead, women are more likely to give average (41.3% vs. 29.9% among men) or negative (11.8% vs. 6.9% among men) assessments of their health.

The share of people who consider their health to be "rather good" decreases with age: in the age group of 18–29 years, 85.5% of respondents chose such assessment; in the age group of 30–44 years – 75.6%; in the age group of 45–59 years old – 49.3%; in the age group of 60 years and older - 19.6%. On the other hand, the percentage of people with poor health also clearly increases with age: 1.9% in the 18-29 age group; 2.7% in the 30-44 age group; 7.5% in the 45–59 age group; 22.7% in the group of 60 years and older.

Residents of cities choose positive assessments of their health a little more often than residents of villages: 55.8% of townspeople chose positive assessments and 8.8% negative assessments against 50.6% positive and 11.4% negative assessments from villagers.

Over the years of monitoring, a slight gradual increase in the percentage of those who call their health "good" or "very good" is observed (in 2016 – 44.4%, in 2017 – 46.6%, in 2018 – 48.4%, in 2019 – 50.0%, in 2020 – 54.3%). The average value of self-assessment, measured on a five-point scale, is also gradually increasing: in 2016 it was 3.34 points, in 2017 – 3.37, in 2018 – 3.41, in 2019 – 3 .46, in 2020 – 3.53 points.

Across regions, there are constant differences between the minimum and maximum values of the positive self-esteem indicator, although both values have increased over the past year. In 2020, this group is the smallest in Donetsk region (39.6% compared to 33.7% in Zaporizhzhia region in 2019); the largest – in Luhansk (71.4% compared to 65.6% in the same region in 2019). For several years, the hierarchy of regions in this matter has changed little. Thus, Zaporizhzhia region has been ranked among the top three regions with the lowest rate of positive self-evaluations every time for the past three years, and Luhansk tops this ranking for the second time in a row. In general, over the last year, there was no significant change in the share of citizens who positively assessed their own health in any of the regions.

The trends in self-assessment of health in groups by gender and age do not change over the years of the survey.

1.2. Body mass index (IMT)

Being overweight increases the risk of heart disease, diabetes, and cancer[3]. However, a more reliable factor in determining such risk is not the actual weight of a person, but the body mass index (BMI), which is calculated as the ratio of a person's weight (in kilograms) to the square of his height (in meters). According to the WHO classification[4], weight is considered insufficient if the BMI value is less than 18.5, normal – in the range of 18.5-24.9, excessive – within 25-29.9, and indicates obesity if it is 30 or more.

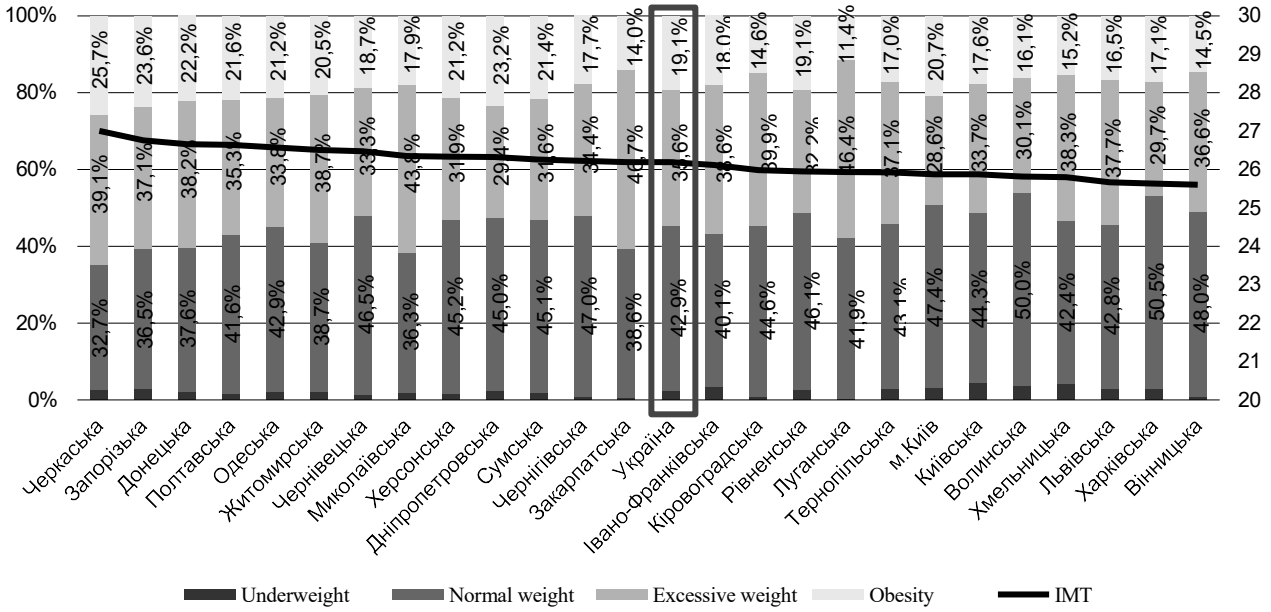
BMI calculations are based on height and weight information reported by survey respondents (in the 2020 survey, it was provided by 88.1% of respondents). According to these calculations, 19.1% of adults in Ukraine are obese, 35.6% are overweight, 42.9% have normal weight and 2.3% are underweight. In general, more than half (54.8%) of the respondents indicated being overweight (Fig. 1.1, Table 1.2).

As of 2020, the largest percentage of the population with excess weight was recorded in the Cherkasy region (64.7%). In addition to it, this indicator exceeds 60% in four other regions: Mykolaiv (61.7%), Zakarpattia (60.7%), Zaporizhzhia (60.6%) and Donetsk (60.4%). This indicator is the lowest in Volyn (46.2%) and Kharkiv (46.8%) regions.

The average value of BMI is 26, that is, the overweight category. The lowest value was recorded in Kharkiv and Vinnytsia regions (25.6), and the highest in Cherkasy (27.0). This means that there is no region in Ukraine where the average value of the indicator would be within the limits of normal weight.

3 https://moz.gov.ua/article/health/scho-treba-znati-pro-vagu

4 http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi



Cherkasy, Zaporizhzhia, Donetsk, Poltava, Odesa, Zhytomyr, Chernivtsi, Mykolaiv, Kherson, Dnipro, Sumy, Chernihiv, Zakarpattia, Ukraine, Ivano-Frankivsk, Kirovohrad, Rivne, Luhansk, Ternopil, the city of Kyiv, Kyiv, Volyn, Khmelnytskyi, Lviv, Kharkiv, Vinnytsia regions

Figure 1.1. Division of interviewees by body mass index categories by region (N = 8945) (*N* = 8945)

Table 1.2

Division of interviewees by body mass index categories by region, %

Region	*N*	Underweight	Normal weight	Excessive weight	Obesity	IMT
Ukraine	**8 945**	**2,3**	**42,9**	**35,6**	**19,1**	**26,2**
Vinnytsia	380	0,9	48,0	36,6	14,5	25,6
Volyn	395	3,9	50,0	30,1	16,1	25,8
Dnipro	351	2,4	45,0	29,4	23,2	26,3
Donetsk	382	2,1	37,6	38,2	22,2	26,7
Zhytomyr	395	2,1	38,7	38,7	20,5	26,5
Zakarpattia	393	0,7	38,6	46,7	14,0	26,2
Zaporizhzhia	373	2,9	36,5	37,1	23,6	26,8
Ivano-Frankivsk	364	3,3	40,1	38,6	18,0	26,1
Kyiv	385	4,4	44,3	33,7	17,6	25,9
Kirovohrad	292	0,9	44,6	39,9	14,6	26,0
Luhansk	315	0,3	41,9	46,4	11,4	25,9
Lviv	347	3,0	42,8	37,7	16,5	25,7
Mykolaiv	332	1,9	36,3	43,8	17,9	26,4
Odesa	384	2,1	42,9	33,8	21,2	26,6
Poltava	369	1,4	41,6	35,3	21,6	26,6
Rivne	397	2,6	46,1	32,2	19,1	26,0
Sumy	285	1,9	45,1	31,6	21,4	26,3
Ternopil	395	2,8	43,1	37,1	17,0	25,9
Kharkiv	348	2,7	50,5	29,7	17,1	25,6
Kherson	374	1,6	45,2	31,9	21,2	26,3
Khmelnytskyi	301	4,1	42,4	38,3	15,2	25,8
Cherkasy	367	2,6	32,7	39,1	25,7	27,0
Chernivtsi	364	1,4	46,5	33,3	18,7	26,5
Chernihiv	290	0,9	47,0	34,4	17,7	26,2
The city of Kyiv	367	3,3	47,4	28,6	20,7	25,9

Women have a slightly higher BMI compared to men (26.3 vs. 25.9), but for both groups the index value is also outside the normal weight range. The only socio-demographic group for which the average value of BMI is within the normal weight range is the group of the youngest respondents (23.2 for those aged 18–29); for all other age groups, the value of BMI gradually increases – from 25.0 for 30-44-year-olds to 28.0 for those 60 and older.

Obviously, the average BMI at the country level cannot change significantly in a short period, so its stability over several years of the study indirectly confirms the high quality of the data. During all five years of the "Health Index. Ukraine" study we observe an almost unchanged value of BMI – approximately 26. Also, during all years of observation, there were no regions where the average value was within the normal weight range, according to the WHO classification.

1.3. Knowledge of stroke symptoms

Knowledge of stroke symptoms is considered one of the main drivers of public health, as it facilitates early diagnosis and timely medical care, which is critical to minimize the consequences of stroke for health and quality of life.

In the study "Health Index. Ukraine" indicator of awareness of stroke symptoms is measured through the spontaneous response of the respondent (without any prompts), when everyone can name an unlimited number of symptoms, and the interviewer indicates the tangential symptoms or an incorrect answer.

In 2020, 15.5% of respondents could not name a single stroke symptom, and another 4.9% gave incorrect answers.

The three main symptoms of a stroke, each of which was spontaneously mentioned by more than 40% of respondents, are as follows: sudden numbness or loss of mobility of the face, arm, or leg, especially on one side of the body (54.5%); difficulty in articulating or perceiving speech (46.4%); sudden loss of movement coordination, unsteady gait, dizziness, fainting (41.3%) (Table 1.3).

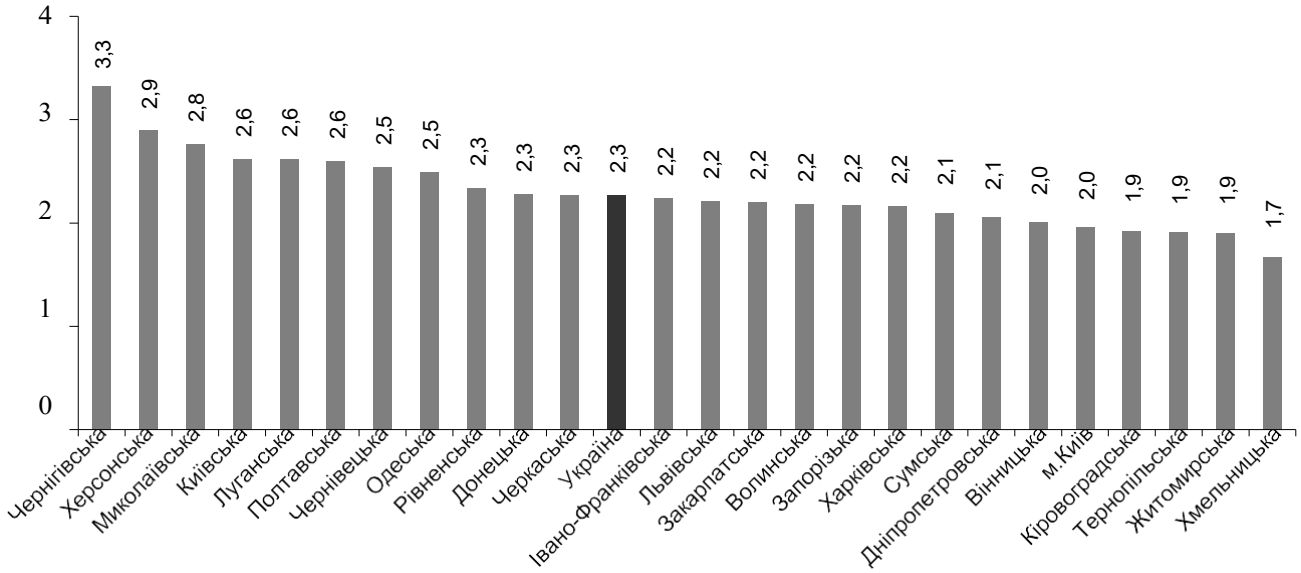
Table 1.3

Division of respondents according to spontaneously named stroke symptoms by region (possibility to name several options), %

Region	***N***	Sudden numbness or loss of movement in the face, arm, or leg, especially on one side of the body	Difficulties of articulation or perception of speech, text, which appeared	Sudden loss of coordination, unsteady gait, dizziness, fainting	Sudden sharp and inexplicable headache	Sharp deterioration of vision in one or both
Ukraine	**10 229**	**54,5**	**46,4**	**41,3**	**22,5**	**17,3**
Vinnytsia	408	51,6	43,9	35,6	20,9	10,9
Volyn	415	57,9	52,1	51,8	20,3	17,4
Dnipro	408	51,3	44,8	53,0	12,2	8,1
Donetsk	408	49,8	46,2	50,4	21,1	24,0
Zhytomyr	408	38,3	38,6	28,2	18,4	14,0
Zakarpattia	408	31,7	33,6	30,4	24,6	15,8
Zaporizhzhia	404	54,2	49,6	32,8	16,7	19,7
Ivano-Frankivsk	411	66,0	38,4	37,2	19,3	12,8
Kyiv	408	72,6	58,6	62,6	25,1	14,7
Kirovohrad	410	48,3	29,7	44,6	13,3	6,6

Region	*N*	Sudden numbness or loss of movement in the face, arm, or leg, especially on one side of the body	Difficulties of articulation or perception of speech, text, which appeared	Sudden loss of coordination of movements, unsteady gait, dizziness, fainting	Sudden sharp and inexplicable headache	Sharp deterioration of vision in one or both
Luhansk	408	67,5	30,1	24,8	53,6	13,7
Lviv	409	61,1	52,7	36,5	24,3	16,2
Mykolaiv	408	67,2	58,3	51,4	15,5	8,9
Odesa	419	59,5	50,1	51,2	33,4	29,1
Poltava	414	52,8	50,3	48,6	24,5	26,1
Rivne	409	56,2	49,5	43,3	19,8	21,7
Sumy	407	50,3	53,5	26,5	19,9	36,2
Ternopil	408	39,2	25,9	25,7	23,2	6,3
Kharkiv	411	64,7	59,8	38,4	16,1	13,0
Kherson	408	70,1	51,9	57,0	52,7	24,7
Khmelnytskyi	407	39,3	42,0	40,4	13,3	17,6
Cherkasy	410	49,7	38,4	37,4	17,7	6,0
Chernivtsi	407	52,1	40,7	46,5	24,4	18,3
Chernihiv	408	47,6	49,4	43,1	40,2	36,1
The city of Kyiv	408	46,9	49,3	25,5	7,2	15,8

The average number of symptoms that an adult resident of Ukraine can name in 2020 is 2.3, which coincides with the value recorded last year. As before, the highest level of awareness (an average of 3.3 symptoms were named) was demonstrated by residents of the Chernihiv region **(Fig. 1.2).**



Chernihiv, Kherson, Mykolaiv, Kyiv, Luhansk, Poltava, Chernivtsi, Odesa, Rivne, Donetsk, Cherkasy, Ukraine, Ivano-Frankivsk, Lviv, Zakarpattia, Volyn, Zaporizhzhia, Kharkiv, Sumy, Dnipro, Vinnytsia, city of Kyiv, Kirovohrad, Ternopil, Zhytomyr, Khmelnytskyi

Figure 1.2. Average number of correctly named stroke symptoms: breakdown by region (N = 8211)

The percentage of respondents who correctly named at least one symptom of a stroke is 94.9%, and this indicator remains approximately at the same level throughout the years of the study. On the other hand, although the share of those who managed to name all five symptoms without prompting is only 5.5%, it is increasing: in 2016, it was 1.4%, in 2017 – 2,1%, in 2018 – 3.0%, in 2019 – 4.0%.

1.4. Medical check-up – early detection of diseases

In Ukraine, medical examinations are mandatory only for certain categories of the population, but everyone should be aware of the need to undergo preventive medical examinations to take care of their health and the health of those around them, as well as to prevent the spread of dangerous diseases.

To assess the level of coverage of the adult population with preventive examinations, respondents were asked a question about passing seven types of medical examinations (scheduled check-ups) during the 12 months preceding the survey. Some of these examinations are relevant for all interviewees (fluorography, cardiogram, and examination at the dentist), the rest are related to the prevention of diseases related to reproductive health, and therefore separate questions were asked only to women (regarding an examination at a gynecologist, a smear for cytological examination and mammography) or only for men (examination by a urologist).

The most common form of preventive examinations from among the list proposed in 2020 is fluorography, which was reported by 57.3% of respondents. This is natural, because there are certain categories of the population for which preventive X-ray examinations are mandatory (for example, persons of military age, women giving birth, employees of certain professions, etc.). For the general population, preventive X-ray examinations, starting from the age of 18, are recommended to be carried out once every two years.

Electrocardiography remains one of the main instrumental methods of examining patients in general medical practice and the main methods of diagnosing diseases of the cardiovascular system. In 2020, 40.9% of adults had an electrocardiogram (ECG).

Regular preventive (check-up) examinations to diagnose the state of the teeth and oral health, which make it possible to detect problems at the beginning of their occurrence and avoid serious diseases, are usually recommended every six months. It was found that the majority ignores these tips, as 38.0% of respondents had preventive dental check-ups in the last year.

Given the COVID-19 pandemic, one would expect an increase in the population's attention to their health and an increase in preventive measures, but this did not happen, at least as of the summer 2020. According to the survey results, the indicators of population coverage with basic preventive examinations as a whole either did not change, as is the case with the share of respondents who did fluorography (57.3% in 2019 and 2020), or decreased, which is observed with respect to the percentage of respondents who did a cardiogram (from 44.4% in 2019 to 40.9% in 2020) or visited a dentist for a check-up (from 41.0% in 2019 to 38.0% in 2020).

The results of the survey showed the lowest percentage of passing various forms of preventive examinations in the Kirovohrad and Zakarpattia regions, which have been in the lowest positions for four years in a row. Among adult residents of Kirovohrad region, only 18.7% had a fluoroscopy and 15.5% had a cardiogram in the last year. The highest rates of passing fluorography and cardiogram are in Luhansk, Kherson, Zhytomyr, Dnipro, Poltava, Chernihiv, Ternopil, Khmelnytskyi regions (**Table 1.4**).

Table 1.4
Division of interviewees who had the experience of undergoing certain types of preventive medical examination during the last 12 months by region, %

Region	Underwent a medical examination or passed tests in the last 12 months, %									
	fluorography				cardiogram				dental examination	
	2017	2018	2019	2020	2017	2018	2019	2020	2019	2020
Ukraine	56,0	55,0	57,3	57,3	44,0	42,2	44,4	40,9”	41,0	38,0”
Vinnytsia	55,7	48,4	56,6	58,8	44,7	43,9	57,2	48,6”	47,9	39,0”
Volyn	14,1	31,0	44,6	39,5	17,8	31,7	42,9	36,4	39,6	33,1
Dnipro	72,7	56,6	76,4	71,3	55,5	38,5	56,0	53,3	50,9	51,8
Donetsk	48,8	62,8	62,0	50,4”	41,7	50,0	47,0	36,4”	37,0	29,0”
Zhytomyr	61,6	68,0	75,3	71,5	42,9	59,6	52,1	50,6	29,4	47,2“
Zakarpattia	45,9	39,6	35,7	28,2”	36,1	37,9	27,4	26,0	22,7	22,6
Zaporizhzhia	48,3	61,3	63,8	58,9	40,3	45,9	43,8	44,5	30,9	31,1
Ivano-Frankivsk	65,1	55,5	54,9	53,0	54,9	51,1	50,9	40,6”	51,7	49,3
Kyiv	59,9	47,1	46,7	56,2“	54,1	44,7	44,0	43,5	34,6	51,7“
Kirovohrad	17,5	19,1	14,9	18,7	19,9	21,1	14,3	15,5	7,7	11,0
Luhansk	69,6	79,7	68,5	88,1“	52,7	48,2	51,2	54,4	41,7	23,0”
Lviv	49,8	43,5	52,2	35,3”	48,6	39,5	47,2	28,9”	43,8	39,8
Mykolaiv	70,0	72,3	50,8	60,4“	51,4	45,1	29,1	34,3	18,9	22,6
Odesa	50,3	48,6	42,4	47,4	41,4	32,2	38,0	34,7	39,2	33,9
Poltava	64,4	70,5	66,9	68,9	42,9	65,3	47,3	54,3“	52,8	54,3
Rivne	57,4	52,9	42,4	42,6	53,6	49,4	41,9	40,0	46,9	40,9
Sumy	69,3	62,0	49,3	53,6	38,7	52,2	32,7	25,7”	45,9	36,7”
Ternopil	66,8	51,4	60,5	62,2	62,5	42,8	48,3	50,6	44,4	46,6
Kharkiv	57,9	67,3	62,7	71,7“	27,1	34,1	27,9	35,6“	38,0	39,1
Kherson	72,7	75,6	79,7	78,2	48,3	49,6	54,1	52,2	31,2	31,2
Khmelnytskyi	47,3	38,1	55,3	60,6	38,5	27,5	49,3	51,2	51,9	48,2
Cherkasy	66,2	58,4	61,6	55,4	59,6	36,9	53,4	42,3”	47,1	40,5
Chernivtsi	72,3	67,2	55,3	50,2	55,5	49,5	48,3	45,1	48,8	39,5”
Chernihiv	77,4	75,2	68,8	68,2	58,9	60,1	53,9	53,2	45,3	45,8
The city of Kyiv	35,0	19,9	48,0	54,8	28,1	20,3	39,1	31,9”	52,2	39,6”

Many gynecological diseases do not manifest themselves in any way, and in the absence of treatment, they can lead to serious and dangerous complications, therefore it is recommended to visit a gynecologist at least annually. This recommendation is ignored by a large part of Ukrainian women, because only half of the respondents (48.6%) visited a gynecologist for preventive purposes during the last 12 months, 34.8% - passed a smear for cytological examination and 20.3% did a mammographic examination. The results of this year's survey show some decline by all these indicators, although they remain slightly higher than those obtained in 2017-2019.

Many men delay a visit to a urologist due to personal barriers and turn to a specialist only when there are acute health problems, although a regular visit to a specialist at least once a year for preventive examinations would help avoid problems and preserve men's health for a long time. The survey found that men see a urologist almost half as often (21.3%) as women see a gynecologist, which is slightly higher than in 2018 (20.5%), but lower than in 2019 (23.7%).

Residents of Zhytomyr, Dnipro, Luhansk, and Kherson regions consult gynecologists and urologists more often **(Table 1.5)**. The share of women who were examined by a gynecologist increased significantly only in one region – Kyiv, while a significant decrease in this indicator was observed in Donetsk, Zhytomyr, Zakarpattia, Lviv, Khmelnytskyi, Cherkasy, Chernivtsi oblasts and in the city of Kyiv.

Kirovohrad region remains the last in terms of the share of the population covered by the examinations of these specialists, as only 20.4% of adult women consulted a gynecologist during the year, 14.7% had a smear for cytological examination, 12.9% had a mammogram, and 13.0% of adult men underwent an examination by a urologist. Although it is worth noting the positive changes in this area, since the share of those who

consulted any of the specialists (except a gynecologist) in the Kirovohrad region increased significantly over the year.

Table 1.5

Division of interviewees of the respective gender who underwent a medical examination by a urologist/gynecologist during the year, by regions and years of examination, %

Region	Passed a medical examination or had tests in the last 12 months											
	at the urologist			at the gynecologist			smear for cytological examination			mammography		
	men			women			women			women		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Ukraine	20,5	23,7	21,3”	46,7	52,0	48,6”	33,8	40,0	34,8”	18,1	22,2	20,3”
Vinnytsia	19,5	20,7	23,0	44,3	50,4	55,7	37,7	47,5	25,3”	18,1	25,8	21,6
Volyn	12,0	27,2	12,6”	18,7	43,2	47,0	5,8	35,7	39,2	8,8	28,2	24,3
Dnipro	20,1	33,8	32,7	55,0	64,1	59,0	32,9	55,4	42,9”	18,8	26,2	11,8”
Donetsk	20,8	17,7	12,3”	43,7	47,7	39,6”	24,7	28,9	23,8	16,1	20,5	18,5
Zhytomyr	55,7	34,6	32,6	63,1	68,8	62,1”	55,4	51,4	52,5	7,4	20,3	27,2“
Zakarpattia	22,8	23,6	16,8”	41,4	38,9	28,3”	32,6	33,3	24,1”	16,9	5,9	10,4“
Zaporizhzhia	26,8	23,7	25,7	42,5	41,5	41,7	36,8	38,9	34,3	12,4	11,9	11,8
Ivano-Frankivsk	11,9	28,4	21,8”	54,6	60,3	54,4	47,5	55,9	42,4”	15,4	17,3	16,2
Kyiv	17,4	14,0	26,0“	50,3	46,8	54,7“	38,8	34,8	46,3“	9,8	20,0	26,4“
Kirovohrad	10,1	4,5	13,0“	25,0	19,5	20,4	9,1	5,5	14,7“	10,1	6,6	12,9“
Luhansk	23,5	32,2	23,6”	53,4	53,7	57,6	29,1	41,0	11,4”	21,6	25,4	30,9
Lviv	18,3	25,4	18,9”	47,7	50,1	37,5”	44,0	42,2	32,3”	21,0	21,8	9,2”
Mykolaiv	16,3	8,1	12,9“	60,9	45,3	49,0	46,8	38,0	42,6	31,7	28,7	12,3”
Odesa	15,4	18,9	17,4	33,8	39,5	40,3	24,7	32,5	27,0	15,5	22,8	16,9”
Poltava	31,8	32,2	31,5	62,9	59,6	53,2	52,0	36,4	38,4	19,8	30,6	18,4”
Rivne	16,7	18,6	14,2	48,3	48,1	49,0	34,2	36,0	33,6	22,8	23,1	24,9
Sumy	19,5	26,0	23,2	44,9	45,1	46,0	34,9	37,2	28,4”	18,6	14,8	18,4
Ternopil	19,4	19,8	15,6	46,8	50,3	54,7	32,5	43,8	37,0”	24,5	19,0	22,8
Kharkiv	12,8	18,3	30,3“	47,6	57,4	53,2	27,2	29,6	36,8“	25,0	20,5	26,8“
Kherson	24,2	31,5	29,5	59,3	58,9	57,0	54,4	54,8	51,4	38,8	25,5	30,6
Khmelnytskyi	21,2	28,3	31,3	32,1	56,6	44,1”	30,5	39,9	27,5”	13,8	23,2	19,6
Cherkasy	23,4	33,8	15,4”	56,8	62,7	54,5”	53,1	59,8	49,9”	16,7	33,8	23,2”
Chernivtsi	16,0	19,5	16,3	56,3	56,6	46,7”	49,7	52,5	43,7”	13,5	18,7	20,9
Chernihiv	40,7	26,1	19,1”	60,2	56,4	54,4	55,5	50,0	44,4	37,8	30,7	13,3”
The city of Kyiv	13,2	22,9	13,6”	29,7	60,2	52,7”	8,3	39,6	46,9“	8,4	26,6	34,8“

As for the differences between socio-demographic groups, in general, women more often visit doctors for the purpose of prevention, and this applies to all forms of medical examination included in the questionnaire (except the urologist). The population of older age groups (60 years+) undergoes all forms of these examinations (except for cardiography) much less often than younger categories of the population, although health problems and the risk of diseases, on the contrary, increase with age **(Fig. 1.3)**.

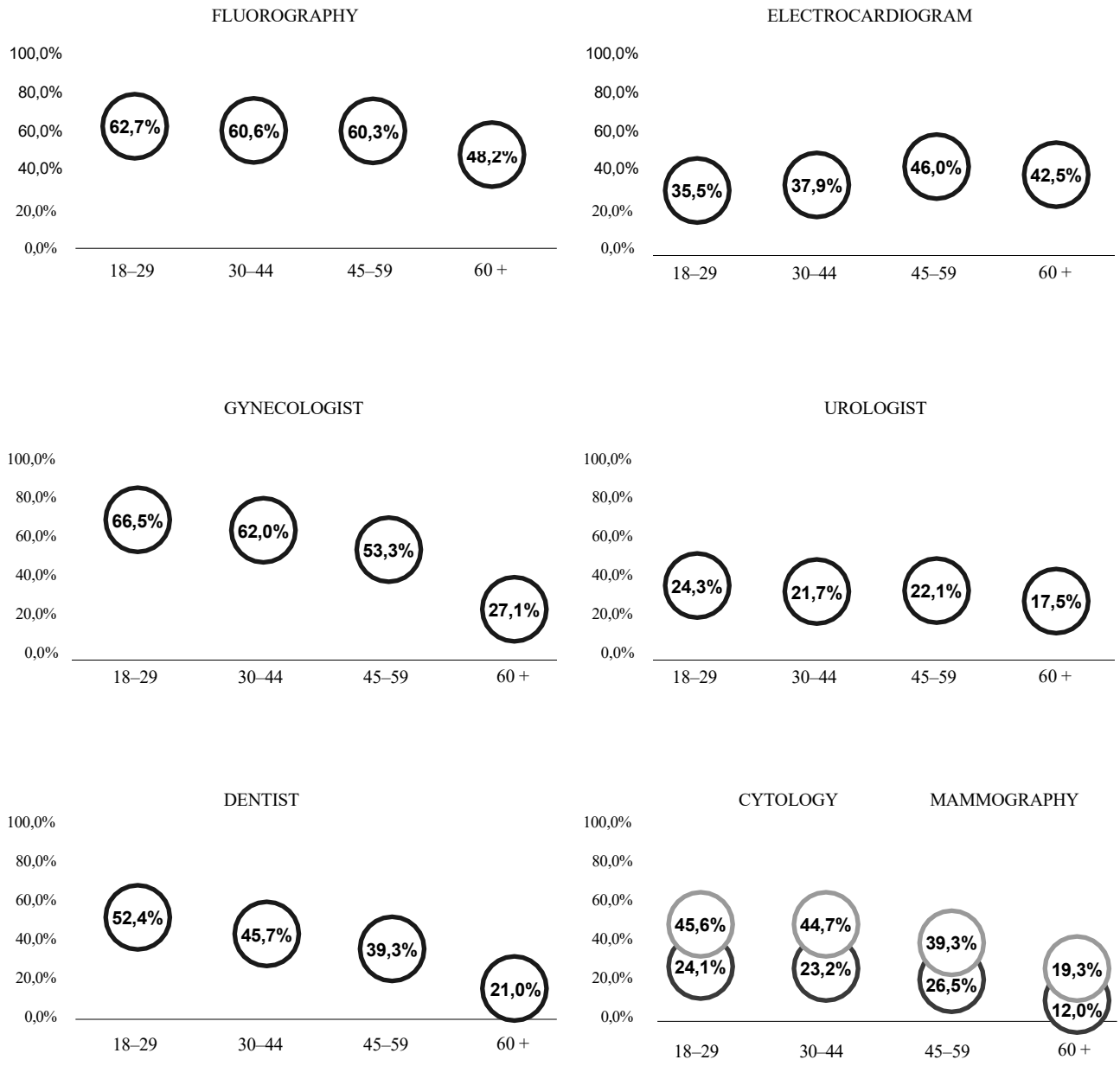


Figure 1.3. Experience of undergoing a medical examination during the last 12 months (percentage of those who answered that they underwent a medical examination with a preventive purpose), %

The survey revealed minor differences in preventive examinations depending on the type of settlement: urban residents are slightly more likely to visit dentists, urologists, and gynecologists, as well as undergo fluorography and mammography, than rural residents. Also, the population with a higher (basic and complete higher) education more often turns to medical professionals for prevention (except for urologist consultations) compared to citizens with a lower level of education.

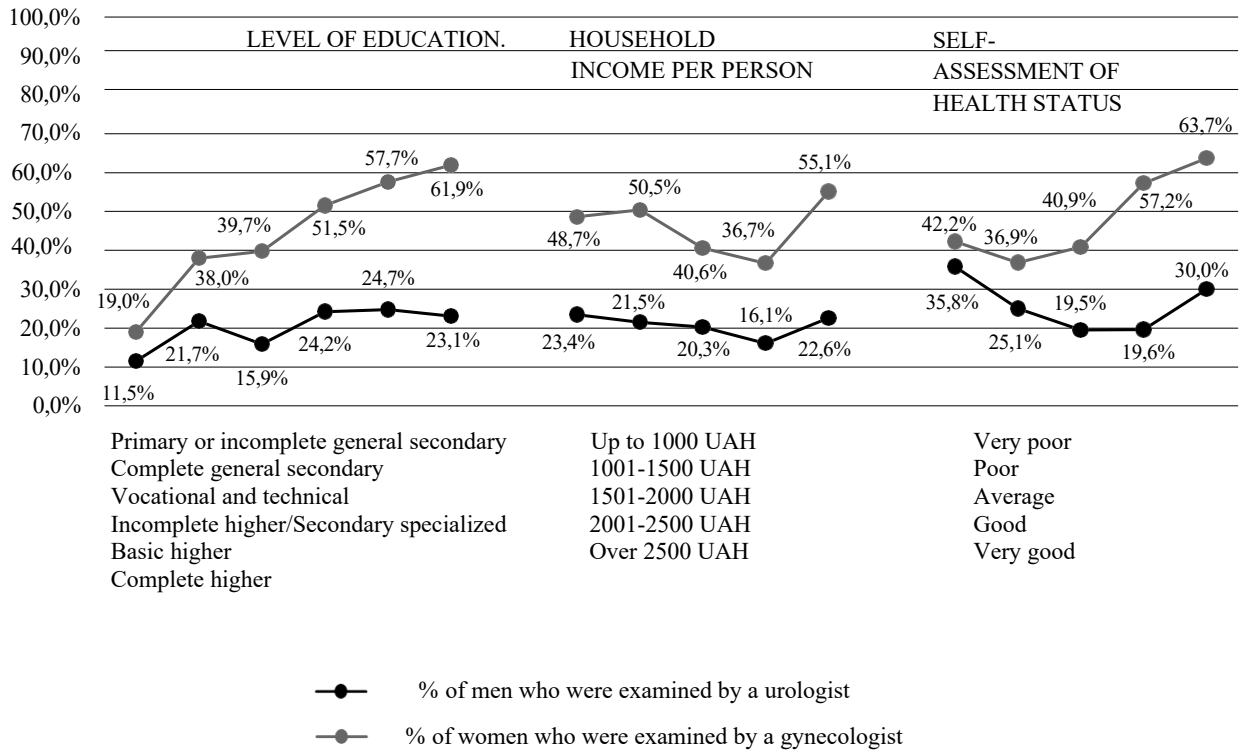


Figure 1.4. Experience of passing a medical examination at a urologist/gynecologist during the year depending on the level of education, income, and self-assessment of health, %

If we compare the visits of women to gynecologists and men to urologists depending on other factors, women with high income, education, and self-rated health have relatively higher rates of visits. At the same time, the connection with income and education is almost imperceptible for men, and self-assessment of the health status affects the visits in extreme cases, that is, in the case of very bad or very good health **(Fig. 1.4).**

1.5. Vaccination

Over the past 10 years, anti-vaccination sentiments in Ukraine have greatly increased. The problem lies in the lack of trust in the state system of purchasing and storing vaccines, previous interruptions in the provision of free vaccines, the doubts of the doctors themselves about the need for vaccination, the spread of negative information about the consequences of vaccination and various conspiracy myths, which is also exacerbated by the politicization of the vaccination topic in society.

For a long time, people encountered basic infections less and less in everyday life, so they stopped being afraid of them. The current situation with the spread of the coronavirus and hopes for vaccination as the main measure against the pandemic make the discussion of routine vaccination practices among Ukrainian citizens extremely relevant.

Questions about attitudes and behaviors related to children's vaccination were only asked of those respondents who reported having children under the age of 18 in their household and had information about the health status and medical care provided to these children. These respondents constitute 32.5% of the sample (3285 people).

Attitude to vaccination

Among the population with children in their households, a "positive attitude" towards vaccination prevails. The average index for Ukraine is 4.0 out of 5. A positive attitude is expressed by 75.9% (among them, 33.3% have a "very positive attitude" and 42.6% have a "rather positive attitude"). "Neutral attitude" is reported by 15.8%. The remaining 8.2% have a "negative" attitude to vaccinations: 5.1% - "rather negative", and 3.1% - "very negative" (**Table 1.6**).

Regionally, the best attitude to vaccination is recorded in Chernihiv and Zaporizhzhia regions (about 89% of positive assessments in each of these regions), and the least positive statements on this matter are

characteristic of residents of Luhansk, Khmelnytskyi, Zhytomyr, Ternopil, Zakarpattia, Kherson regions and Kyiv (no more than 70% of positive reviews). More than 17% of residents of Khmelnytskyi, Ternopil and Zakarpattia regions express a negative attitude towards vaccination.

Table 1.6
Division of respondents who have children in the household by attitude to vaccination and regions, %

Region	N	Average score	Very positively	Rather positively	Neutrally	Rather negatively	Very negatively
Ukraine	**3131**	**4,0**	**33,3**	**42,6**	**15,8**	**5,1**	**3,1**
Vinnytsia	139	3,8	25,7	50,4	12,0	6,0	5,9
Volyn	100	4,2	39,4	44,7	9,1	5,6	1,2
Dnipro	202	3,8	19,3	59,5	10,9	6,1	4,3
Donetsk	267	4,1	34,2	51,0	10,4	2,7	1,8
Zhytomyr	97	3,7	14,9	48,7	28,5	6,4	1,4
Zakarpattia	108	3,7	22,0	45,8	16,6	12,6	3,0
Zaporizhzhia	132	4,2	40,5	48,4	7,3	0,6	3,1
Ivano-Frankivsk	107	4,2	41,9	42,1	9,6	2,8	3,6
Kyiv	148	3,8	21,5	48,4	22,0	4,5	3,6
Kirovohrad	88	3,9	28,6	49,8	9,3	9,1	3,2
Luhansk	156	3,9	31,2	28,5	40,2	0,0	0,0
Lviv	189	4,2	50,2	33,9	4,2	5,2	6,4
Mykolaiv	77	4,4	60,1	25,0	11,7	2,6	0,7
Odesa	151	4,0	26,4	49,4	18,5	5,7	0,0
Poltava	119	4,0	37,0	36,0	18,3	7,2	1,6
Rivne	90	4,0	40,9	33,9	13,6	8,1	3,5
Sumy	71	3,8	27,1	45,2	14,8	11,2	1,7
Ternopil	96	3,8	45,4	20,5	17,1	3,5	13,5
Kharkiv	200	4,1	35,2	46,8	12,9	3,9	1,3
Kherson	85	3,9	31,4	36,5	26,8	5,3	0,0
Khmelnytskyi	100	3,5	22,5	40,2	15,6	9,8	11,9
Cherkasy	70	4,0	43,8	34,6	10,4	5,5	5,8
Chernivtsi	71	3,9	34,8	38,1	12,4	9,2	5,5
Chernihiv	69	4,5	63,6	25,8	6,2	3,7	0,7
The city of Kyiv	200	3,9	26,3	40,6	29,7	3,3	0,0

The attitude towards vaccination in Ukraine is gradually changing. The Ministry of Health launched a large-scale campaign on informational support for vaccination and training of medical workers on effective counseling. Despite such positive developments in 2020, the Health Index study recorded the cessation of the growth of positive attitudes towards vaccination, which was observed during the years 2016-2019, due to the transfer of a part of vaccination supporters to the group with a neutral attitude. At the same time, the share of opponents of vaccination practically did not change. Over the years of the survey, the percentage of those who had a generally negative attitude to vaccination decreased from 14.0% in 2016 to 12.7% in 2017, 9.6% in 2018, and 7.7% in 2019. In 2020, it was 8.3%. 70.9% supported vaccination in 2016, 73.4% in 2017, 74.5% in 2018, 80.4% in 2019, and 75.9% in 2020 (**Fig. 1.5**). On average, support for vaccination increased from 3.8 points out of 5 in 2016 to 3.9 points in 2017 and 2018, 4.1 points in 2019 and 4.0 points in 2020.

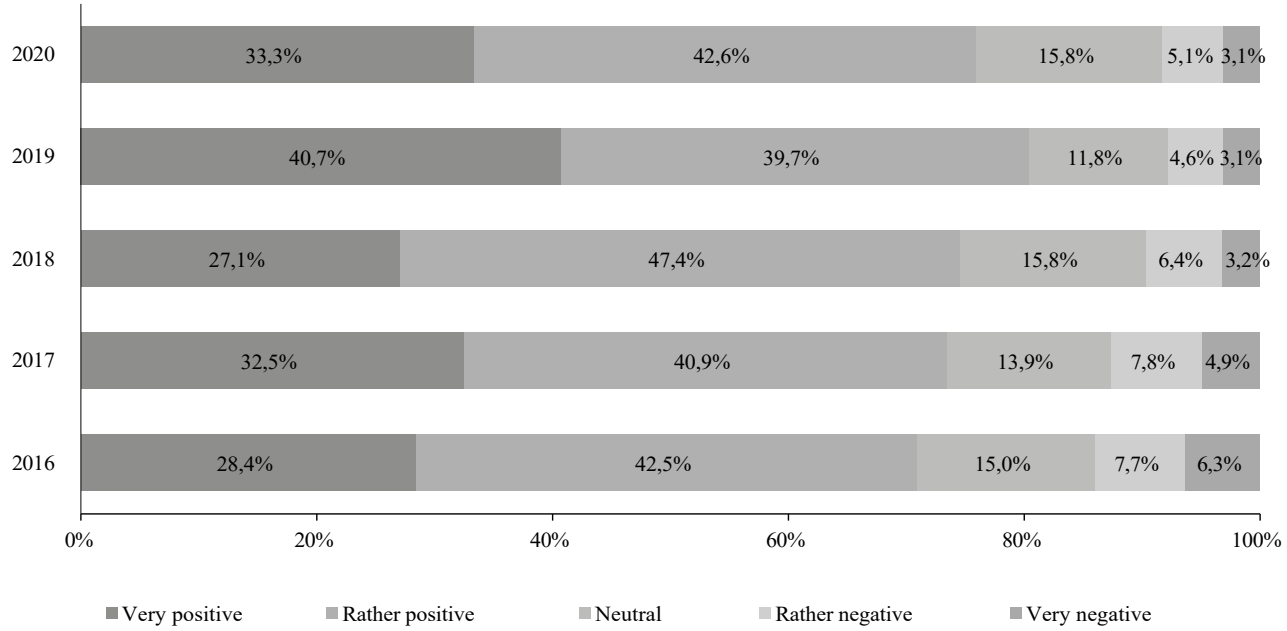
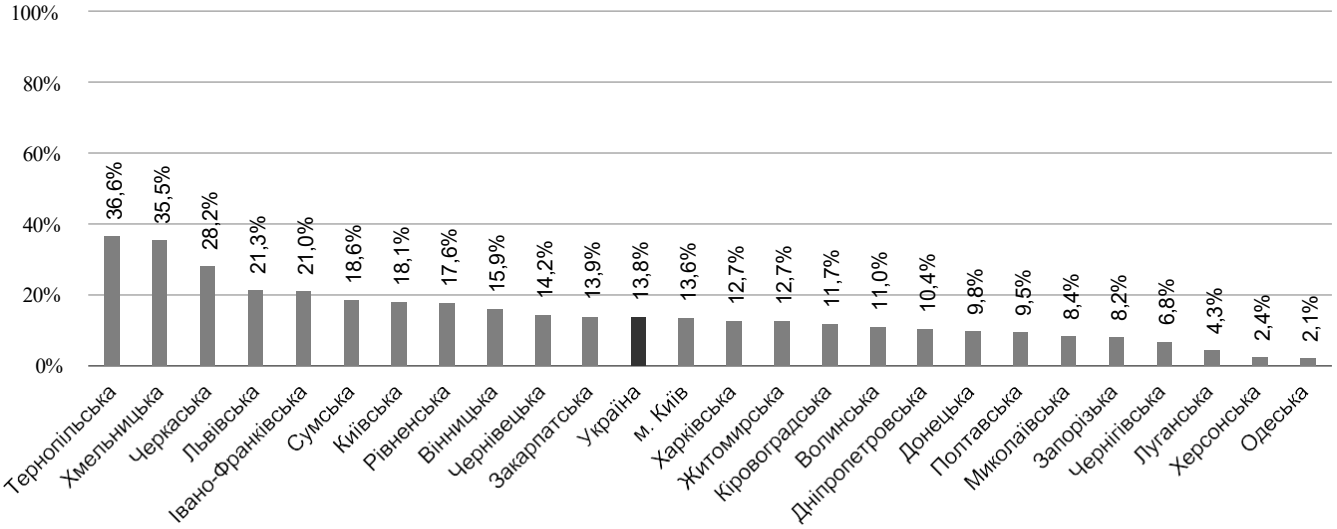


Figure 1.5. Attitudes towards vaccination: breakdown by survey year

Refusal of vaccination

A total of 13.8% of respondents who are responsible for children in their household reported that they had the experience of refusing vaccinations. The most difficult situation with parents' attitude to vaccination is in such western regions as Ternopil and Khmelnytskyi, where more than a third of respondents had experience of refusal, as well as in Cherkasy region, where more than a quarter of respondents had such experience. On the other hand, the parents in Odesa, Kherson and Luhansk regions declare the greatest adherence to vaccinations less than 5% of respondents refused vaccinations **(Fig. 1.6).**



Ternopil, Khmelnytskyi, Cherkasy, Lviv, Ivano-Frankivsk, Sumy, Kyiv, Rivne, Vinnytsia, Chernivtsi, Zakarpattia, Ukraine, city of Kyiv, Kharkiv, Zhytomyr, Kirovohrad, Volyn, Dnipro, Donetsk, Poltava, Mykolaiv, Zaporizhzhia, Chernihiv, Luhansk, Kherson, Odesa

Figure 1.6. Percentage of respondents who had the experience of refusing vaccinations for a child: division by region (among those who had children under 18 years of age in the household and information on their health status, N = 3285).

The hierarchy of reasons for refusing childhood vaccinations has not changed compared to 2019. The most common reasons for refusing vaccination are fear of possible complications or negative consequences (45.5%) and the child's health at the time of the scheduled vaccination (38.6%). More than a third of parents (35.1%) are stopped by mistrust of vaccine manufacturers or the procedure for its transportation and storage (15.5%). The rest of the reasons gained no more than 10% **(Fig. 1.7).**

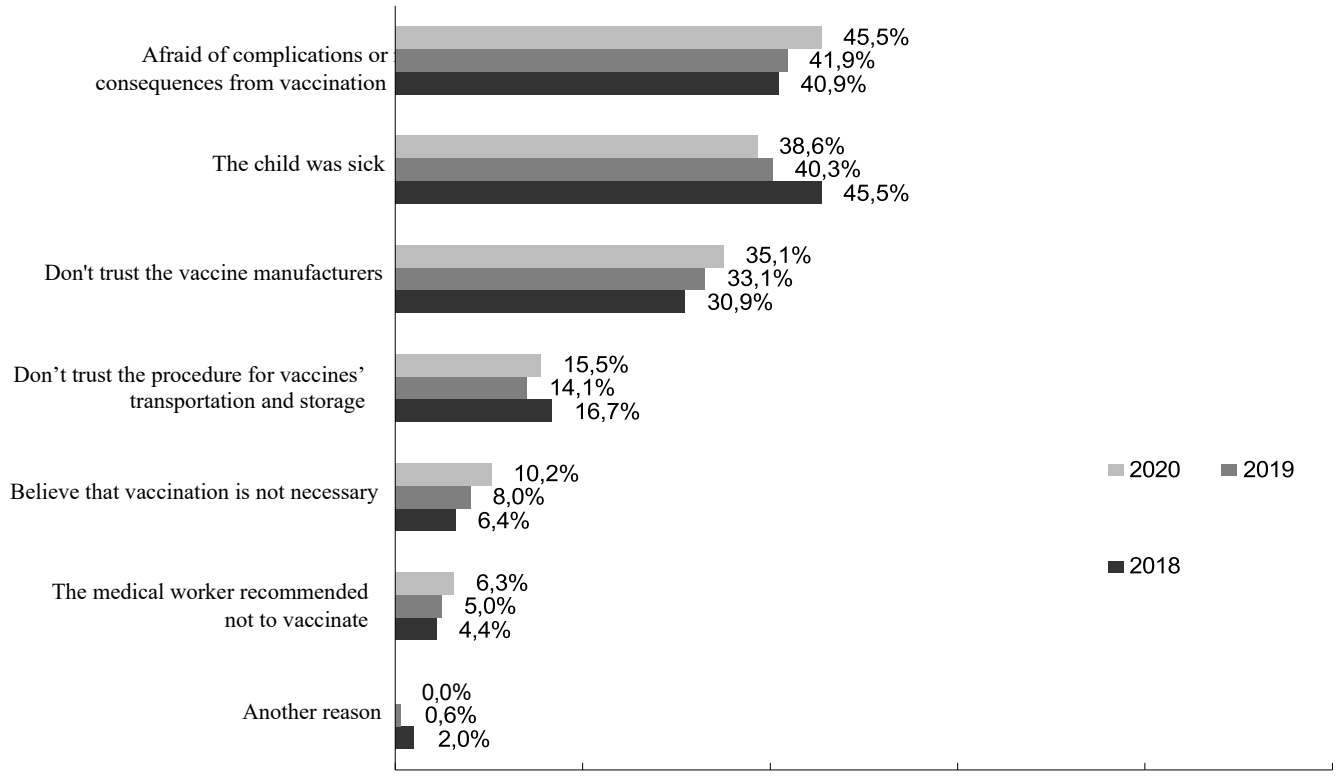


Figure 1.7. Division of respondents by reasons for refusing vaccinations for a child and years of examination (among those who ever refused to vaccinate a child, N = 479)

In general, progress in changing attitudes towards children's vaccination is gaining momentum, as the share of respondents in Ukraine whose families have ever refused to vaccinate a child has significantly decreased compared to previous years (from 21.1% in 2017 and 21.9% in 2018 to 18.3% in 2019 and 13.8% in 2020), and this is a positive result of many years of doctors' work.

1.6. Behavior in case of illness

To find out the typical behavior of adults in case of illness, the respondents were asked the following question: "What do you usually do first when you get sick? Think about those illnesses that prevented you from working or doing your usual daily activities for at least seven days."

The results of the survey show that self-medication is the most common practice of the population in case of illness, almost half (46.8%) of the surveyed adults resort to it: 32.7% prefer independent pharmacological treatment, another 14.1% are treated with folk remedies (**table. 1.7**).

Despite the numerous positive aspects of self-treatment (for example, saving time and money, reducing the burden on medical institutions and doctors, etc.), self-treatment carries numerous risks, namely the threat of untimely seeking professional medical help and a high risk of complications. The main component of self-treatment is the responsibility of the patient for their own health, and it cannot be considered as an alternative to professional treatment.

Contacting a medical professional is a typical behavior in case of illness for 2/5 of the population (41.2%): 28.9% contact a family/district doctor, 2.6% contact a specialist directly, 2.6% have doctors among relatives, friends, or acquaintances, 1.7% call an ambulance, and 1.2% immediately go to a hospital.

At the same time, 10.4% of respondents indicated that their decision on further treatment usually depends on the symptoms.

Compared to the results of the previous survey waves, there is a gradual increase in the share of those who seek help from a medical professional in case of illness (from 29.0% in 2017 to 33.8% in 2018, from 37.4% in 2019 to 41.2% in 2020), although the total share of self-medication supporters did not change significantly (about 45–47%).

At the same time, in the group of respondents who prefer self-medication, the share of those who are treated with medication has not changed over the year (31.7% in 2019 compared to 32.7% in 2020), just as the share of those who rely on the methods of traditional medicine, which had previously been slowly decreasing (19.4% in 2017, 15.5% in 2018, 13.7% in 2019 and 14.1% in 2020).

The increase in seeking help from medical professionals recorded last year continues due to the increase in visits to the family/district doctor (18.6% in 2017, 23.1% in 2018, 27.0% in 2019 and 28, 9% in 2020). This is not surprising, since the primary care physician becomes an intermediary between the patient and specialists, although, as mentioned above, 2.6% of patients continue to seek help directly from specialists, bypassing the stage of consultation with a family doctor.

Not in all regions the share of respondents who treat themselves with folk remedies or medications is higher than the share of those who seek help from a health worker. In the Kherson, Lviv, and Dnipro regions, 1.2-1.7 times more people seek help from doctors than are treated at home without consulting health workers. The situation is completely opposite in the Donetsk, Luhansk, Odesa, and Rivne regions, where the total share of self-treatment supporters is 1.6-2.1 times higher than the share of those who seek help from health workers, and in the Poltava and Chernihiv regions – more than 2.8-2.9 times **(Table 1.7).**

Regionally, the most significant changes during the year in favor of visits to doctors are observed in Kherson (+18.7 percentage points[5]) and Khmelnytskyi (+10.6 percentage points) regions, while respondents who lived in Poltava (+15, 4 p.p.), Cherkasy (+15.3 p.p.), Zakarpattia (+11.7 p.p.) and Ternopil (+11.7 p.p.) regions, on the contrary, more often reported engaging in self-medication.

Certain differences in behavior in case of illness were also revealed by socio-demographic groups. People with low incomes (up to 1000 UAH), with less than general secondary education (54.9%), aged 60 and older (52.8%) resort to self-medication the most.

Young people either take more responsibility for their health or perceive modern procedures for receiving medical care more impartially, as turning to doctors precedes self-treatment among young people aged 18–29; among them 42.0% turn to medical professionals in case of illness compared to 37.8% of those who choose to self-medicate. A rough parity of strategies is observed among people with higher education, and in all other demographic groups considered, self-medication is more common than professional medical care.

Women (in 2017 – 31.0%, in 2018 – 36.8%, in 2019 – 40.1%, in 2020 – 39.1%) and persons with basic and complete higher education somewhat more often report on their visits to medical professionals in case of illness. On the other hand, there were significantly fewer requests for professional medical assistance from men (45.3% in 2017, 48.2% in 2018, 34.1% in 2019, 34.5% in 2020). The tendency of decreasing self-medication among people from the poorest families (51.9% in 2017, 56.4% in 2018 and 38.2% in 2019) did not continue, since in 2020, 56.2% of the representatives of this group chose self-medication as the main measure of combating the disease.

In light of the strengthening of the role of the family doctor as a key provider of medical care, it is important that in six regions the trend towards a statistically significant increase in visits to the family doctor as a priority treatment strategy in case of illness continues to persist compared to 2019 (mostly in Kherson and Lviv, as well as in Chernivtsi, Zakarpattia, Sumy and Odesa regions).

[5] Percentage points (abbreviated p.p.) characterize the difference between the percentages of the same indicator measured over different time periods or in different groups.

Table 1.7

Behavior in the event of illness: division by region, %

What is the first thing you usually do when you get sick?	Ukraine		Vinnytsia	Volyn	Dnipro	Donetsk	Zhytomyr	Zakarpattia	Zaporizhzhia	Ivano-Frankivsk	Kyiv	Kirovohrad	Luhansk	Lviv	Mykolaiv	Odesa	Poltava	Rivne	Sumy	Ternopil	Kharkiv	Kherson	Khmelnytskyi	Cherkasy	Chernivtsi	Chernihiv	The city of Kyiv
	%	N	%																								
Self-treatment with folk remedies without medicines	14,1	1449	10,6	25,0	12,9	11,8	22,9	16,8	12,7	8,9	16,7	15,6	0,5	18,3	8,1	18,3	14,5	19,5	6,5	17,5	20,0	13,1	9,4	10,8	15,2	8,6	19,1
Self-treatment with medicines	32,7	3334	35,6	25,8	29,2	45,3	21,3	35,6	31,9	32,8	32,3	17,4	36,3	21,3	26,7	37,0	53,3	33,6	44,7	27,1	28,7	19,4	31,5	39,1	29,1	53,1	19,9
Ask for advice from the pharmacist at the pharmacy	4,1	367	4,6	5,6	7,3	4,3	1,7	1,0	5,9	5,4	2,7	0,0	1,7	4,6	1,8	3,0	2,3	7,4	2,1	3,7	7,4	1,2	6,4	3,5	3,7	5,9	3,2
Call an ambulance	1,7	200	1,1	2,4	3,2	0,5	0,5	1,0	1,7	1,3	0,8	1,9	0,5	0,7	2,7	3,0	1,2	1,4	3,7	2,1	3,8	4,9	4,8	0,7	0,5	0,6	0,3
Contact a family doctor/district therapist	28,9	3026	34,9	32,7	42,3	22,6	26,9	39,2	30,4	29,9	29,6	24,0	13,4	44,8	27,4	24,6	18,9	28,3	34,2	33,0	25,7	39,6	22,3	28,6	41,1	20,0	21,4
Contact a narrow specialist of an outpatient clinic or polyclinic directly	2,6	283	5,5	2,0	1,9	1,3	1,8	2,9	4,5	5,0	3,8	3,0	0,5	1,4	1,2	1,9	1,0	2,1	0,5	4,0	5,2	3,4	9,6	3,1	2,6	0,7	1,5
Contact the inpatient specialist directly	1,2	123	1,8	0,0	0,0	0,2	0,6	1,5	2,9	0,7	2,0	2,0	0,9	0,0	1,6	0,9	0,3	0,5	0,2	0,4	2,8	1,3	6,0	0,9	1,5	0,6	1,7
Contact specialists of non-traditional medicine	0,2	18	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,0	0,0	0,0	0,0	0,2	0,0	0,0	0,0	0,4	0,4	0,0	0,7	0,5	1,0	0,0	0,2	0,0	0,2
Consult with doctors who are their relatives, friends, acquaintances	2,6	282	1,4	2,3	1,7	2,4	3,2	1,3	2,0	8,9	3,9	0,6	2,2	3,0	6,2	2,4	1,9	1,3	1,4	6,9	0,9	5,9	4,3	5,1	1,2	0,0	1,1
Look for a way to treat similar symptoms and diseases on the Internet	0,6	47	0,2	0,6	0,2	1,6	1,1	0,2	0,3	0,7	0,2	0,4	0,0	0,7	0,0	0,6	1,1	0,6	0,3	0,0	0,7	0,2	1,2	1,3	0,0	0,0	0,5
Resort to other actions	0,2	15	0,0	0,0	0,4	0,0	0,5	0,0	0,0	0,3	0,0	0,2	0,0	0,0	0,7	0,5	0,0	0,0	0,0	0,2	1,0	0,0	0,0	0,0	0,0	0,0	0,3
Do nothing	0,7	77	0,0	0,0	0,5	0,0	2,1	0,5	0,6	2,1	0,0	2,2	0,3	0,2	1,6	0,8	0,8	1,7	0,4	0,8	0,7	1,6	2,7	0,8	1,0	0,0	0,9
Depends on the symptoms	10,4	955	4,2	3,6	0,5	10,0	17,6	0,0	6,8	4,0	8,0	32,6	43,9	4,8	22,0	7,0	4,6	3,3	5,7	4,5	2,6	8,9	0,7	6,2	3,8	10,5	29,9

Table 1.8
Behavior in case of illness: division by socio-demographic groups, %

What is the first thing you usually do when you get sick?	Ukraine	By gender		By age				By residence		By education							By revenue				
		men	women	18–29 years old	30-44 years old	45–59 years old	60 years and older	urban	rural	Primary or incomplete general secondary	Complete general, secondary	Vocational, technical	Incomplete higher/secondary, specialized	Basic higher	Complete higher	Scientific degree (n = 16 people)	up to 1000 UAH	1001–1500 UAH	1501–2000 UAH	2001–2500 UAH	over 2500 UAH
Self-treatment with folk remedies without medicines	14,1	15,5	13,0	8,6	11,5	16,2	17,9	13,0	16,6	24,2	19,5	14,0	12,2	11,1	12,2	13,2	17,1	12,8	17,4	14,6	14,5
Self-treatment with medicines	32,7	31,1	33,9	29,2	33,4	31,5	34,9	33,6	30,6	30,7	29,2	35,1	36,7	30,1	28,8	60,8	39,1	33,4	33,8	32,6	32,7
Ask for advice from the pharmacist at the pharmacy	4,1	4,7	3,7	3,5	4,7	5,2	3,0	4,3	3,8	1,6	3,4	5,5	3,6	5,4	4,0	0,0	4,7	4,2	3,3	4,0	4,6
Call an ambulance	1,7	1,6	1,8	0,4	1,4	1,7	2,8	1,7	1,7	4,1	1,8	2,0	2,0	2,3	0,7	0,0	1,9	2,0	2,9	2,1	1,3
Contacting a family doctor/district therapist	28,9	25,7	31,5	35,8	28,0	27,1	27,6	28,1	30,7	21,0	32,3	24,1	27,2	31,5	32,8	14,0	25,1	32,6	28,8	30,3	28,9
Contact a narrow specialist of an outpatient clinic or polyclinic directly	2,6	2,7	2,6	2,3	2,4	3,0	2,8	2,3	3,4	2,1	2,3	2,6	2,1	4,5	3,2	5,8	1,3	3,4	2,9	2,4	2,8
Contact the inpatient specialist directly	1,2	1,4	1,0	0,6	1,5	1,4	1,0	1,1	1,4	1,4	1,0	1,3	0,9	1,8	1,4	0,0	1,4	1,7	1,2	1,6	0,7
Contact specialists of non-traditional medicine	0,2	0,2	0,1	0,1	0,1	0,2	0,2	0,1	0,2	0,5	0,2	0,2	0,1	0,0	0,2	0,0	0,1	0,0	0,2	0,0	0,2
Consult with doctors who are their relatives, friends, acquaintances	2,6	3,1	2,2	2,9	2,4	2,7	2,7	2,5	3,0	3,1	1,8	1,9	3,1	3,8	2,9	6,2	1,9	2,3	1,5	2,2	2,6
Look for a way to treat similar symptoms and diseases on the Internet	0,6	0,6	0,5	1,3	0,7	0,5	0,1	0,7	0,3	0,0	0,7	0,4	0,3	1,4	0,9	0,0	0,2	0,3	0,2	0,6	0,5
Resort to other actions	0,2	0,2	0,2	0,1	0,3	0,2	0,1	0,2	0,0	0,0	0,1	0,0	0,2	0,4	0,3	0,0	0,0	0,0	0,0	0,1	0,3
Do nothing	0,7	1,3	0,3	0,7	0,9	0,8	0,6	0,7	0,7	2,5	0,7	0,8	0,7	0,6	0,6	0,0	1,0	0,3	0,7	0,8	0,6
Depends on the symptoms	10,4	11,9	9,1	14,4	12,8	9,7	6,4	11,6	7,5	8,8	7,0	12,1	10,9	7,2	12,0	0,0	6,2	7,0	6,8	8,6	10,3

In follow-up questions, respondents were asked to recall their most recent incident of serious illness: “Recall the last incident of any illness or injury that prevented you from working or doing your usual daily activities for at least seven days, and which occurred within the past 12 months. Name the month and year when it happened", as well as the experience of seeking medical assistance in connection with this case: "Did you seek medical assistance from a doctor or paramedic during your last illness or injury?" In contrast to value judgments, the discussion of the last treatment will shed light on the actual treatment practices of serious diseases.

Recalling their real experience, 30.4% of respondents (N = 3320) reported that they had an illness or injury that affected their daily activities during the last 12 months. This indicator has significantly decreased compared to the data of 2019, when it was 44.1%. A little less than 3/4 of those who had an illness (73.2%) sought professional medical help from a doctor or paramedic (**Fig. 1.8**), which is significantly more than last year's figure (63.5%). The decrease in morbidity against the background of an increase in visits in problematic cases can be explained by the re-evaluation of risks due to the fear visits to medical institutions in the conditions of the COVID-19 pandemic. Therefore, patients preferred not to recognize their problem as serious and tried to cope with its treatment on their own, rather than seek professional help.

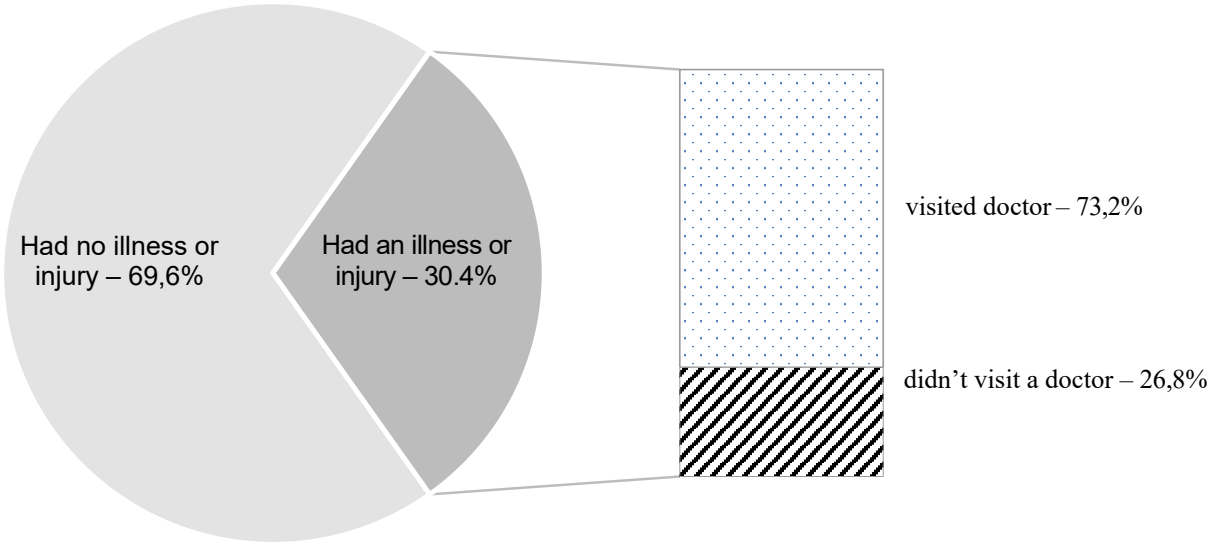
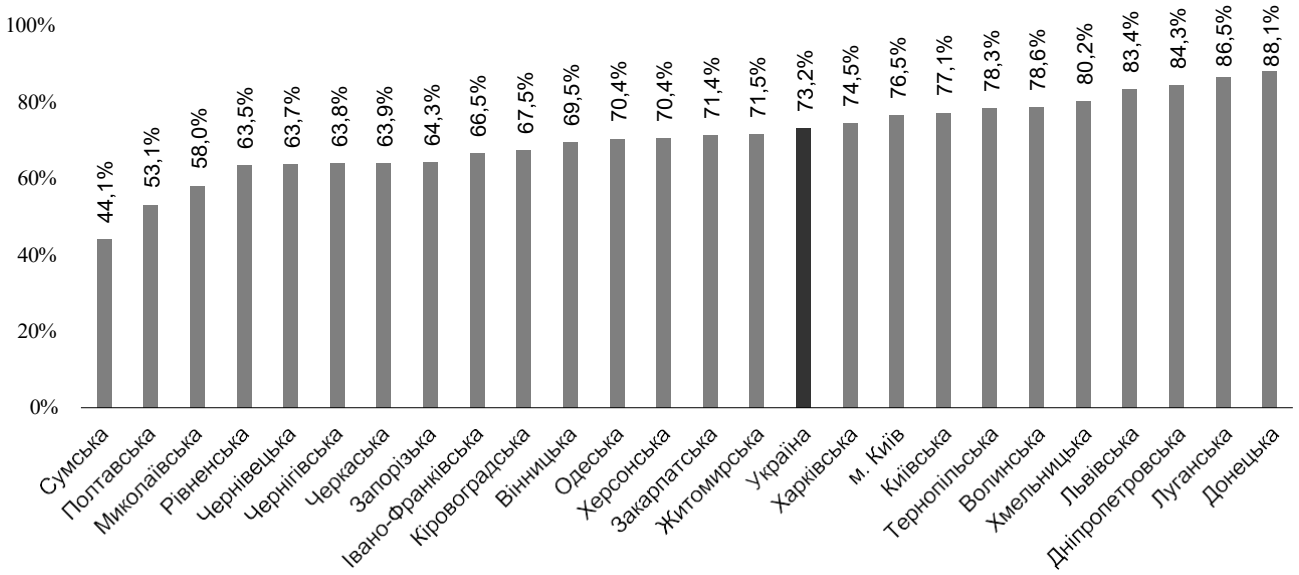


Fig. 1.8. The percentage of respondents who reported a disease they had during the last 12 months and visits to medical professionals in connection with this disease.

The lowest level of visits to the doctor (less than half of those who had an illness or injury), as before, was recorded in the Sumy region. Poltava and Mykolaiv regions also have low rates of visits. On the other hand, medical professionals in Lviv, Dnipro, Luhansk, and Donetsk region were consulted more often than the national average (**Fig. 1.9**).



Sumy, Poltava, Mykolaiv, Rivne, Chernivtsi, Chernihiv, Cherkasy, Zaporizhzhia, Ivano-Frankivsk, Kirovohrad, Vinnytsia, Odesa, Kherson, Zakarpattia, Zhytomyr, Ukraine, Kharkiv, city of Kyiv, Kyiv, Ternopil, Volyn, Khmelnytskyi, Lviv, Dnipro, Luhansk, Donetsk

Fig. 1.9. The percentage of those who consulted a doctor due to the disease that happened in the last 12 months (division by region)

Women (75.0%) more often turn to a medical professional in case of serious illness than men (70.3%), as well as respondents of older age groups: 66.1% of respondents aged 60 and older versus 58.3% 18– 29-year-olds who have been ill for the past year. The 2020 study did not reveal significant differences in seeking medical help in case of illness among representatives of other demographic groups (by urban/rural type of residence, age, education, and income).

1.7. Barriers to using medical care

The main obstacles on the way to medical care were identified with the help of a question, "Why didn't you see a doctor? Name no more than three reasons." The most common reason why the population of Ukraine does not seek professional medical help in case of illness was that in most cases the symptoms of the disease were already familiar from previous treatment experience (48.4%); 20.3% cited the high cost of treatment; 19.4% were stopped by long lines to the doctor, and 19.0% of respondents hoped that the disease would pass without medical help. Another 16.4% did not seek help due to mistrust of medical workers, and 12.6% of patients were afraid of being infected with the coronavirus (**Table 1.9**).

Compared to previous years, the main reason for "not consulting" a doctor remains unchanged, but its specific weight has significantly decreased over the past five years (by 9 percentage points): familiar symptoms and experience of previous treatment in 2016 were indicated by 57.5%, in 2017 – 55.5%, in 2018 – 54.8%, and in 2019 – 47.7%, and in 2020 – 48.4% of respondents.

During the year, the share of those who hoped that the disease would go away on its own decreased significantly (by 10 percentage points) – 19.0% in 2020 compared to 29.3% in 2019 and 29.2% in 2018, 22.7% in 2017 and 25.3% in 2016.

That is, there is a decrease in the share of those who want to solve medical problems on their own, even if they have previous experience, as well as in the share of those who are irresponsible with their health, expecting that the disease will go away on its own instead of receiving qualified advice and, if necessary, help.

Such a barrier to medical care as queues in hospitals remains relevant in 2020 (19.4%), as in 2019 (18.0%), although previously there were positive changes, which turned out to be unstable (13.0% in 2016, 19.5% in 2017, 14.1% in 2018). In 2020, such an obstacle to seeking medical help as distrust of medical personnel (16.4%), the increase of which was recorded in 2019 (17.5%), continues to be relevant (11.2% in 2017 and 10.0% in 2018), although it was significantly lower in previous years.

The cost of treatment remains an obstacle to seeing a doctor. A certain improvement in the situation in this area, recorded in previous years, has not been observed in the last two years (24.6% in 2016, 22.9% in 2017, 17.0% in 2018, 17.7% in 2019 and 20.3% in 2020).

Due to the small number of analyzed groups, no regional comparison of indicators was carried out. The following differences were found in terms of socio-demographic characteristics:

- men more often than women hope that the disease will go away by itself (24.1% compared to 15.1%);
- men demonstrate greater distrust of doctors than women (20.3% compared to 13.3%);
- for women, the high cost of these services is a more serious obstacle to visiting a doctor.

City dwellers often see long queues as an obstacle to see a doctor, and for rural dwellers the lack of transport connections is a significant obstacle. Urban residents more often express fears about the possibility of being infected with the coronavirus as an obstacle to seeking medical care compared to residents of rural areas, where the population density is significantly lower. The high cost of treatment is predictably the most pressing issue for older age groups (**Table 1.10**).

Thus, over the years of monitoring, the "Health Index" research confirms the positive dynamics of self-assessment of the health status by the adult population. The share of those who call their health "rather good" has increased from 44.4% in 2016 to 54.3% in 2020. The tendency among men and older people to view their own health less positively is also stable. It is worth remembering that, despite the obviously subjective nature of self-assessment of health status, studies have long shown its connection with the real state of health of the interviewee and recognized it as a reliable predictor of mortality.

Considering the extreme weight of cardiovascular diseases among the causes of mortality of the population of Ukraine[6], it is worth once again emphasizing those research results that indicate the lack of progress in this direction, namely, insufficient awareness of the population about the symptoms of a stroke, which can lead to untimely diagnosis and increase the risk of irreversible impact on the patient's health, and the body mass index, the average value of which for the adult population of Ukraine is in the overweight zone according to the WHO classification, and this situation persists for each individual region of Ukraine. Special attention should be paid to these indicators in public health support programs.

A certain concern is the curtailment of the population's visits to doctors for preventive purposes. This year, visits to gynecologists by women and urologists by men, dentists, and cardiograms, which had been growing little by little until now, decreased. On the other hand, the trend towards an increase in the share of visits to a doctor in case of illness as opposed to self-medication continues in 2020: during the last illness, 29.0% consulted a doctor in 2017, 33.8% in 2018, 37.4% in 2019, and 41.2% in 2020. Although our study does not provide a clear answer to the question about the reasons for changes in behavior related to the prevention of diseases and their early detection, the epidemiological situation that developed in 2020 could have an impact on such decisions of the respondents.

Therefore, the prevention of non-communicable chronic diseases, reducing the influence of factors that contribute to the development of non-communicable diseases, forming a responsible attitude of citizens towards their health and motivating them to lead a healthy lifestyle should remain priorities on the way to improving public health in Ukraine.

[6] Stravbridge VI, Wallhagen MY. Self-rated health and mortality over three decades: results from a time-dependent covariate analysis. Res Aging (1999)

Table 1.9
Division of respondents by region for reasons of refusing to see a doctor in case of illness or injury, %

Region	*N*	Too expensive (services, medicine, transport)	I do not trust the medical staff, their qualifications	Bad attitude of the staff, rudeness	Long queues in hospitals	There is no transport connection	Know how to treat from previous experience	Do not know who to contact	Expected that the disease would go away by itself, it did not bother them much	Were afraid of contracting the coronavirus	Were afraid that non-coronavirus services were unavailable, of lower quality, more expensive, etc.	Other reasons
Ukraine	1016	20,3	16,4	5,8	19,4	4,4	48,4	1,9	19,0	12,6	2,9	1,9
Vinnytsia	**48**	28,0	3,7	1,8	10,3	7,7	66,8	0,0	13,8	5,7	2,2	2,1
Volyn	**33**	11,1	14,3	5,6	20,8	4,9	38,6	0,0	16,4	8,7	13,0	0,0
Dnipro	18	15,4	11,0	0,0	54,1	3,7	58,2	3,6	19,3	45,0	0,0	3,7
Donetsk	**16**	62,0	18,9	12,0	41,5	9,6	27,0	0,0	6,0	12,0	0,0	0,0
Zhytomyr	**51**	13,4	5,4	0,0	8,9	1,3	56,7	0,0	27,1	7,0	1,4	0,0
Zakarpattia	**12**	20,7	17,8	0,0	8,7	18,6	27,0	0,0	9,6	0,0	16,3	0,0
Zaporizhzhia	**43**	19,9	33,3	3,3	27,0	9,1	46,5	7,9	11,6	4,6	4,6	4,8
Ivano-Frankivsk	**51**	14,4	19,9	10,1	10,1	0,0	42,0	1,7	31,3	18,7	2,2	0,0
Kyiv	**44**	17,5	21,2	0,0	15,8	1,9	55,9	0,0	23,8	10,5	7,3	2,2
Kirovohrad	**32**	13,8	31,8	0,0	14,7	0,0	14,7	0,0	36,5	8,8	0,0	0,0
Luhansk	**6**	53,5	0,0	0,0	31,4	0,0	76,7	0,0	46,5	45,3	0,0	0,0
Lviv	**30**	17,7	9,3	0,0	11,9	2,9	43,0	2,6	27,2	27,4	0,0	0,0
Mykolaiv	**87**	30,5	27,7	10,2	58,8	6,0	42,5	0,0	6,3	11,7	2,2	8,5
Odesa	**35**	39,0	23,4	7,9	14,2	7,6	55,6	2,4	11,2	6,2	0,0	0,0
Poltava	**72**	16,9	8,6	1,0	13,0	4,3	61,5	1,1	19,7	5,8	1,7	3,4
Rivne	**61**	17,5	23,7	9,0	11,6	3,0	29,3	1,2	23,6	16,3	0,0	3,0
Sumy	**19**	19,1	32,8	9,5	4,8	9,4	15,9	0,0	40,8	4,8	0,0	0,0
Ternopil	**9**	0,0	0,0	0,0	23,2	0,0	47,4	10,2	0,0	7,9	0,0	11,3
Kharkiv	**44**	15,6	14,2	21,8	22,3	3,9	36,0	6,2	15,8	12,3	0,0	1,6
Kherson	**69**	17,7	17,9	2,3	2,3	6,1	69,3	1,1	25,8	6,7	3,9	0,0
Khmelnytskyi	**28**	0,0	24,5	6,3	15,2	0,0	33,5	3,0	29,2	47,2	6,3	0,0
Cherkasy	**72**	19,6	9,7	5,9	21,4	3,8	38,3	1,3	10,8	9,9	10,8	2,4
Chernivtsi	85	10,7	21,2	7,6	3,5	0,0	48,3	2,1	31,0	12,1	3,7	0,0
Chernihiv	**31**	6,8	0,0	0,0	0,0	9,4	93,1	0,0	3,3	3,2	0,0	0,0
City of Kyiv	**20**	6,9	0,0	3,4	10,1	0,0	69,8	0,0	16,7	0,0	6,6	0,0

Table 1.10
Division of interviewees by reasons for refusing to see a doctor in case of illness or injury by socio-demographic characteristics, %

	N	Too expensive (services, medicine, transport)	I do not trust the medical staff, their qualifications	Bad attitude of the staff, rudeness	Long queues in hospitals	There is no transport connection	Know how to treat from previous experience	Do not know who to contact	Expected that the disease would go away by itself, it did not bother them much	Were afraid of contracting the coronavirus	Were afraid that non-coronavirus services were unavailable, of lower quality, more expensive, etc.	Other reasons
Ukraine	1016	20,3	16,4	5,8	19,4	4,4	48,4	1,9	19,0	12,6	2,9	1,9
GENDER												
Men	364	17,3	20,3	4,5	16,6	3,1	45,7	1,9	24,1	11,2	2,4	1,4
Women	652	22,7	13,3	6,8	21,6	5,4	50,5	1,9	15,1	13,7	3,3	2,2
AGE GROUP												
18–29 years old	124	9,7	14,6	6,1	18,1	4,0	52,6	0,0	27,2	9,2	2,1	0,7
30-44 years old	257	12,0	17,9	6,9	17,9	1,9	47,9	2,7	19,8	9,7	4,8	2,3
45–59 years old	240	18,6	15,8	5,4	18,8	3,4	50,2	2,1	14,5	13,8	3,4	0,9
60 years and older	395	31,7	16,2	5,1	21,5	7,2	46,1	1,9	18,8	15,2	1,4	2,6
PLACE OF RESIDENCE												
urban	615	20,4	16,0	6,4	22,5	3,0	46,9	2,0	18,9	14,3	4,0	1,8
rural	401	20,2	17,1	4,6	13,2	7,4	51,6	1,7	19,2	9,0	0,7	2,1
LEVEL OF EDUCATION												
Primary or incomplete general secondary	39	41,9	15,1	3,6	13,5	10,9	44,5	0,0	20,0	6,6	0,0	6,0
Complete general secondary	224	27,6	14,5	6,8	25,7	6,8	50,5	0,9	16,2	9,6	2,8	1,6
Vocational (vocational school, lyceum)	180	24,6	27,7	7,5	18,3	5,8	38,1	3,6	23,8	9,3	1,1	1,3
Incomplete Higher/Secondary specialized (technical school, college, junior specialist)	295	20,7	14,3	2,4	18,7	3,7	53,0	1,7	16,9	17,2	3,5	2,5
Basic higher (Bachelor's)	71	14,5	15,8	8,0	23,3	3,4	36,9	2,5	15,4	17,3	5,1	0,0
Complete higher education (specialist, master)	205	9,4	11,9	7,6	15,6	1,7	53,7	1,8	21,6	10,9	3,4	1,5
Scientific degree (Candidate of Sciences, Doctor of Science)	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	38,0	0,0	62,0
HOUSEHOLD INCOME PER PERSON												
Up to 1000 UAH	92	14,4	17,0	5,1	12,7	8,5	43,2	3,7	20,9	9,8	2,0	2,2
1001–1500 UAH	88	20,8	14,8	2,7	24,2	11,0	46,5	0,0	19,5	21,3	1,0	0,7
1501–2000 UAH	159	27,2	16,1	6,0	22,3	5,9	46,9	1,1	16,9	9,8	3,1	3,6
2001–2500 UAH	140	25,0	18,1	3,4	10,6	5,6	51,7	1,4	20,9	10,9	3,1	2,0
Over 2500 UAH	324	16,3	16,2	6,9	18,6	2,8	49,4	2,0	18,5	12,6	3,5	1,4

SECTION 2. OUTPATIENT CARE

Key findings:

- a third (33.1%) of adult residents of the country sought outpatient medical care in connection with an illness during the year before the survey, which is 6.2 percentage points less than the previous year;
- Most health-related visits are still handled at the GP level, and voluntary visits to specialists is becoming less common. In 2020, more than two-thirds (68.2%) had their last outpatient visit to a GP, 28.0% to a narrow specialist, and of these, almost half (48.1%) had a referral to this specialist from their family doctor;
- about half (55.4%) of those who applied for outpatient care had expenses related to receiving these services during the last visit;
- the fee for outpatient treatment gradually increases over the years. According to the current survey, half of those who paid for outpatient care during their last visit paid less than UAH 100, and half paid more than this amount;
- consumption of laboratory-diagnostic services in connection with receiving outpatient medical care slightly increased compared to the previous year. According to 2020 data, two-thirds (66.6%) of outpatient care users passed tests (by 7.2 percentage points more than the previous year), 52.6% underwent diagnostics (by 5.3 percentage points more than the previous year);
- the share of those who paid for laboratory and diagnostic services remains approximately at the same level during the study period. During the last year, 41.7% paid for tests, 55.2% paid for diagnostic services;
- the cost of laboratory and diagnostic services continues to rise. According to 2020 data, the median fee for tests was UAH 250, for diagnostic services – UAH 300;
- the financial burden associated with receiving outpatient care remains significant. Two-thirds (66.4%) of outpatient care users paid for a visit to a doctor and/or laboratory diagnostic services, among them almost half (49.9%) indicated that it was difficult for them to cover these costs, and 39.3% borrowed funds to pay for the costs associated with receiving outpatient medical care. The percentage of those who needed to borrow funds for treatment continues to decrease, but the amount of borrowed funds is increasing;
- the percentage of refusals from outpatient care due to lack of funds continues to gradually decrease but remains quite significant. According to 2020 data, about a fifth (19.3%) of the adult population were sick in the past 12 months but did not visit a doctor due to lack of funds.

Outpatient care is a type of medical care that does not require the patient to be admitted to a hospital for round-the-clock care, unlike inpatient care. Outpatient facilities provide primary and, in part, specialized medical care and play an important role in the health care system, because it is at the primary level that most of the patients' health problems can be solved.

There is a wide network of outpatient clinics in Ukraine, both in cities and in rural areas: in general, more than 10 thousand outpatient clinics provide outpatient care in Ukraine[7]; the number of visits to doctors during the year, including preventive visits and visits at home, exceeds 275 million (6.6 per inhabitant of the country)[8].

[7] Center for Medical Statistics of the Ministry of Health of Ukraine. Medical personnel and the network of health care institutions of the Ministry of Health of Ukraine for 2018–2019. http://medstat.gov.ua/im/upload/kadry%202019.zip

[8] Center for Medical Statistics of the Ministry of Health of Ukraine. Indicators of population health and use of health care resources in Ukraine for 2019. http://medstat.gov. ua/im/upload/DOV_1_ZAG-2019.zip

At the same time, the data of previous studies show that a significant number of people in Ukraine do not go to doctors in case of illness, trying to cure it on their own, and most often not visiting a doctor is associated with the high cost of treatment[9]. The level of "out-of-pocket payments" for health care services in Ukraine remains high (according to the State Statistics Service, in 2018, households accounted for 48.2% of all health care costs[10]) and is higher than in many other European countries[11]. Although a large proportion of these costs are incurred in inpatient care, receiving outpatient care in many cases also involves costs, both formal and informal[12]. In 2020, going to the doctor in case of illness could also be affected by the COVID-19 epidemic in addition to possible financial barriers. On the one hand, according to the recommendation of the Ministry of Health, people with signs of respiratory disease or suspected disease of COVID-19 should contact their family doctor, which should lead to an increase in outpatient visits. At the same time, some patients with other diseases could refuse to visit a medical institution due to quarantine restrictions or fear of contracting COVID-19. Changes in the receipt of outpatient medical care in Ukraine can be traced based on the data of the research presented in this section.

2.1. Seeking outpatient care

According to the survey results, a third (33.1%) of the adult population of Ukraine sought outpatient medical care due to health problems during the year before the survey, which is slightly less than the previous year (39.3%).

The average number of outpatient visits has not changed compared to previous years and is about 2.3 (**Fig. 2.1**).

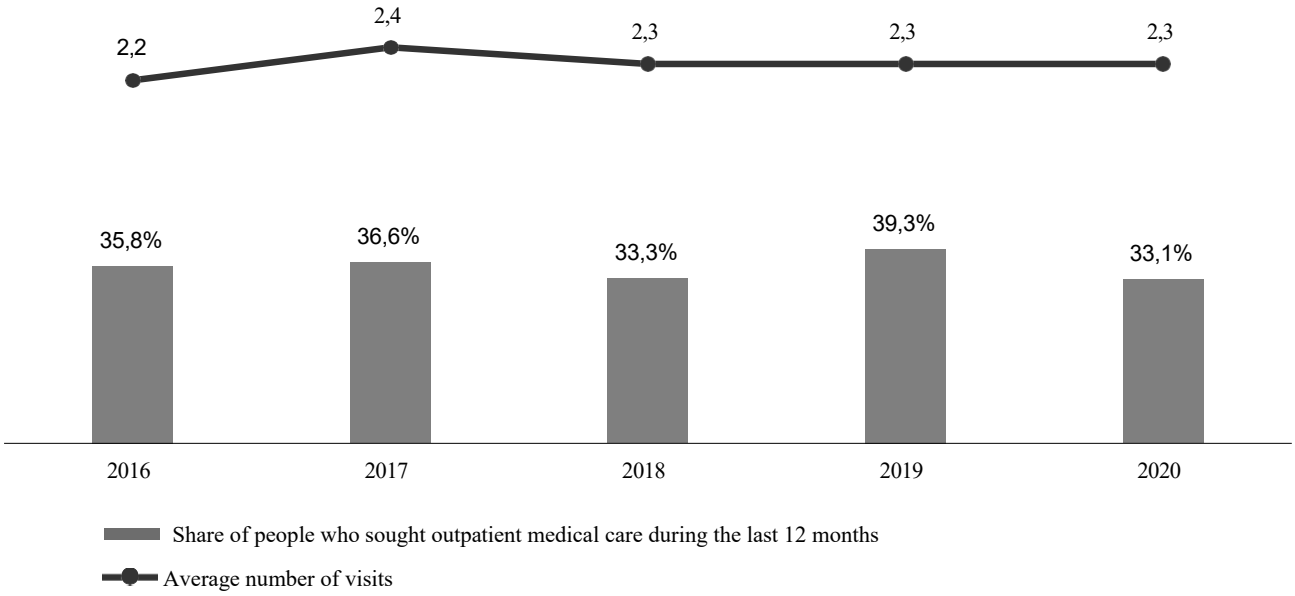


Figure 2.1. Percentage of respondents who sought outpatient care in the 12 months prior to the survey for health problems and average number of visits among those who sought outpatient care: breakdown by year.

As in previous years, there are slightly more women than men, as well as older people than young people, who consulted doctors (**Table 2.1**). Thus, 37.6% of women and 25.3% of men visited a doctor for health problems in the last 12 months. The percentage of those who visited doctors at least once a year increases from 28.8% among people aged 18–29 years old to 39.5% among people over 60 years old.

9 Results of the "(Free) medicine" study, 2017. https://patients.org.ua/wp-content/uploads/2017/03/free-medicine.pdf
10 State Statistics Service of Ukraine. Satellite account of health care in Ukraine in 2018. http://www.ukrstat.gov.ua/operativ/operativ2020/oz_rik/sat_rah_oh_zd18.xlsx
11 Goroshko A., Shapoval N., Lai T. (2018). Can people afford to pay for health care? New evidence on financial protection in Ukraine. Copenhagen: WHO Regional Office for Europe. https://www.euro.who.int/__data/assets/pdf_file/0008/381590/ukraine-fp-eng.pdf
12 See data of the current and previous studies "Health Index. Ukraine". http://health-index.com.ua/

There is no significant difference between cities and villages in the share of those who visited a doctor: 33.5% of urban and 32.6% of rural residents turned to doctors for outpatient care.

By region, the largest percentage of those who sought outpatient care during the last 12 months was among residents of Chernivtsi (51.7%), Kherson (50.6%), Kyiv (47.9%) and Vinnytsia (47.9%) regions, the smallest among residents of Sumy (10.0%), Kirovohrad (17.7%) regions and the city of Kyiv (15.3%).

Compared to the previous year, the frequency of outpatient care visits decreased in all socio-demographic categories, but to a somewhat greater extent among women (by 8.2 percentage points), people aged 60 and older (by 8.7 percentage points), residents of cities (by 7.8 percentage points), and people with a higher income (by 10.8 percentage points in the category with household income over UAH 2,500 per person). If the decline in ambulatory care use were due solely to financial reasons, one would expect the largest decline among the poorest households, which the survey data does not show. Therefore, we can assume that the reduction in ambulatory care use in 2020 is partly due to the COVID-19 pandemic.

Table 2.1

The percentage of respondents who sought outpatient care during the 12 months before the survey and the average number of visits among those who sought outpatient care: breakdown by region and survey year

Have sought outpatient medical care within the last 12 months, %						**Average number of outpatient visits**				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
In total	33,1	39,3	33,3	36,6	35,8	2,3	2,3	2,3	2,4	2,2
GENDER										
men	25,3	31,5	27,7	29,7	28,8	2,1	2,2	1,8	2,1	1,8
women	37,6	45,8	37,9	42,2	41,6	2,4	2,4	2,5	2,6	2,4
AGE GROUP										
18–29 years old	28,8	35,1	27,6	31,8	30,4	2,0	2,1	2,1	2,1	2,2
30-44 years old	28,4	34,4	28,4	32,3	31,5	1,9	2,1	1,9	2,2	2,0
44–59 years old	32,1	38,1	35,1	36,3	36,5	2,3	2,2	2,2	2,4	2,2
60 years and older	39,5	48,2	41,1	44,8	43,7	2,6	2,7	2,6	2,9	2,3
PLACE OF RESIDENCE										
urban	33,5	41,0	33,5	37,1	36,4	2,3	2,4	2,2	2,4	2,2
rural	32,6	35,4	32,9	35,4	34,5	2,2	2,2	2,3	2,5	2,2
HOUSEHOLD INCOME PER PERSON										
up to 1000 UAH	32,7	35,3	29,4	32,9	36,3	2,1	2,7	2,5	2,5	2,4
1001–1500 UAH	31,9	40,6	33,5	40,5	39,3	2,2	2,6	2,3	2,6	2,2
1501–2000 UAH	41,3	42,2	38,6	42,4	36,7	2,6	2,4	2,4	2,5	2,0
over 2500 UAH	33,4	44,2	31,3	36,3	30,8	2,2	2,3	2,1	2,3	2,2
REGION										
Vinnytsia	47,9	47,5	42,5	39,4	44,4	2,1	2,6	2,2	2,2	2,2
Volyn	36,9	50,3	13,7	21,6	31,9	2,1	2,0	2,5	2,3	3,3
Dnipro	30,2	44,7	46,6	37,6	44,4	2,1	2,6	2,3	2,7	2,0
Donetsk	29,1	41,4	30,2	26,3	31,2	2,0	2,2	1,9	1,9	1,5
Zhytomyr	36,6	49,7	50,8	51,0	39,9	2,9	2,4	3,3	1,9	1,7
Zakarpattia	23,0	24,6	30,1	28,1	34,3	2,3	2,1	2,2	2,4	1,8
Zaporizhzhia	36,7	48,7	38,7	36,8	45,7	2,5	2,4	1,7	1,6	2,1
Ivano-Frankivsk	36,9	42,7	44,6	41,1	38,0	2,5	2,8	2,3	3,3	2,6
Kyiv	47,9	40,6	37,0	45,7	44,0	2,4	2,1	2,9	2,4	2,6
Kirovohrad	17,7	15,9	41,2	29,6	24,0	1,4	2,0	1,4	1,6	1,5
Luhansk	38,5	35,8	30,6	29,7	23,5	2,5	1,8	1,6	1,5	1,4
Lviv	34,9	37,1	40,9	42,1	34,5	2,1	2,6	1,5	2,0	3,2
Mykolaiv	28,3	40,2	26,0	35,9	36,9	1,8	2,0	2,5	1,8	1,8
Odesa	26,4	40,9	27,3	32,7	31,5	2,2	2,3	2,9	2,5	1,9

Poltava	37,3	36,2	49,7	34,3	54,6	2,5	2,3	2,7	2,9	2,9
Rivne	38,7	40,1	44,8	54,5	46,6	1,9	2,7	1,9	2,6	2,2
Sumy	10,0	23,0	31,8	23,5	31,4	1,5	2,2	3,3	2,9	2,3
Ternopil	24,3	22,1	16,1	33,9	20,8	2,0	2,5	2,3	2,9	2,8
Kharkiv	27,5	35,8	19,3	29,6	35,6	2,4	2,6	1,4	2,2	1,9
Kherson	50,6	43,1	45,1	42,4	38,2	2,0	1,9	2,0	1,9	1,5
Khmelnytskyi	39,5	41,8	20,4	23,4	28,7	2,3	2,1	2,7	1,8	1,6
Cherkasy	42,1	40,4	39,6	47,5	45,2	4,1	2,6	2,7	3,1	2,7
Chernivtsi	51,7	44,6	35,4	42,2	38,7	2,4	2,8	3,0	3,3	3,0
Chernihiv	21,7	32,8	32,7	45,9	38,1	1,9	2,2	2,4	2,8	2,0
The city of Kyiv	15,3	43,4	14,8	50,1	24,7	1,7	2,3	2,4	3,5	2,8

A doctor's consultation is the main type of medical care during an outpatient visit: 88.4% of respondents received this type of medical care during their last outpatient visit. Also, a significant proportion of patients receive diagnostic services during an outpatient visit: 30.2% received laboratory diagnostics during the last visit, 13.1% received instrumental diagnostics (**Fig. 2.2**).

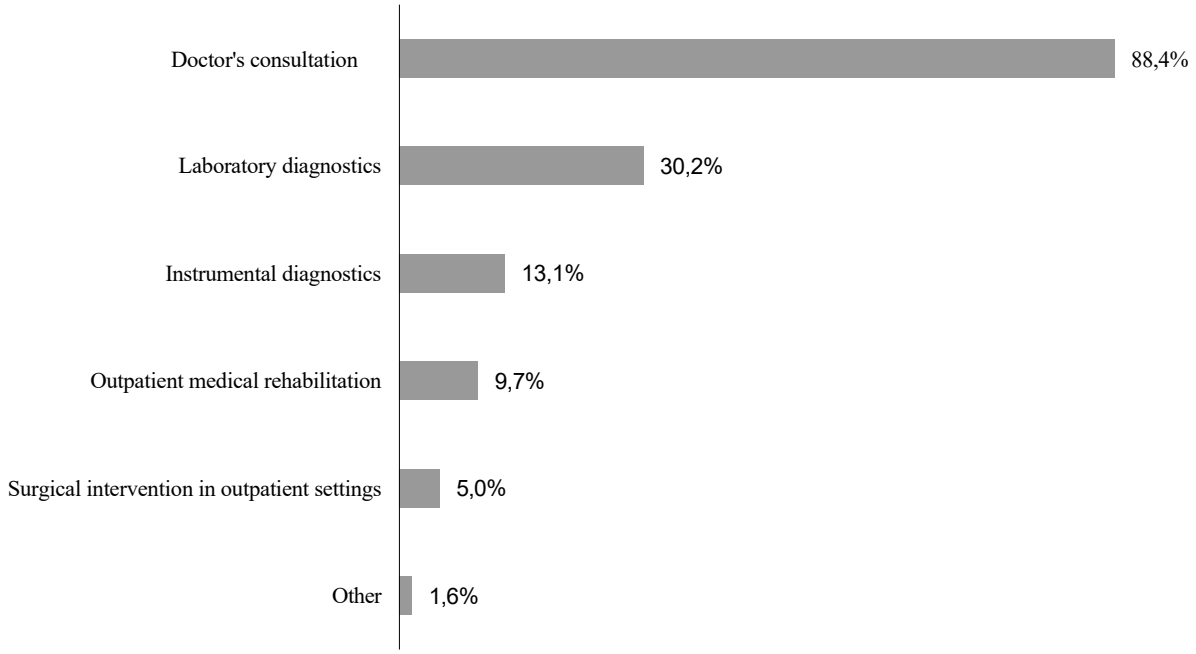


Figure 2.2. Types of medical care received during the last outpatient visit, 2020.

2.2. Choosing a health care provider

Over the course of the study, there is a trend toward an increase in the share of those whose last outpatient visit was to a general practitioner, and a decrease in the share of those who sought outpatient care from a narrow specialist (Fig. 2.3). According to the survey, in 2020 more than two-thirds (68.2%) had their last outpatient visit to a general practitioner (family doctor), while in 2016 family doctors or community therapists accounted for 60.9% of visits. The share of those whose last outpatient visit was to a narrow specialist decreased from 37.2% in 2016 to 28.0% in 2020.

The percentage of those who visit a narrow specialist on a referral from a family doctor continues to grow, from a third (32.2%) in 2017 to almost a half (48.1%) in 2020.

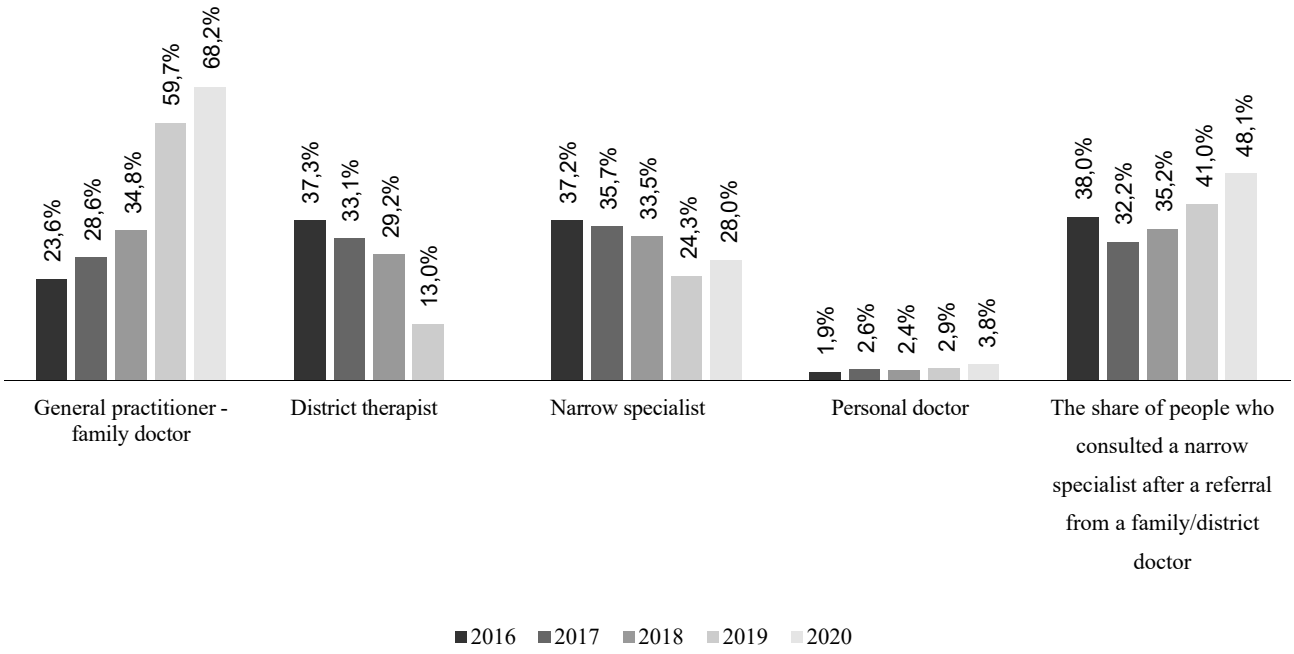


Figure 2.3. Distribution of respondents by type of ambulatory care provider during the last visit and percentage of individuals who consulted a narrow specialist: comparison by years.

2.3. Out-of-pocket costs for outpatient care

About half (55.4%) of those who sought outpatient care during the last visit had expenses related to receiving these services, in particular, 39.2% paid for medical goods, 14.3% paid at the cash register according to official rules, 11.8% paid to a charity fund or other organization, and 8.3% paid informally (**Figure 2.4**).

In general, the research shows that the need to pay in connection with receiving outpatient care has not disappeared. Although the share of those who paid for medical supplies during the last outpatient visit decreased compared to the previous year, it remains at the level of 2017-2018. The prevalence of "charitable contributions" and informal payments, as well as the share of ambulatory care users who paid for the services received according to official rules, despite some fluctuations, has remained at the same level in recent years. That is, in general, the study does not record a steady trend towards a reduction in the prevalence of costs in connection with receiving outpatient care in recent years, and the main form of costs remains the need to pay for medical goods.

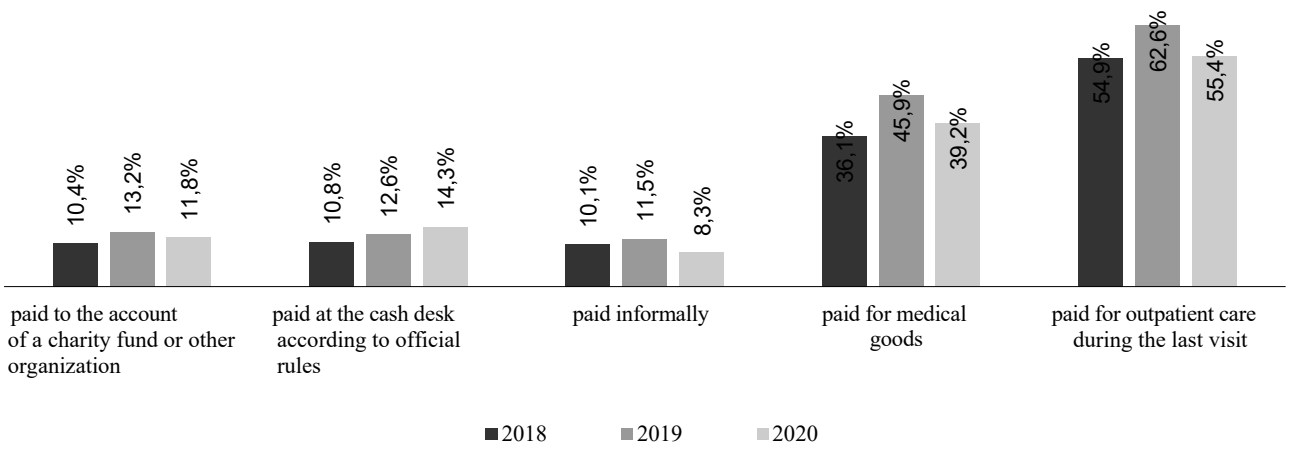


Figure 2.4. Out-of-pocket payment for an outpatient visit: comparison by year

To understand the motivations that lead people to resort to informal payments when receiving outpatient medical care, a 2020 study additionally asked respondents who had such experiences why they paid cash or gave gifts for the services of medical personnel during an outpatient visit. The answers to this question are given in **fig. 2.5**.

In general, according to the answers received, the majority of those who paid informally for outpatient services resort to such actions of their own free will, due to the unwillingness to violate the established order or a desire to receive better quality services, and a relatively smaller share pay informally at the request of medical personnel. Among the stated reasons, respondents most often mentioned the desire to receive better services (36.1%) and to express gratitude (35.0%). A significant part of them "reward" medical workers because it is established this way (24.3%), or they expect to receive better treatment in return (22.3%) or faster access to the service (22.1%). A relatively smaller share of payers answered that they paid or gave a gift on demand: 9.8% indicated that the medical staff hinted at payment, 8.3% said that the medical staff openly demanded payment (**Fig. 2.5**). That is, the existence of informal payments when receiving outpatient care is associated with a complex of reasons, including inadequate provision of hospitals and doctors, insufficient quality or unsatisfactory conditions for receiving services, established patterns of interaction between a patient and a doctor, lack of professional ethics, etc.

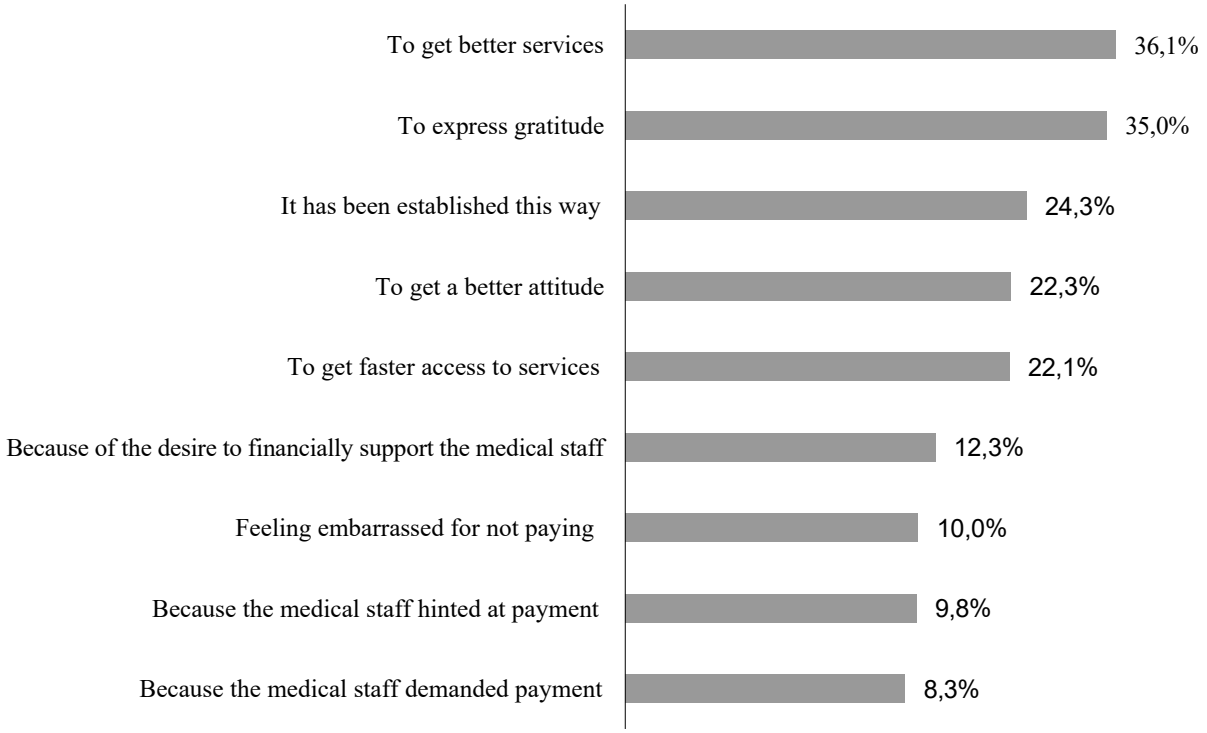


Figure 2.5. Reasons for informal payment for ambulatory care services, 2020.

As can be seen from the **table. 2.2**, the amount of the fee in connection with receiving outpatient care gradually increases over the years. According to the 2020 survey, the median amount of the payment to the charitable fund was UAH 100 (i.e., half paid less than this amount, and half paid more). The amount paid officially to the cash register, and the size of the informal payment in half of the cases was more than UAH 200. The median cost of medical goods is UAH 50. The median total fee for outpatient care during the last visit is UAH 100.

Table 2.2
Amount of payment for outpatient care during the last visit: comparison by year

	Survey year		
	2020	2019	2018
The amount paid to the account of a charity fund or other organization, UAH			
Median	100,0	100,0	50,0
Mean	395,8	351,9	320,1
Standard error	83,2	67,0	240,7
The amount paid at the cash desk in accordance with the official rules, UAH			
Median	200,0	200,0	150,0
Mean	1757,3	1159,5	1012,6
Standard error	651,5	157,1	301,7
Amount paid to the doctor informally, UAH			
Median	200,0	200,0	150,0
Mean	623,0	639,0	379,5
Standard error	125,6	121,8	90,7
Amount paid for medical products, UAH			
Median	50,0	60,0	50,0
Mean	273,7	211,8	133,1
Standard error	35,1	20,3	15,4
Amount paid for outpatient care in any form, UAH			
Median	100,0	70,0	50,0
Mean	766,5	531,5	394,4
Standard error	180,4	47,5	104,3

The data of the conducted survey show that in many cases the payment for outpatient care ("charity contributions", informal payments) is not voluntary: among those who paid to the account of a charity fund or other organization, half (49.5%) did it on demand, 50.5% – voluntarily; among those who paid the doctor informally, 28.3% indicated that they were asked to pay, 71.7% – were not. Some of the respondents said that they were required to pay for outpatient care, but they did not pay: among those who did not pay to the account of a charity fund or other organization, such a fee was demanded in 1.5%; among those who did not pay informally, such payment was demanded in 2.2%. That is, there is both a requirement for additional payment and voluntary payment when receiving outpatient care, and only a small percentage of outpatient care recipients refused to pay out of pocket when faced with such a requirement.

Compared to previous years, a certain decrease can be observed in the share of those who paid to the charity fund on demand, that is, the share of those who paid voluntarily increased slightly, but in general, the study does not record drastic changes in this aspect (**Table 2.3**).

Table 2.3
Proportion of persons who were required to pay for outpatient care: comparison by year

		Survey year				
		2020	**2019**	**2018**	**2017**	**2016**
among those who paid to the account of a charitable foundation or other organization	%	49,5	59,8	57,5	64,6	57,0
	N	380	482	343	564	655
among those who did not pay to the account of a charitable foundation or other organization	%	2,2	2,5	2,1	2,5	2,0
	N	2878	3413	3136	3280	2917
among those who paid the doctor informally	%	28,3	50,3	30,9	34,7	28,6
	N	269	380	282	334	346
among those who did not pay the doctor informally	%	1,5	2,0	2,1	2,3	1,5
	N	3006	3421	3095	3458	3463

To estimate the total costs of outpatient care and the extent to which such costs were significant to the average monthly household budget, respondents were asked to recall how much they spent out-of-pocket on doctor visits (outpatient care), not including travel, ambulance transportation, and medications for the last 30 days.

According to 2020 data, 5.7% of all respondents had expenses for outpatient care during the last 30 days, 10.9% among those who sought outpatient care. The median cost of outpatient care during the last 30 days was UAH 475 (average – UAH 1,245). On average, the share of outpatient care expenses among those who had such expenses in the past 30 days was almost a quarter (23.5%) of household income.

2.4. Passing laboratory and diagnostic tests

In previous years, there was a tendency towards a decrease the share of those who were tested or diagnosed in connection with receiving outpatient medical care, however, in 2020, the use of laboratory and diagnostic services increased slightly (**Fig. 2.6**). According to the research, two-thirds (66.6%) of the outpatient care users passed the tests, which is 7.2 p.p. more than the previous year. The share of those who underwent diagnostics increased by 5.3 percentage points, from 47.3% in 2019 to 52.6% in 2020.

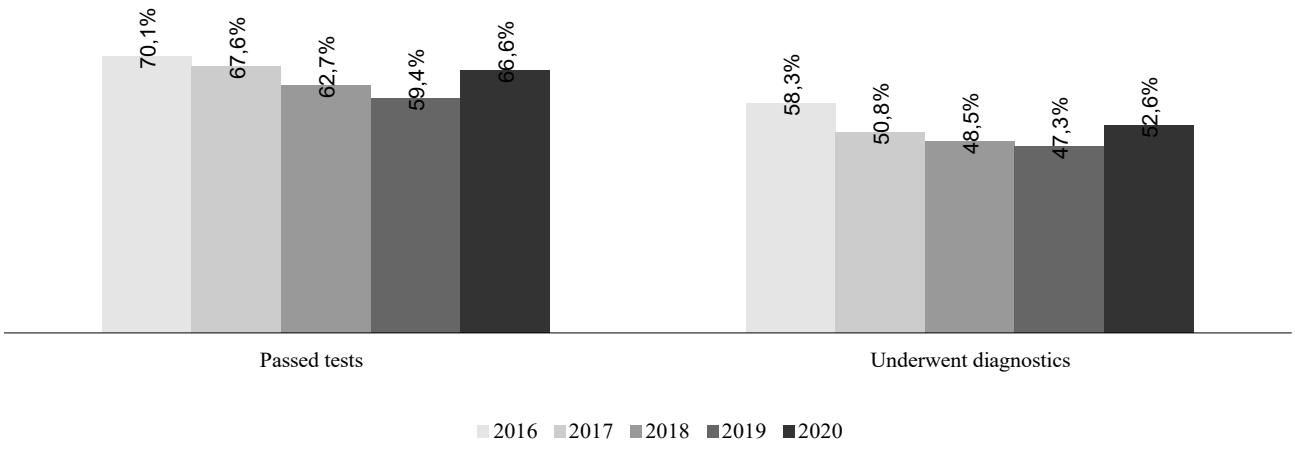


Figure 2.6. Consumption of laboratory and diagnostic services during the last 12 months: a comparison by years

As in previous years, most of those who passed tests or underwent diagnostics received these services in public institutions. According to 2020 data, 78.4% passed all tests in a state or communal institution, 72.3% received diagnostic services (**Fig. 2.7**).

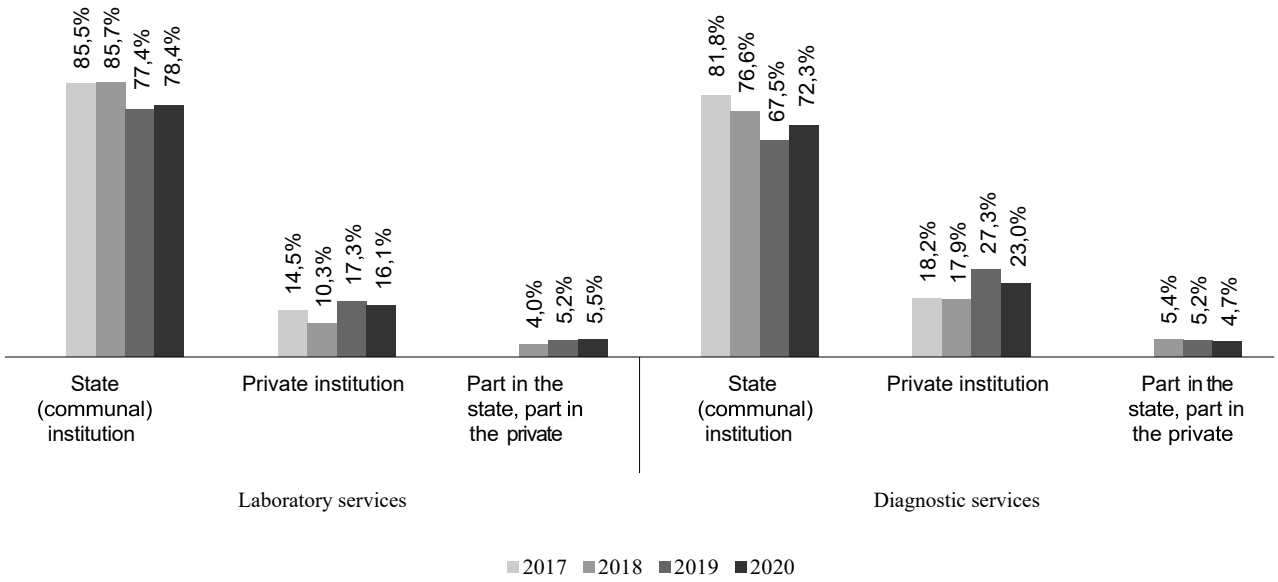


Figure 2.7. Type of provider of laboratory and diagnostic services: comparison by year

Among those who took tests during the last year, 41.7% paid for these services and 58.3% received them for free. 55.2% paid for diagnostic services, 44.8% received them free of charge. Compared to the previous year, the share of those paying for laboratory and diagnostic services slightly decreased, but in general, despite some fluctuations, the study does not record significant changes in this aspect (**Fig. 2.8**).

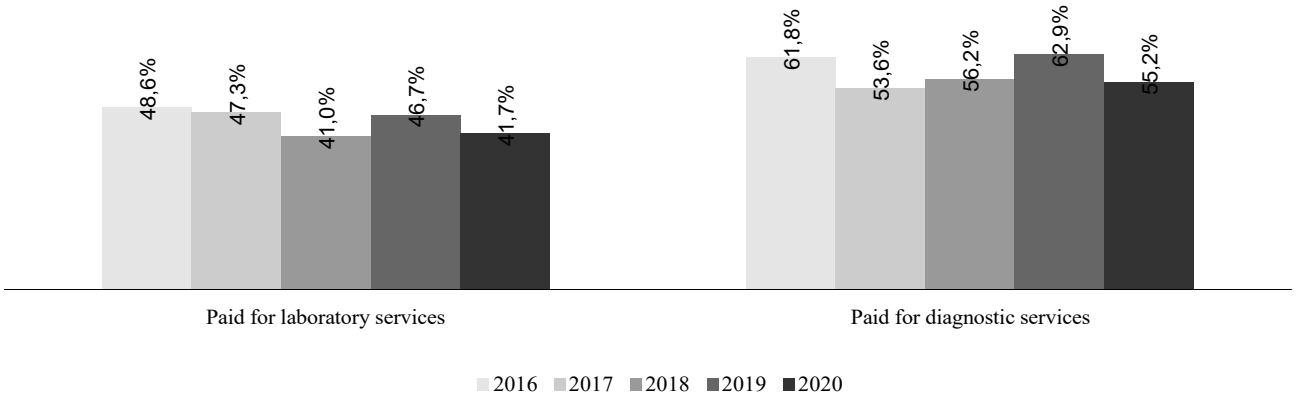


Figure 2.8. Share of payers for laboratory and diagnostic services among users of relevant services: comparison by year

The cost of laboratory and diagnostic services increases every year (**Table 2.4**). In 2020, the median fee for tests was UAH 250, for diagnostic services – UAH 300.

Table 2.4
Amount of payment for laboratory or diagnostic services: comparison by year

	Survey year				
	2020	**2019**	**2018**	**2017**	**2016**
Amount paid for laboratory services, UAH					
Median	250,0	200,0	100,0	60,0	60,0
Mean	529,1	471,5	269,2	244,7	182,5
Standard error	31,6	31,6	24,0	18,7	12,5
Amount paid for laboratory services, UAH					
Median	300,0	250,0	170,0	150,0	120,0
Mean	603,8	620,3	379,9	327,4	273,8
Standard error	34,8	34,2	28,9	18,4	15,2

2.5. Financial burden

According to 2020 data, two-thirds (66.4%) of ambulatory care users paid for a visit to a doctor and/or laboratory diagnostic services. Compared to the previous year, the share of payers among outpatient care users decreased slightly, but still remains significant (**Fig. 2.9**).

The share of those who found it difficult to cover all costs did not change compared to last year and remains quite significant: almost half (49.9%) of those who paid for outpatient treatment indicated that they found it difficult to cover these costs.

The share of payers who had to borrow funds to cover all expenses continues to decrease (from 53.1% in 2018 to 44.0% in 2019 and 39.3% in 2020). At the same time, the amount of borrowed funds increases every year (**Table 2.5**) in accordance with the growth of costs related to treatment. That is, the financial burden associated with receiving outpatient care remains significant.

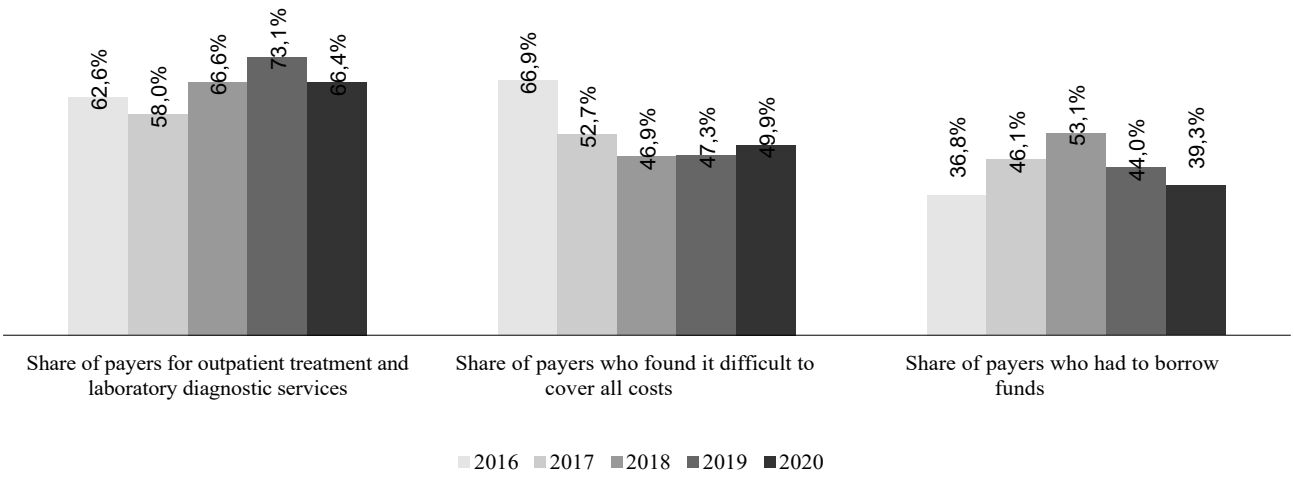


Figure 2.9. Ability to pay for outpatient treatment and laboratory diagnostic services among users: comparison by year.

Table 2.5
The amount of borrowed funds to cover the costs of outpatient treatment: comparison by year

	Survey year				
	2020	**2019**	**2018**	**2017**	**2016**
Those who had to borrow funds to cover all expenses (among payers)	39,3	44,0	53,1	46,1	36,8
The amount borrowed to cover the costs of outpatient treatment, UAH					
Median	2 500,0	2 000,0	1 500,0	1 000,0	1 000,0
Mean	6 566,3	8 065,0	2 968,6	3 243,4	2 192,2

About a fifth (19.3%) of the adult population had been ill in the past 12 months but had not visited a doctor due to lack of funds. Among outpatient care users, the percentage of those who refused outpatient care due to lack of funds during the year is 27.2%. Compared to previous years, the percentage of outpatient care refusals continues to decrease, which is a positive trend (**Fig. 2.10**).

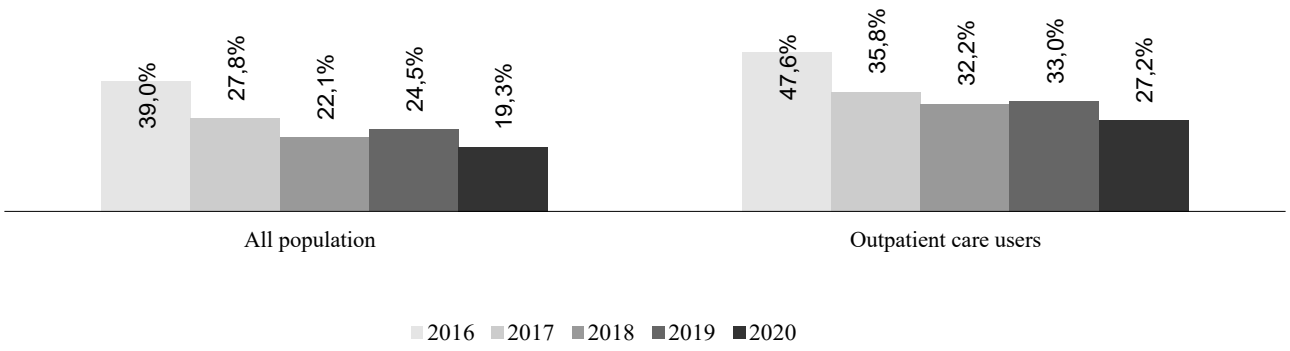


Figure 2.10. Refusal of outpatient care due to lack of funds: comparison by year

2.6. Evaluation of outpatient care aspects

Consumers' perceptions of the most important aspects of outpatient medical care remain fairly stable (**Fig. 2.11**).

The effectiveness of treatment is still the most important aspect of outpatient care for residents of the country (80.3%). The opportunity to receive free diagnostic procedures, laboratory tests and medical procedures takes the second place (46.9%).

Relatively less important, according to the answers of outpatient care users, are such aspects as the comprehensibility of medical explanations (among the three most important, this option was chosen by 27.1%, and the relevance of this aspect is increasing), the territorial convenience of the medical facility (21.2%), doctors' politeness in communication with patients (20.7%), sanitary and living conditions (15.8%), availability of necessary equipment (15.0%), clear and transparent payment policy for assistance (14.1%), compliance by medical personnel with examination and procedure hygiene (10.1%), and work schedule (6.6%).

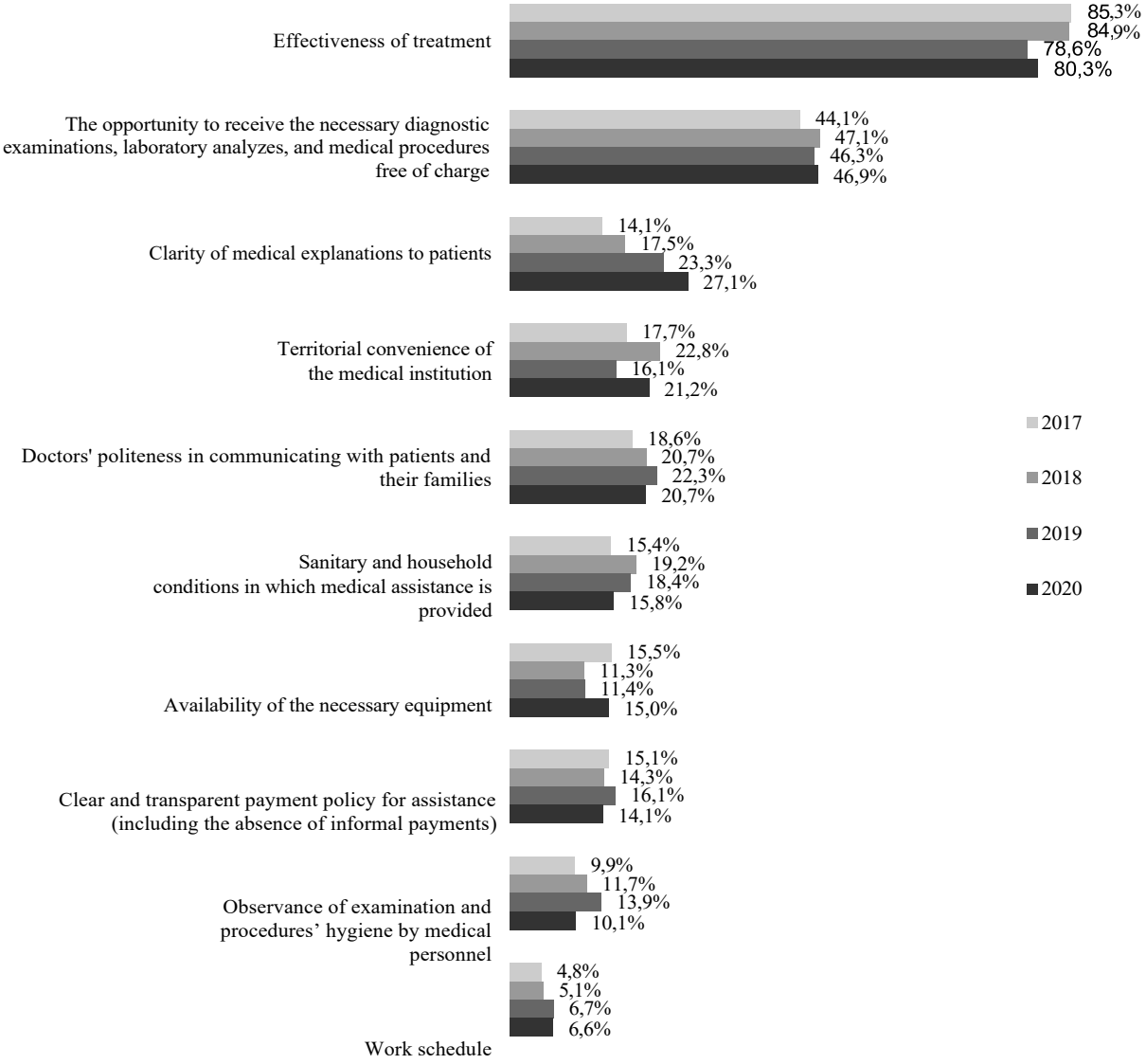


Figure 2.11. The most important aspects of the outpatient care provision (among those who sought outpatient care in the last 12 months): breakdown by year (you can choose up to three answers)

So, despite a certain reduction in the share of those who sought outpatient care in the current year compared to the previous one (from 39.3% in 2019 to 33.1% in 2020), the consumption of outpatient care by the population of Ukraine during the study period remains at approximately the same level.

In terms of outpatient care provider type, the majority of visits are to general practitioners, and visits to specialists without a referral are gradually becoming less common.

The obtained data indicate certain improvements in the aspect of financial availability of outpatient care. Compared to last year, there was a slight decrease in the share of people who paid for outpatient care, in particular, a decrease in the share of those who paid informally or paid for medical supplies at the last outpatient visit, and the share of those who paid for laboratory or diagnostic services among those who received them. Among the positive trends, we can also note a gradual decrease in the percentage of refusals from outpatient care due to lack of funds compared to 2016 – by almost 20 percentage points, and, according to the latest measurement, 19.3% of the adult population resorted to such actions during the last 12 months.

Thus, certain positive developments related to the financial availability of ambulatory care can be observed, although the financial burden associated with obtaining it remains significant, especially for vulnerable categories of the population (the elderly and those with poor health and low income).

SECTION 3. HOSPITAL ASSISTANCE

Key findings:

- the share of people who had experience of hospitalization decreased compared to the previous year and is the lowest for the entire period of observation: according to the survey, 9.2% of respondents had cases of hospitalization during the year preceding the survey, which is 4.3 percentage points less than in 2019;
- despite some fluctuations, the main methods of referral to hospitalization remained unchanged throughout the study period. Among those who had experience of hospitalization during the last 12 months, the vast majority (47.7%) were referred for the last hospitalization by a doctor, 26.6% by an ambulance team, 18.2% insisted on hospitalization by their own decision, and 7.6 % had repeated or planned hospitalization;
- as in previous years, city/district (70.3%) and regional hospitals (22.1%) are the main providers of inpatient medical services;
- the vast majority (83.1%) of hospital patients had to pay for some kind of inpatient care service during their last hospitalization (86.1% in 2019). Payments for inpatient care increased slightly compared to the previous year. The median payment to the charity fund is currently 200 UAH, expenses for medical goods – 200 UAH, informal payment to a doctor – 600 UAH, official payment – 700 UAH;
- almost all hospitalized patients (95.2%) were diagnosed or passed tests during the last hospitalization during the last 12 months, which does not differ from the indicators of previous years. About half (51.1%) of those who received laboratory diagnostic services paid for them during hospitalization. Compared to the previous year, the amount of expenses for laboratory and diagnostic services has essentially not changed (median value – 400 UAH);
- more than half (59.5%) of payers indicated that it was difficult for them to cover all the costs of inpatient treatment (vs. 53.8% in 2019);
- about 8.1% of the adult population required inpatient treatment in the past 12 months but were not hospitalized due to lack of funds. Compared to the previous year, the percentage of refusals from hospitalization due to lack of funds slightly decreased (11.2%).

Inpatient medical care, compared to outpatient care, involves a 24-hour stay of the patient in the hospital under the constant supervision of medical professionals and, as a rule, is more expensive.

Data from previous "Index of health. Ukraine" studies indicate the prevalence of out-of-pocket costs when receiving inpatient care, while in many cases the payment for inpatient care is not voluntary[13]. Due to the high prevalence of informal payments, treatment can lead to financial hardship for many people, especially the poor and those who are in constant need of health care, such as people with chronic diseases. As of 2015, the costs of inpatient care and medicine were the main causes of catastrophic medical spending in Ukraine, that is, situations where health care costs take up such a large percentage of household income that people have to cut back on basic needs such as food or clothing[14].

The situation with the consumption of inpatient care in 2020 could be affected by the COVID-19 epidemic. At the time of the survey, the burden on hospitals related to the inpatient treatment of patients with COVID-19 was moderate. As of October 1, 2020, about 213,000 cases of COVID-19 were confirmed in Ukraine, there were about 15,000 patients with the coronavirus disease in hospitals, and the occupancy of beds for patients with COVID-19 was 50.8%. At the same time, the COVID-19 epidemic could also affect the inpatient care consumption by other patients, in particular due to the limitation of planned hospitalizations or the refusal of a part of patients from hospitalization due to the fear of contracting COVID-19.

Research data on the experience of receiving inpatient care continue to make it possible to monitor

[13] The "Health Index. Ukraine" project. http://health-index.com.ua/

[14] Goroshko A., Shapoval N., Lai T. (2018). Can people afford to pay for health care? New evidence on financial protection in Ukraine. Copenhagen: WHO Regional Office for Europe. https://www.euro.who.int/__data/assets/pdf_file/0008/381590/ukraine-fp-eng.pdf

changes in the inpatient care consumption practices of the adult population of Ukraine and to assess the financial burden of hospitalization for households.

3.1. Seeking inpatient care

According to the 2020 survey, 9.2% of respondents were hospitalized at least once in the 12 months preceding the survey, and 90.8% had no hospitalizations during the year. Compared to previous surveys, the share of people who had experience of hospitalization decreased and is the smallest for the entire observation period (**Fig. 3.1**).

The average number of hospitalizations per person is 1.2 and remains practically unchanged throughout the study period.

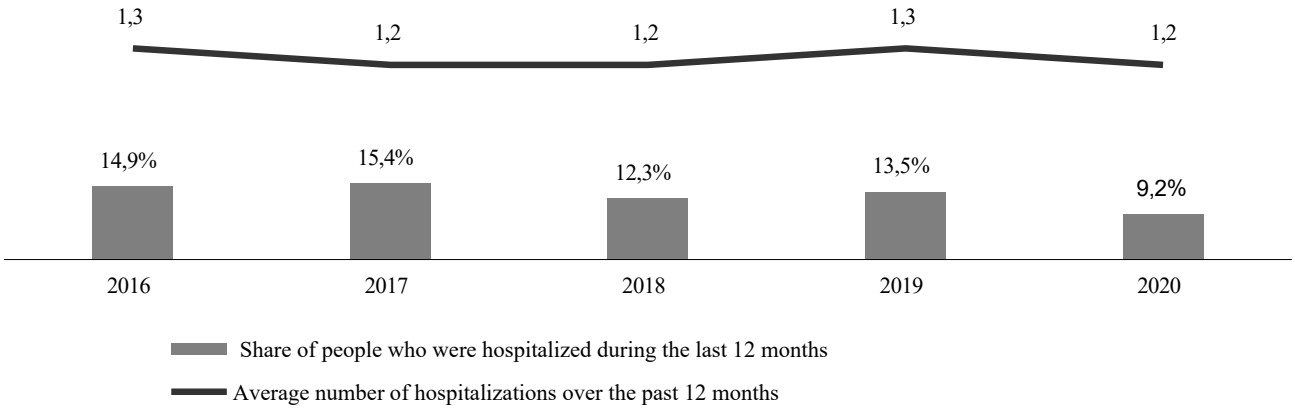


Figure 3.1. Consumption of inpatient medical care in Ukraine: comparison by year (percentage of those who indicated that they had experience of hospitalization during the last 12 months)

Dependencies between the consumption of inpatient medical care and socio-demographic characteristics remain similar throughout the entire period of the study (data on the consumption of inpatient medical care by socio-demographic groups according to research data for 2016–2020 are shown in **Table 3.1**).

As in previous studies, the percentage of those who had been hospitalized in the past year was slightly higher among women (10.1%) than men (7.6%), and among those over 60 (13.2%), than in younger age categories (6.6% among people aged 18–29 years old, 6.4% – aged 30–44 years old, 8.2% – 45–59 years old). Also, as in previous years, the study does not record a significant difference in the hospitalization experience depending on the type of area: 8.8% of urban residents and 9.8% of rural residents reported cases of hospitalization during the last year (the difference is not significant at the level of 0.05).

Compared to the previous year, the consumption of inpatient care decreased to the same extent in all socio-demographic categories.

By region (**Table 3.1**), the highest percentage of those who had cases of hospitalization was recorded in Kyiv (13.6%), Zaporizhzhia (13.6%), Kharkiv (13.5%), Cherkasy (13.2%), Khmelnytskyi (13.0%) regions, the lowest – in Luhansk (1.5%), Sumy (4.3%), Donetsk (4.7%) regions and the city of Kyiv (4.0%). Compared to the previous year, the consumption of inpatient medical care decreased most noticeably in Dnipro (by 10.0 percentage points), Donetsk regions (by 9.7 percentage points) and Kyiv (by 9.3 percentage points), and practically did not change in Zakarpattia, Kirovohrad, Poltava, Khmelnytskyi regions.

Table 3.1
Consumption of inpatient medical care by socio-demographic characteristics and regions, 2016–2020.

	Have been admitted to a hospital within the last 12 months, %					Average number of hospitalizations				
	2020	**2019**	**2018**	**2017**	**2016**	**2020**	**2019**	**2018**	**2017**	**2016**
In total	9,2	13,5	12,3	15,4	14,9	1,2	1,3	1,2	1,2	1,3
GENDER										
Men	7,6	12,1	10,5	14,1	12,5	1,2	1,3	1,2	1,3	1,3
women	10,1	14,6	13,8	16,5	16,9	1,2	1,3	1,3	1,2	1,4
AGE GROUP										
18–29 years old	6,6	11,1	10,8	12,6	11,8	1,2	1,1	1,3	1,3	1,4
30-44 years old	6,4	10,2	8,8	13,5	12,8	1,1	1,3	1,2	1,2	1,2
45–59 years old	8,2	14,3	13,1	14,9	15,1	1,3	1,4	1,3	1,2	1,5
60 years and older	13,2	17,7	16,4	19,9	19,1	1,2	1,4	1,2	1,3	1,3
PLACE OF RESIDENCE										
urban	8,8	13,5	12,7	15,3	14,4	1,2	1,4	1,2	1,2	1,3
rural	9,8	13,5	11,6	15,7	16,1	1,1	1,2	1,3	1,3	1,3
HOUSEHOLD INCOME PER PERSON										
up to 1000 UAH	8,1	14,2	11,0	17,9	15,6	1,2	1,6	1,4	1,4	1,4
1001–1500 UAH	10,6	15,8	13,6	17,6	16,4	1,2	1,3	1,3	1,2	1,3
1501–2000 UAH	12,9	14,9	13,9	17,5	14,7	1,1	1,3	1,2	1,2	1,4
2001–2500 UAH	12,4	16,5	14,2	14,3	16,3	1,2	1,3	1,4	1,4	1,2
over 2500 UAH	7,5	12,9	10,6	13,9	13,0	1,2	1,2	1,2	1,2	
REGION										
Vinnytsia	9,1	16,9	12,8	12,8	20,5	1,1	1,5	1,3	1,2	1,2
Volyn	11,6	16,0	3,9	11,8	14,9	1,4	1,2	1,6	1,2	1,9
Dnipro	6,4	16,4	12,3	19,6	15,6	1,1	1,2	1,3	1,5	1,3
Donetsk	4,7	14,4	9,0	14,7	15,3	1,4	1,3	1,2	1,1	1,3
Zhytomyr	9,3	12,8	22,8	19,1	14,8	1,1	1,2	1,1	1,2	1,2
Zakarpattia	6,6	6,9	10,7	10,7	15,0	1,0	1,4	1,3	1,2	1,2
Zaporizhzhia	13,6	16,4	12,2	16,1	17,3	1,1	1,2	1,4	1,1	1,1
Ivano-Frankivsk	10,4	15,9	16,5	18,8	11,8	1,3	1,4	1,3	1,4	1,3
Kyiv	13,6	18,1	18,9	20,8	19,2	1,1	1,2	1,3	1,2	1,3
Kirovohrad	12,7	11,7	20,3	19,0	17,3	1,0	1,1	1,1	1,1	1,3
Luhansk	1,5	7,0	8,4	5,8	11,9	1,0	1,7	1,1	1,3	1,0
Lviv	10,5	12,2	12,1	14,1	16,9	1,1	1,5	1,2	1,4	1,6
Mykolaiv	8,7	11,9	10,4	14,3	12,4	1,3	1,1	1,1	1,2	1,2
Odesa	7,1	13,1	8,4	13,0	10,4	1,2	1,4	1,2	1,2	1,4
Poltava	9,8	10,5	14,6	15,7	15,2	1,3	1,2	1,9	1,4	1,3
Rivne	9,9	12,5	19,5	18,7	18,8	1,1	1,3	1,2	1,3	1,3
Sumy	4,3	8,8	13,3	12,1	17,0	1,4	1,7	1,2	1,3	1,3
Ternopil	9,6	16,0	9,0	17,3	9,5	1,2	1,4	1,4	1,3	1,7
Kharkiv	13,5	15,4	15,2	16,4	12,6	1,2	1,2	1,1	1,1	1,5
Kherson	9,8	11,2	13,9	13,3	13,9	1,0	1,5	1,1	1,2	1,2
Khmelnytskyi	13,0	11,9	8,3	12,6	11,3	1,3	1,7	1,4	1,1	1,2
Cherkasy	13,2	16,1	17,3	25,9	18,4	1,3	1,4	1,3	1,5	1,4
Chernivtsi	8,5	13,9	14,0	16,2	14,0	1,4	1,2	1,4	1,5	1,4
Chernihiv	8,8	12,2	12,9	15,4	16,8	1,1	1,3	1,4	1,4	1,5
The city of Kyiv	4,0	13,3	7,6	15,2	14,3	1,1	1,4	1,0	1,1	1,4

In most cases, a stay in a hospital is associated with non-surgical treatment. According to the survey, more than half (59.7%) of those hospitalized during the last hospitalization received therapeutic services, and a quarter had a surgical operation (26.5%) (**Fig. 3.2**).

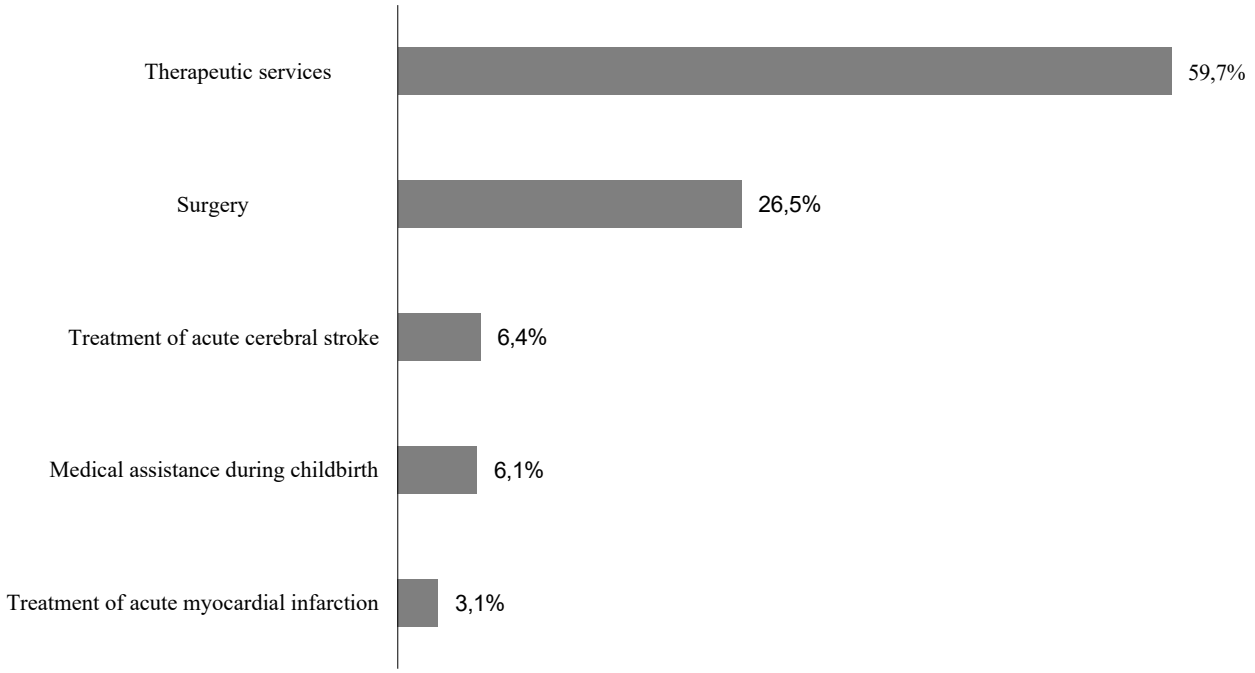


Figure 3.2. Types of medical care received during the last hospitalization, 2020.

3.2. Choosing a hospital care provider

Almost half of those who had the experience of hospitalization (47.7%) had a referral from a doctor, 26.6% were taken by emergency medical personnel, 18.2% asked to go to the hospital by their own decision, and 7.6% had planned/regular hospitalization. Despite some fluctuations, the main methods of referral to hospitalization remain unchanged throughout the study period (**Fig. 3.3**).

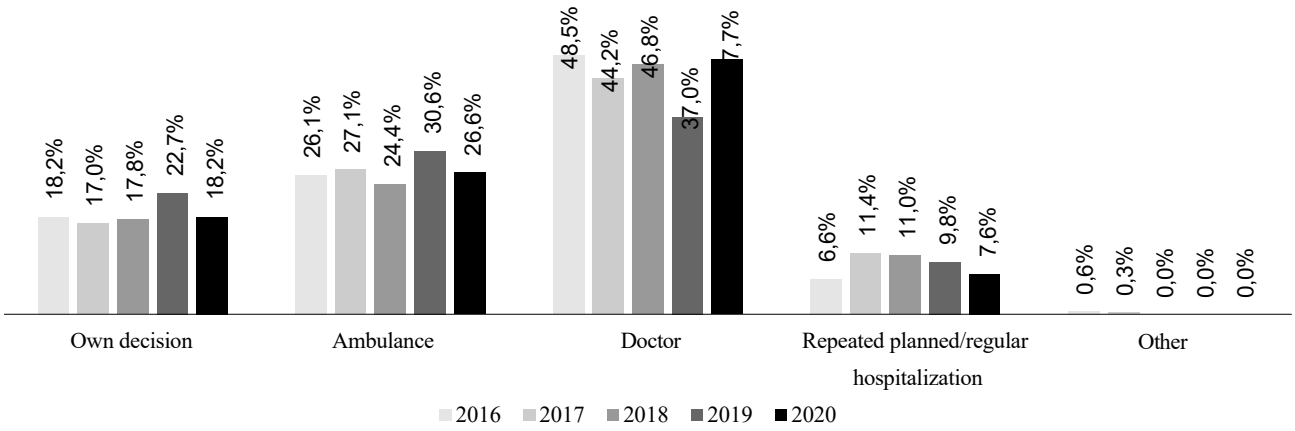


Figure 3.3. Referral methods for last hospitalization: comparison by year, percentage among those who experienced hospitalization during the last 12 months.

City and district hospitals remain the main provider of hospital services: the absolute majority (70.3%) of those who had cases of hospitalization were hospitalized there. Another 22.1% were patients of regional hospitals. A much smaller percentage was treated in departmental (3.1%), republican (2.1%), or private (2.4%) medical institutions. There is no significant difference by year in the distribution of types of inpatient service providers (**Fig. 3.4**).

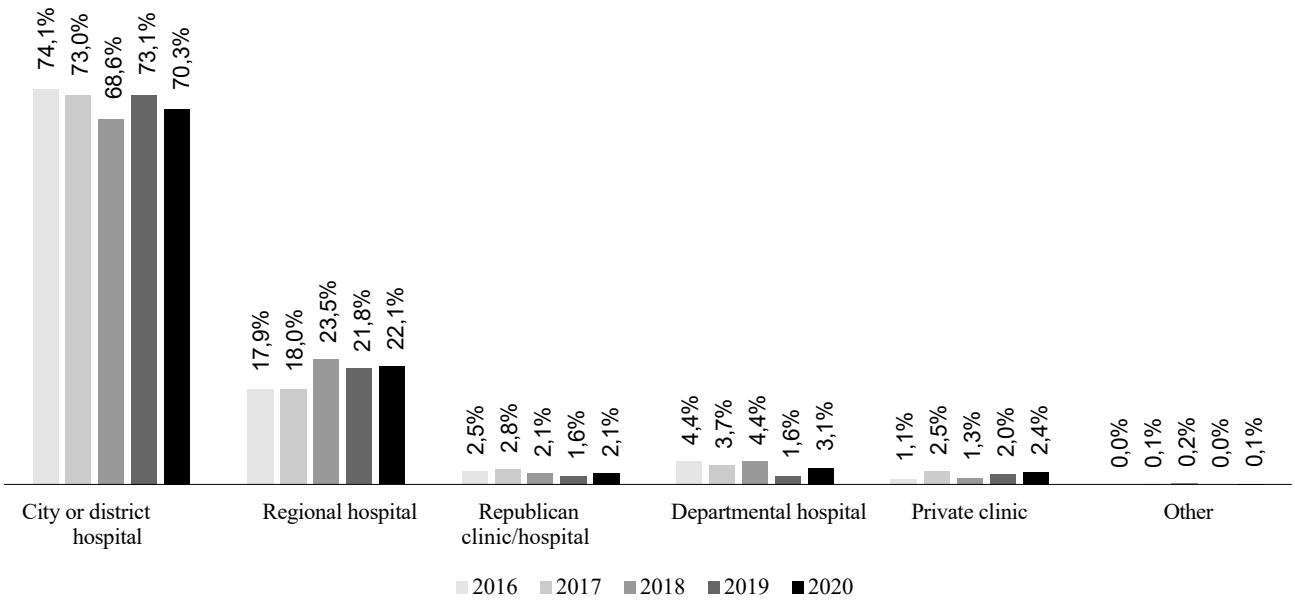


Figure 3.4. Type of inpatient health care provider during the last hospitalization: comparison by year

3.3. Out-of-pocket costs for inpatient treatment

Survey data show that out-of-pocket costs for inpatient care remain widespread (**Fig. 3.5**). According to 2020 data, 83.1% paid for inpatient care during the last hospitalization, in particular, 58.5% of those who underwent inpatient treatment paid for medical goods during the last hospitalization, 32.8% paid at the cash register according to official rules, 26.0% – at the expense of a charitable foundation or other organization, and 21.1% – informally, or made a gift to a doctor or other medical staff.

Compared to the previous year, one can note a certain decrease in the share of those who paid informally (by 4.4 percentage points, from 25.5% to 21.1%) or made a "charity contribution" during the last hospitalization (by 10.1 from 36.1% to 26.0%). Also, compared to the previous year, the share of those who paid for medical goods decreased slightly (by 4.7 percentage points, from 63.2% to 58.5%). The percentage of those who paid at the cash register according to official rules did not change compared to the previous year. That is, the survey data indicate a certain decrease in the prevalence of informal payments or contributions, but the share of those who pay for inpatient care remains significant.

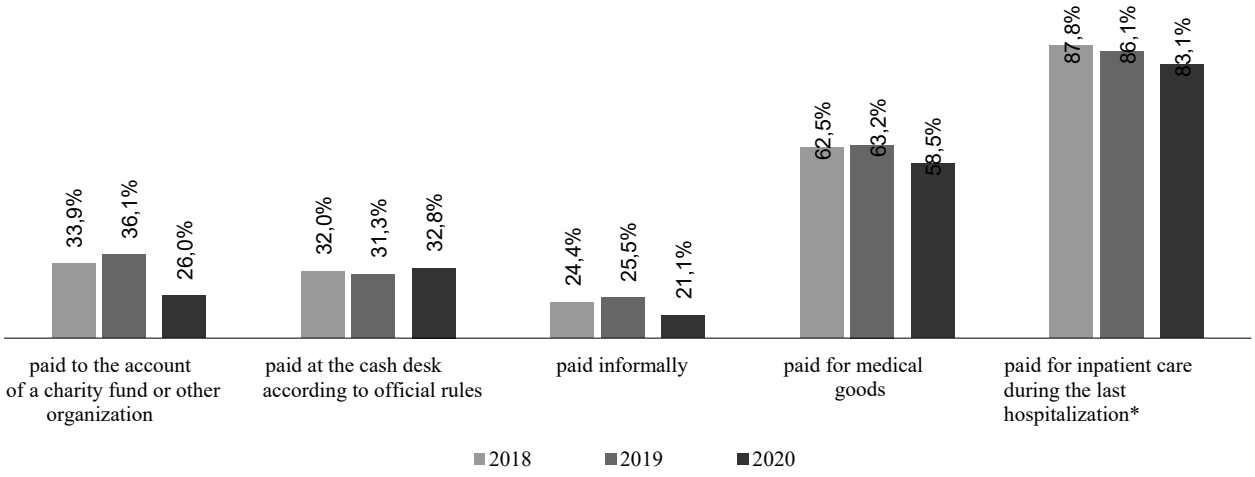


Figure 3.5. Out-of-pocket payment for inpatient treatment: comparison by year

According to the survey, most of those who paid informally during hospitalization did so to receive better quality services or because they did not want to break the established order. In particular, 45.7% answered that they paid or gave gifts to medical personnel in order to receive better services, 26.6% – to receive better treatment, 18.4% – to receive faster access to services. A significant part also pays "by tradition", out of gratitude (29.1%), or because it is customary (22.8%), or because they feel shame for not paying (14.6%). A relatively smaller part of the payers answered that they paid or gave a gift on demand during hospitalization: 11.0% indicated that the medical staff hinted at payment, 9.5% – that the medical staff demanded payment (**Fig. 3.6**).

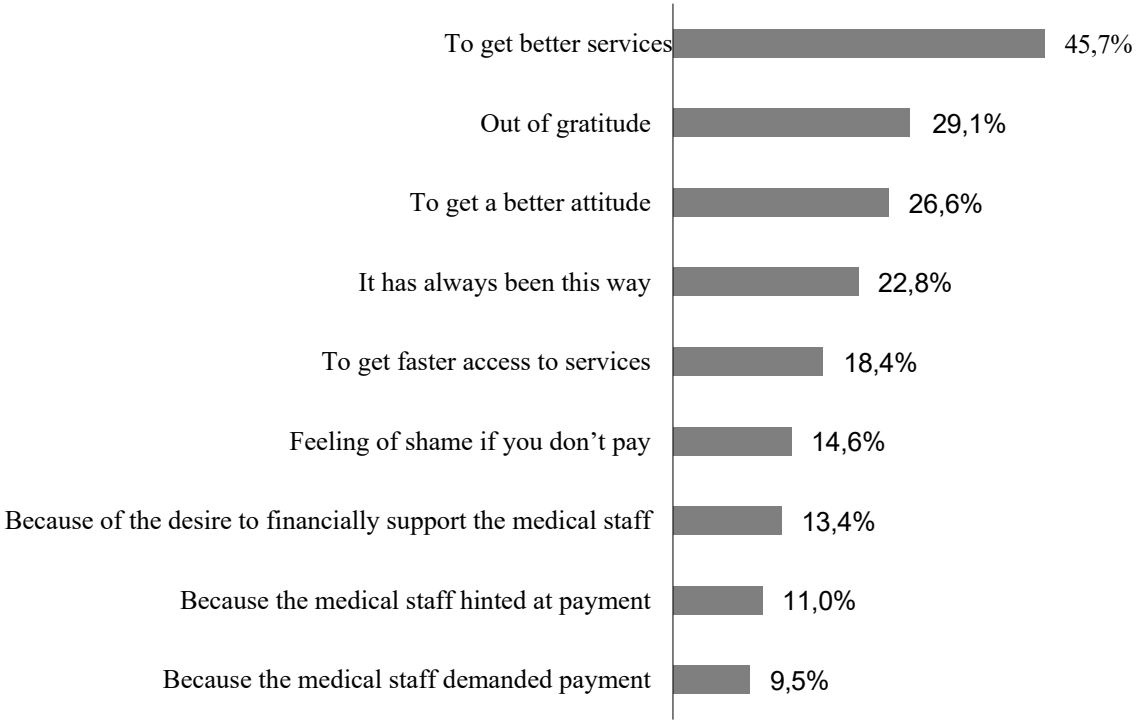


Figure 3.6. Reasons for informal payments for inpatient medical care services, 2020.

As can be seen from the **table 3.2**, payments for inpatient care increase over time. According to the 2020 survey, the median amount of payment to a charity fund or other organization that respondents paid in connection with receiving inpatient care is UAH 200 (i.e., half paid less than this amount, half paid more). About the same amount (UAH 200) is the median cost of medical supplies. In half of the cases, the size of the informal payment exceeded UAH 600, the amount officially paid at the cash register was UAH 700.

Table 3.2
Amount of payment for inpatient treatment during the last hospitalization: comparison by year

	Survey year		
	2020	**2019**	**2018**
Amount paid to the account of a charity fund or other organization, UAH			
Median	200,0	200,0	100,0
Mean	893,9	801,5	624,0
Standard error	187,6	122,3	255,5
Amount paid at the cash register according to official rules, UAH			
Median	700,0	500,0	400,0
Mean	5253,4	5196,8	11276,2
Standard error	695,0	1257,9	10772,9
Amount paid to the doctor informally, UAH			
Median	600,0	500,0	500,0
Mean	2942,4	2021,3	2847,9
Standard error	566,2	298,9	670,8
Amount paid for medical goods, UAH			
Median	200,0	200,0	100,0
Mean	963,4	567,9	372,8
Standard error	294,9	66,1	32,9
Amount paid for inpatient treatment in any form, UAH			
Median	330,0	300,0	200,0
Mean	3369,3	2836,5	4812,9
Standard error	443,4	433,1	3573,2

As in previous years, some inpatient care users pay informally or make "charitable contributions" because they are required to do so by the service provider, and some do so voluntarily. According to the 2020 survey, among those who paid to the account of a charitable fund or other organization, more than half (58.6%) did so on demand, 41.4% – voluntarily; among those who paid the doctor informally, 49.7% indicated that they were asked to pay, 50.3% were not.

Also, as in previous years, some hospitalized patients refuse to pay when faced with a demand from medical professionals. According to the answers of the respondents, among those who did not pay to the account of a charitable foundation or other organization during the last hospitalization, such a fee was demanded from 5.4%, among those who did not pay the doctor informally, such a fee was demanded from 3.0%. Compared to previous years, the study does not record significant changes in this aspect (**Table 3.3**).

Table 3.3
Proportion of individuals who were charged for inpatient treatment: comparison by year

The share of persons, among those who		**Survey year**			
		2020	**2019**	**2018**	**2017**
paid to the account of a charity fund or other organization	%	58,6	69,4	67,0	66,9
	N	210	393	384	478
did not pay to the account of a charity fund or other organization	%	5,4	5,2	4,6	5,3
	N	594	782	704	916
paid the doctor informally	%	49,7	53,8	51,7	54,6
	N	165	250	211	271
did not pay the doctor informally	%	3,0	5,0	4,1	3,2
	N	627	872	808	1016

To estimate the total costs of inpatient care and the extent to which such costs weighed on the family's monthly budget, respondents were asked to recall how much they spent out-of-pocket on hospitalization (not including travel, ambulance transportation, and medications) in the past 30 days.

According to 2020 data, about 2.2% of all respondents had hospitalization expenses in the last 30 days, 97.8% did not. Among those who paid for inpatient treatment during the last 30 days, the average amount of these costs was UAH 3,166, the median value was UAH 1,000. As in previous years, the cost of hospitalization is slightly higher in cities (average – 4117 UAH, median – 1500 UAH) than in rural areas (average – 2081 UAH, median – 625 UAH), and practically does not depend on age and level income.

The costs of inpatient treatment are significant for the family budget. Survey indicates that those who paid for hospitalization in the past 30 days spent nearly two-thirds (67.8%) of their total household income on average. These costs are most noticeable for older people and those with lower incomes: among people aged 60 and over who had hospital costs in the past month, these costs were on average greater than the total household income (112.3 %), and among those whose income is up to UAH 2,500 per person, hospitalization expenses accounted for more than three quarters of the monthly income (81.8%). This means that hospitalization costs remain a significant financial burden for households, especially those with low incomes and a high need for treatment, which can lead to refusal or delay in treatment or a worsening of the household's financial situation due to the need to use savings or borrow funds in case of hospitalization.

3.4. Laboratory and diagnostic tests during hospitalization

The absolute majority of those who were hospitalized during the last 12 months underwent diagnostics or passed tests during the last hospitalization. According to the 2020 survey, 92.3% passed tests during the last hospitalization, 77.6% underwent diagnostics, and 95.2% had any of these. Compared to previous studies, the percentage of those who underwent laboratory and/or diagnostic tests during hospitalization did not change (**Fig. 3.7**).

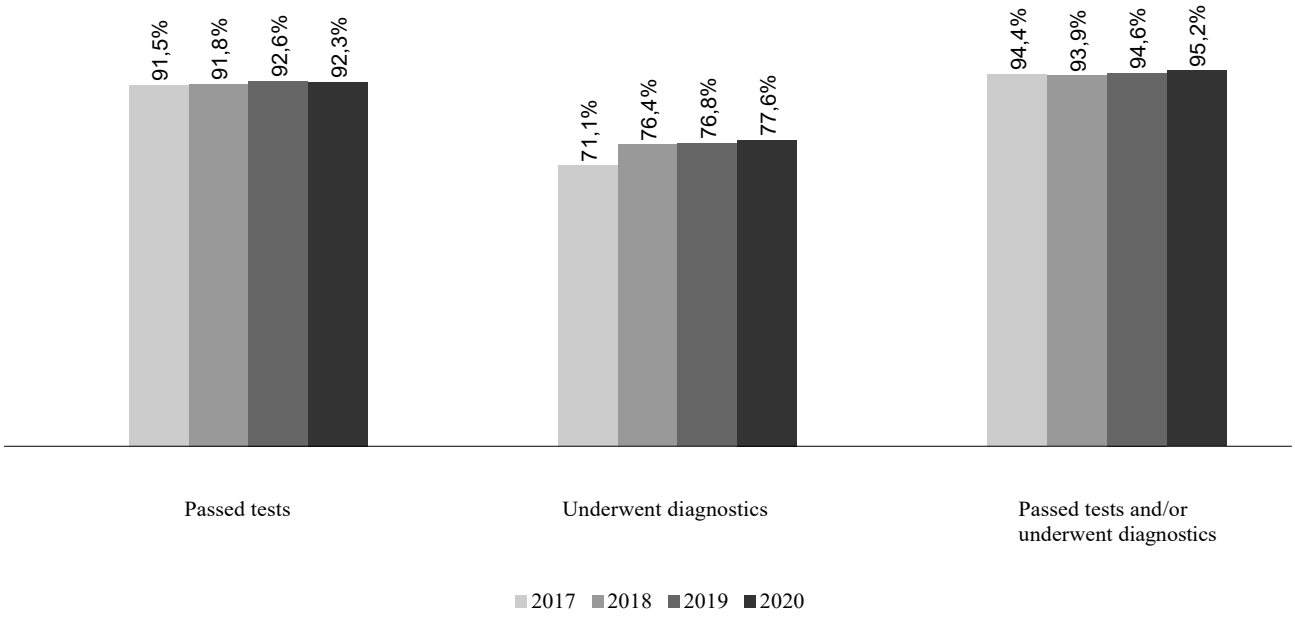


Figure 3.7. Consumption of laboratory-diagnostic services during the last hospitalization: comparison by year (percentage of those who had hospitalization experience during the last 12 months)

About half (51.1%) of those who received laboratory-diagnostic services paid for them during the last hospitalization, in particular, 32.9% paid for tests, 49.3% – for diagnostics. Compared to the previous study, the percentage of those who paid for laboratory-diagnostic services practically did not change (**Fig. 3.8**).

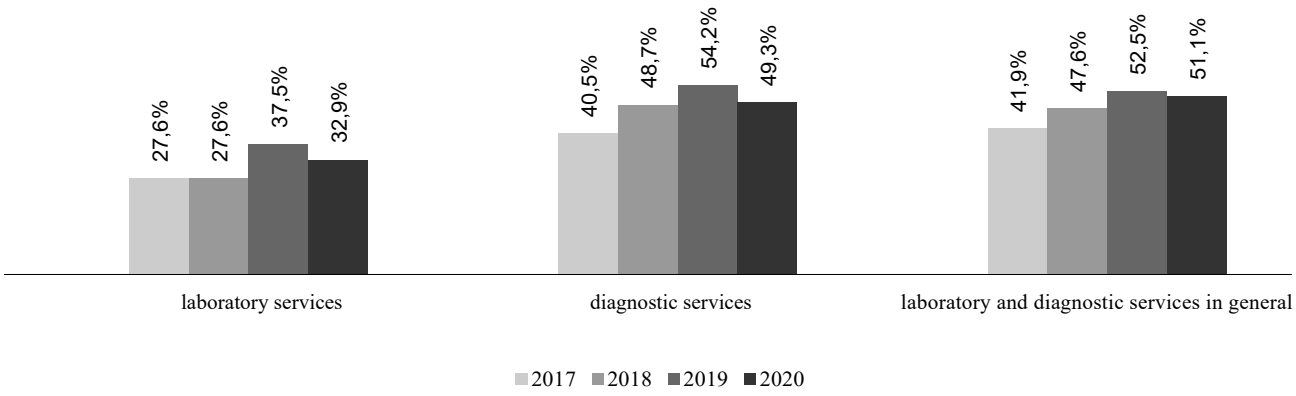


Figure 3.8. Proportion of those who paid for laboratory-diagnostic services during the last hospitalization: comparison by year (*percentage among those who received the corresponding service during hospitalization*).

According to the 2020 study, the average amount of payment for laboratory services during hospitalization was UAH 492, the median was UAH 300. The average cost of diagnostics was UAH 840 (median – UAH 300). The average amount of payment for laboratory and diagnostic services during the last hospitalization is UAH 931 (median – UAH 400).

Compared to the previous year, the amount of expenses for laboratory and diagnostic services practically did not change (**Table 3.4**).

Table 3.4
Amount of payment for laboratory diagnostic services during the last hospitalization: comparison by year

	Survey year			
	2020	**2019**	**2018**	**2017**
Payment for laboratory services, UAH				
Median	300,0	260,0	200,0	100,0
Mean	492,1	559,2	415,6	350,2
Standard error	68,8	43,6	62,5	49,1
Payment for diagnostic services				
Median	300,0	360,0	200,0	200,0
Mean	840,1	827,1	483,0	419,9
Standard error	138,3	67,8	55,2	31,2
Payment for laboratory and diagnostic services in general				
Median	400,0	440,0	220,0	200,0
Mean	931,1	1026,8	611,7	523,4
Standard error	124,1	71,2	65,5	45,4

3.5. Financial burden

Survey data show that hospitalization costs remain a significant financial burden for patients. According to the 2020 survey, 82.8% among those who paid for medication during the last hospitalization reported the difficulty of payment, among those who paid for diagnostics – 64.9%, and among those who paid for the services of a doctor or surgery – 63.5%.

In general, more than half (59.5%) of payers indicated that it was difficult for them to cover all costs (formal and informal) related to inpatient treatment. Compared to 2018, the ability of patients to pay for inpatient treatment has slightly deteriorated (**Fig. 3.9**).

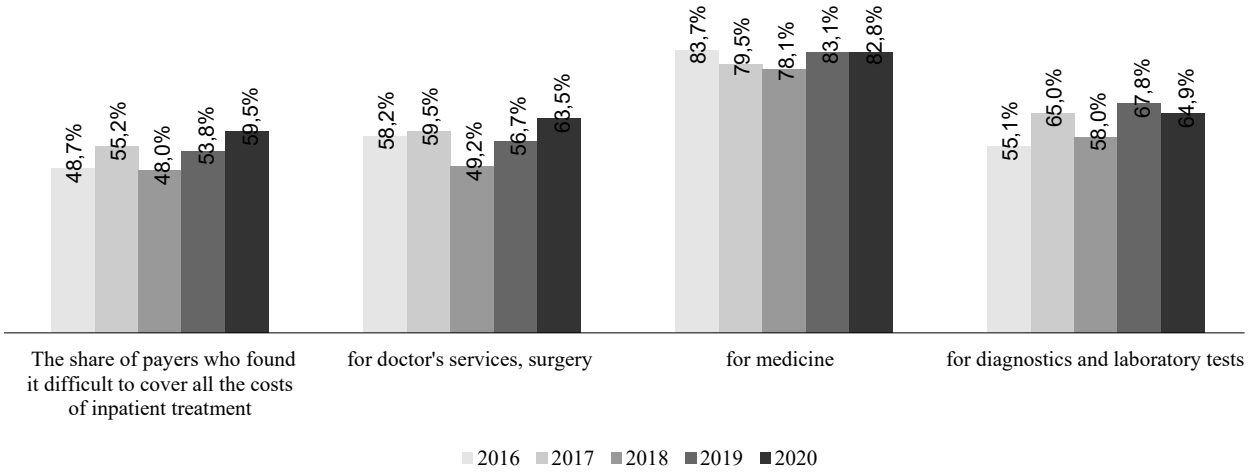


Figure 3.9. Ability to pay for inpatient care among hospitalized patients: comparison by year (*percentage of those who had respective costs related to hospitalization in the past 12 months*)

Among those who paid during the last hospitalization, 52.8% indicated that their household had to borrow money for treatment. The median amount of the loan was UAH 5,000 (i.e., half borrowed up to UAH 5,000, half – more than this amount), the average was UAH 12,541. Although the share of people who had to borrow funds to cover the expenses related to hospitalization is slightly lower than last year, it remains quite significant, as well as the amount of borrowed funds (**Table 3.5**).

Table 3.5
The need to borrow money to cover the costs of inpatient treatment: a comparison by year

	Survey year				
	2020	**2019**	**2018**	**2017**	**2016**
Respondents who had to borrow funds to cover all expenses (among payers), %	52,8	59,6	57,9	61,7	43,8
The amount of borrowed funds to cover the costs of inpatient treatment (among payers)					
Mean	12541,0	10314,7	14182,7	6927,5	4858,7
Median	5000	5000	4000	3000	2000

According to 2020 data, about 8.1% of the adult population required inpatient treatment in the past 12 months but were not hospitalized due to lack of funds. Among the inpatient care consumers, the percentage of those who had the experience of refusal of hospitalization during the year is 21.1%. Compared to the previous year, the percentage of refusals from hospitalization due to lack of funds slightly decreased, returning to the level of 2018 (**Fig. 3.10**).

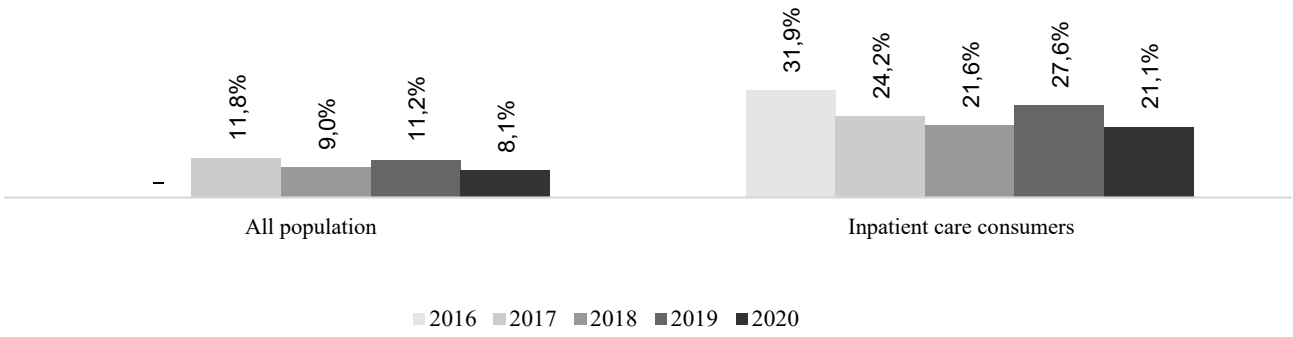


Fig. 3.10. Refusal of hospitalization due to lack of funds: comparison by year

3.6. Assessment of inpatient care aspects

As in previous years, the effectiveness and financial availability of treatment remain the most important aspects for inpatient care recipients, namely: the qualifications of doctors (among the three most important, this option was chosen by 59.5% of those who had experience of hospitalization during the last 12 months), the effectiveness of treatment (54.5%), availability of diagnostic and laboratory examinations (40.8%), and supply of medicines (40.4%).

According to the answers of the respondents, sanitary and living conditions (19.5% chose this option among the three most important), the time of registration in the reception department (18.8%), and the kindness of doctors (16.4%) are relatively less important; clear and transparent payment policy for assistance (9.6%), quality of food (9.2%), friendliness of nurses (6.0%) are the least important.

Compared to previous years, the perceptions of consumers regarding the most important aspects of the inpatient medical care provision remain practically unchanged (**Fig. 3.11**).

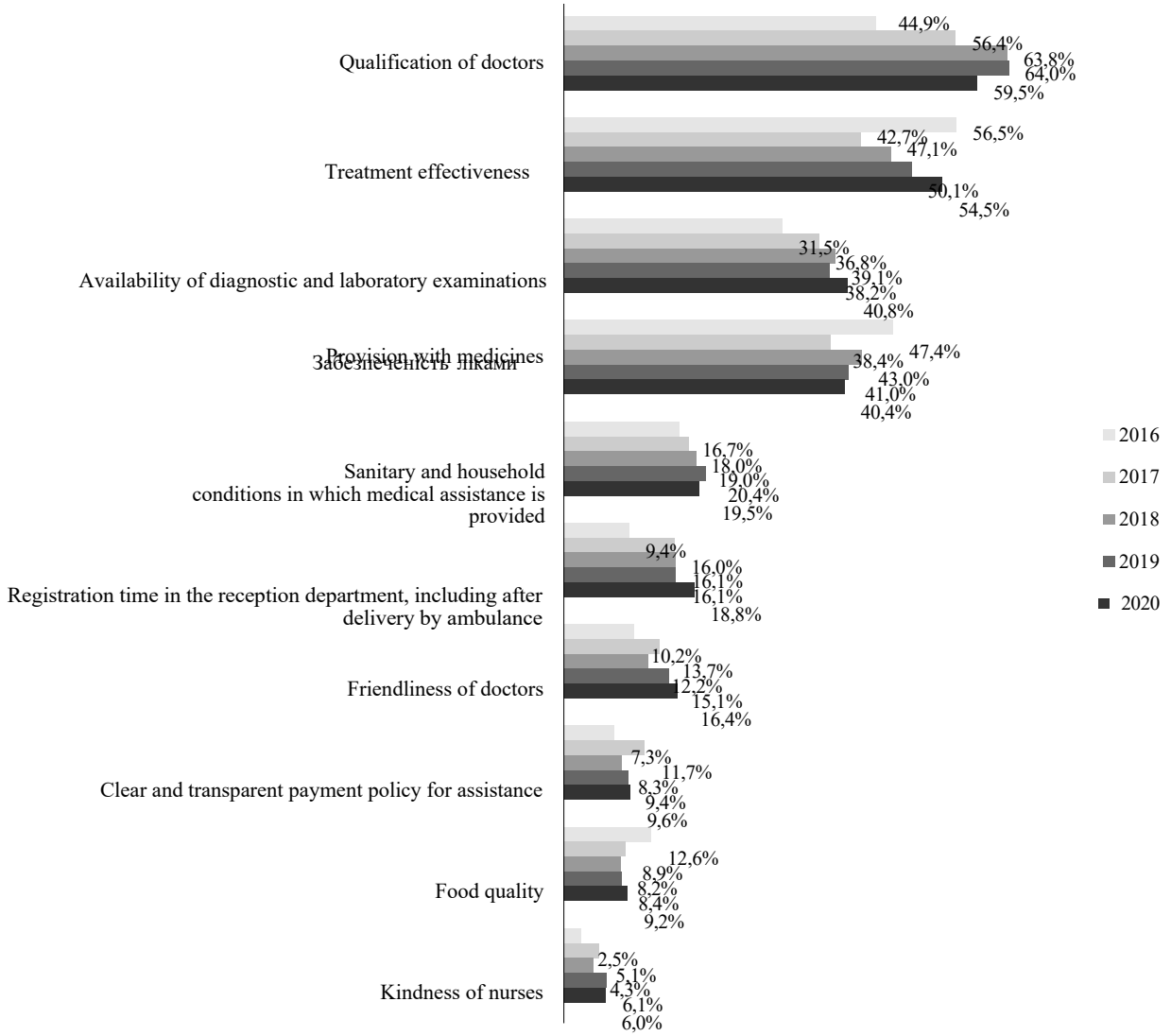


Fig. 3.11. The most important aspects of the inpatient medical care provision: comparison by year (percentage of those who had hospitalization experience during the last 12 months)

Therefore, according to the data of the conducted research, the following changes and trends can be observed in the consumption of inpatient medical care. First, according to the data of this year's study, the share of people who had experience of hospitalization during the last 12 months is the lowest for the entire period of observation (9.2%, 4.3 percentage points less than in 2019) and, compared to the previous year, the consumption of inpatient care decreased in all socio-demographic categories.

There were no significant changes in the method of referral for hospitalization and the type of inpatient medical services' providers during the study period.

As in previous years, most patients pay for a certain inpatient care service, however, compared to the previous year, positive changes can be observed, in particular, a decrease in the share of those who paid informally (by 4.4 percent), did "charitable contribution" (by 10.1 percentage points) or paid for medical goods (by 4.7 percentage points). In addition, the amount of costs associated with inpatient treatment increases every year, and the ability of patients to pay for inpatient treatment decreases. According to the 2020 survey, more than half (59.5%) of payers found it difficult to cover all costs of inpatient treatment, which is 5.7 percentage points more than last year. The share of those who needed to borrow funds to cover the costs of inpatient treatment remains significant, as does the share of those who refused hospitalization due to lack of funds.

That is, in many respects, the experience of consuming inpatient medical care remains similar to previous years, in particular, the amount of costs associated with inpatient treatment remains an urgent problem, but there are also small positive changes, including a decrease in the prevalence of out-of-pocket costs during hospitalization.

SECTION 4. AVAILABILITY OF MEDICINES

Key findings:

- in total, 20.6% of outpatient care consumers used the Affordable Medicines program in both 2020 and 2019. Among those who use the Program, 83.7% indicate that they received an offer to become a member of the reimbursement program from their doctor (81.6% in 2019). In 2020, the largest number of respondents of all years reported receiving all prescription medicines (62.4% in contrast to 47.2% in 2019 and 43.8% in 2018). A record 3/4 of the Program users believe that medicines have become more accessible in 2020 (57.5% in 2019);
- the share of people who engaged in self-medication with the use of medicinal products during their last illness or injury has not increased since 2019 and is 82.9%. However, the average costs of medicine in the case of the last illness and injury without consulting a doctor in 2020 are the highest and almost three times higher than the average of 2019 (1,828.10 UAH vs. 650.82 UAH, respectively);
- in 2020, 97.4% of surveyed ambulatory care consumers who were prescribed medicines purchased them, while 87.0% purchased all medicines, and 10.4% purchased almost all. As in previous years, the patient's lack of sufficient funds is one of the main reasons why people do not buy all the medicines. Older and less affluent categories of respondents point to this reason more often;
- in 2020, an average of 1,278.22 UAH was spent on medicines prescribed by a doctor during an outpatient visit (77.20 – standard deviation, 500 UAH – median). The 2020 value is higher than in the previous three years: UAH 1,039.99 (45.25 – standard deviation) in 2019 and UAH 793.32 (25.96 – standard deviation) in 2018. The highest average values are observed in Zaporizhzhia (2479.03 UAH), Kharkiv (2246.38 UAH), and Kirovohrad (2160.69 UAH) regions, and the lowest – in Vinnytsia (544 UAH) and Zakarpattia (753 UAH) regions;
- only 10.9% of outpatient care users reported that the state reimbursed them all or part of the cost of medicines. Presumably, the increase in medicine reimbursement in recent years is related to the functioning of the government's Affordable Medicines program;
- 96.1% of hospitalized patients were prescribed medication, 94.1% of them paid an average of UAH 4,550.30 for medication (UAH 312.90 – standard deviation). High costs of medicines during hospitalization are typical for all five years of the "Health Index. Ukraine" existence, if compared with the costs of medicines during outpatient treatment or self-medication. The average costs in 2019 and 2018 were significantly lower – UAH 3793.30 (259.90 – standard deviation) and UAH 2971 (189 – standard deviation), respectively;
- in total, 89.8% purchased all medications that were prescribed during the last hospitalization, while in 2019, 79.6% purchased all medications, in 2018 – 94.5%, in 2017 – 85.0% and in 2016 – 85.2%. Across all five waves of the study, lack of funds is the main reason why patients do not buy all prescribed medications and it does not change;
- in 2020, 53.6% of respondents (versus 56.0% in 2019, 54.8% in 2018, 52.5% in 2017), who do not always have health problems themselves, but may have expenses for loved ones, spent money on medicines "within the last 30 days". The average amount of such expenses is 751 UAH (704 UAH in 2019, 586 UAH in 2018).

2020 brought changes to the typical practices of interaction between patients and doctors, as well as the behavior of patients in case of illness or hospitalization, which could not but be reflected in the consumption of medicines and the costs of medicines. Currently, we do not have the opportunity to fully identify and describe the effects of the new serious threat to people's health and life related to the COVID-19 epidemic. It is necessary to emphasize that data collection for the study was carried out at the end of summer – beginning of autumn 2020. Most of the questions on medical care and medicine consumption had a one-year reference period (i.e., from approximately September 2019 to August 2020 inclusive), which may not fully reflect the characteristics of medicine consumption during the quarantine restrictions due to COVID-19. Although the last section on medicine costs in the past 30 days may indicate that there has been no significant change in medicine consumption.

Universal Health Coverage[15] is a key goal for the countries of the world in accordance with the Sustainable Development Goals[16]. The concept of universal coverage means that all citizens should have equal access to the full, necessary, and sufficient medical care[17] (which also includes medicines). However, such an ambitious goal is a goal for the future for most countries, despite very important steps towards its achievement. For example, medicines during outpatient treatment take the highest place in the structure of "out-of-pocket" costs for health care[18].

Out-of-pocket costs for medicines depend on a combination of different factors: the distribution of payers and the amount of spending that is shaped by health care policies (such as the introduction of reimbursement programs and regulation of how a patient can access medicines); professionalism (the knowledge of an individual doctor and the culture of a health care institution, which can either restrain the prescription of medicines or promote polypharmacy); regulation of the pharmaceutical sector (including the availability of generics)[19]; the way medicines are advertised in the mass media and by pharmacists in pharmacies; whether educational campaigns aimed at patients regarding the responsible consumption of medicines are implemented. Therefore, a change in the reimbursement policy alone is not enough to reduce the costs "out of the patient's pocket", although, as the experience of Ukraine shows, such an intervention is a positive step.

At the same time, co-payments for medicines can curb overconsumption and, on a global scale, there is still no clear answer as to whether out-of-pocket expenses in the form of co-payments for medicines are a positive or negative phenomenon. A recent systematic review of the literature[20] attempted to analyze existing published research on the relationship between medicine copayments and health care utilization. The authors found that nine of the eleven studies included in the analysis demonstrated a statistically significant direct relationship between medicine co-payments and seeking care. The conclusion proposes to design an optimal system of out-of-pocket costs for medicines, which should prevent excessive consumption of medicines and mitigate the risks of excessive burden due to direct payments (out-of-pocket costs).

Below are the results of the "Health Index. Ukraine" – 2020 regarding patients' experience of self-administration of medicines or obtaining medical prescriptions demonstrate the peculiarities of the Ukrainian context in 2019-2020 from the patient's perspective.

15 World Health Organization, Universal Health Coverage (who.int) https://www.who.int/health-topics/universal-health-coverage#tab=tab_1

16 Universal Health Coverage for Sustainable Development - Issue Brief https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/univer- sal-health-coverage-for-sustainable-development---issue -br.html

17 About financial provision of health care and mandatory medical insurance in Ukraine | LIGA:ZAKON https://ips.ligazakon. net/document/GI00215A?an=2

18 Goroshko, A., Shapoval, N., Lai, T. (2018). Can people afford to pay for health care? New evidence on financial protection in Ukraine. Copenhagen: WHO Regional Office for Europe http://www.euro.who.int/en/countries/ukraine/publications/can-people-afford-to-pay-for-health-care-new-evi- denceonfinancial -protection-in-ukraine-2018

19 Richardson, E., Sautenkova, N., & Bolokhovets, G. (2014). Pharmaceutical care. In Trends in health systems in the former Soviet countries [Internet]. European Observatory on Health Systems and Policies

20 Kolasa, K., & Kowalczyk, M. (2019). The effects of payments for pharmaceuticals: a systematic literature review. Health Economics, Policy and Law, 14(3), 337–354.

4.1. Experience and attitude towards the "Affordable Medicines" program

"Health index. Ukraine" has been tracking patient use of the "Affordable Medicines"[21] program for four years since the start of the government program in 2017. The inclusion of questions about the experience of the "Affordable Medicines" program users in the "Health Index" study helped to fill the gaps that existed at the time with a lack of data on the results of the government initiative. With the beginning of the administration of the Program by the National Health Service of Ukraine (NHSU) in 2019, the accumulation of data and the appearance of analytical panels (dashboards), the "Health Index" research focuses on those aspects of the functioning of "Affordable Medicines" that are not covered by the analysis of the National Health Service of Ukraine.

From the patient's perspective, the "Affordable Medicines" program looks the following way: a person turns to their family doctor, who can issue a prescription (since 2019 – electronic one) for medicinal products, after which the patient uses the prescription at a pharmacy that is a member of the "Affordable Medicines" program and receives medication, if available. Therefore, since 2018, questions about the experience of medicine consumption through the reimbursement program have been asked in the Health Index. Ukraine" only to those respondents who indicated that they sought outpatient (non-hospital) care. In 2017, the question about the consumption of medicines within the framework of "Available medicines" was asked to all respondents, so we do not include the data of 2017 in the analysis, because the change in the questions in the questionnaire could have affected the results of the study. Instead, data collected in 2018, 2019 and 2020 are comparable.

The first question about "Affordable Medicines"[22] concerned the experience of participating in the Program. Both in 2019 and in 2020, an identical share of the surveyed consumers of outpatient medical care (20.6%) indicated the presence of experience in obtaining medicines through the "Affordable Medicines" program. However, in 2018, the percentage of such patients was close to the indicators of the last two years, namely 18.4% (**Table 4.1**).

The results of 2020 in the socio-demographic breakdown of the Program participants show trends similar to previous years: in Ukraine there are more women – users of the Program (22.1% versus 18.2% of men in 2020), more older people (41.2% among 60+ and 15.6% among 45–59 years old), more consumers of the Program with a lower level of education – 21.6% with an incomplete general average education, 24.5% with a full general average education, and 32, 4% – with vocational and technical education against 13.8% with complete higher education. Of the minor differences between the years, it is possible to emphasize the increase in the share of men (13.5% in 2018, 16.5% in 2019 and 18.2% in 2020) and the gradual increase of Program participants in the oldest age group 60+ (35.5% in 2018, 36.8% in 2019 and 41.2% in 2020). This may indicate both an increase in understanding of the use of the Program and an increase in trust in reimbursement. Also, in the three-year period of the study, we observe a gradual increase in the gap between participants of the "Affordable Medicines" program from urban and rural areas: 22.3% vs. 16.9% in 2020, respectively, 21.1% vs. 19.2% in 2019 and 18.1% against 19.1% in 2018 (**Table 4.1**).

As in previous years, a larger share of those who rate their health worse (38.6% among those who rated it "Very poor", 33.6% – "Poor" and 27.8% – "Average"), are expected to be consumers of the "Affordable Medicines" program. In 2018, 2019 and 2020, there were fluctuations in the shares of Program participants (up to 10 percentage points): in 2019, there were 30.3% of Program participants who considered their health to be "very poor", and in 2018 – 40.4% and in 2020 – 38.6%. This can be explained by the greater subjectivity in the assessment of "perception" of health in contrast to, for example, the level of education or place of residence.

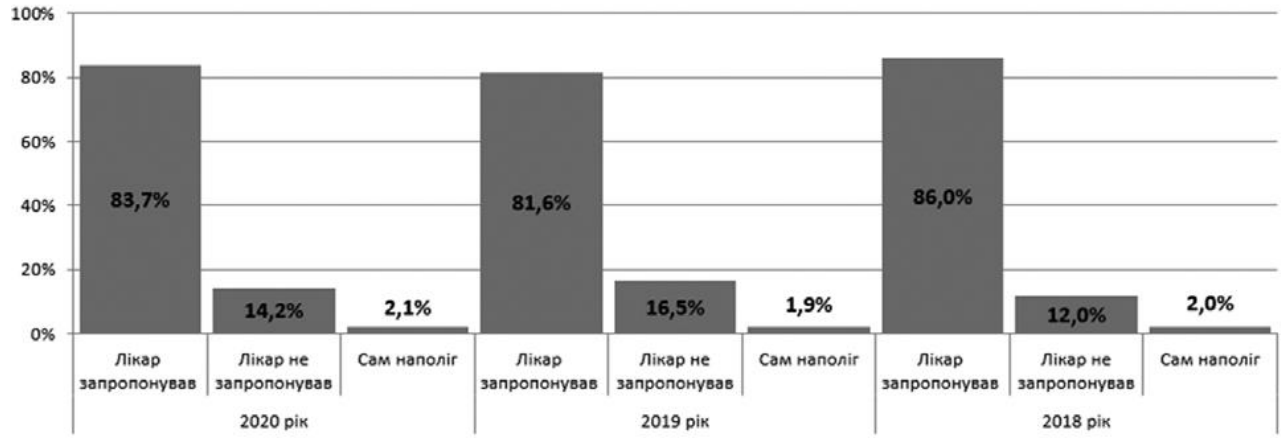
Since 2018, we have been asking about the specifics of doctor-patient communication that may have an impact on receiving medicines under the Affordable Medicines program, such as "Did the doctor suggest you use the Affordable Medicines program, i.e., write a prescription?" In total, in 2020, 83.7% of those who reported participating in the Program indicated that it was the doctor's initiative to involve the patient (**Fig. 4.1**). There are no significant differences between 2019 and 2018: 81.6% of consumers in 2019 and 86.0% in 2018 indicate that a doctor suggested using the Program.

[21] Government reimbursement program "Affordable medicines" https://moz.gov.ua/dostupni-liki "Reimbursement is a mechanism for full or partial payment of medicines included in the detailed description from the budget."

[22] Question wording: Now let's talk about only those medicines that are included in the reimbursement program "Affordable Medicines". Have you had the experience of receiving medicines under the "Affordable Medicines" program?

Table 4.1
Experience of participation in the "Affordable Medicines" program among outpatient care users: sociodemographic breakdown (percentage of those who answered "yes" to the question "Have you had experience receiving medicines under the "Affordable Medicines" program?), %

	2020	2019	2018
IN TOTAL	**20,6**	**20,6**	**18,4**
GENDER			
men	18,2	16,5	13,5
women	22,1	23,0	21,4
AGE GROUP			
18–29 years old	2,4	7,0	3,1
30-44 years old	5,3	8,7	5,4
45–59 years old	15,6	18,2	18,0
60 years and older	41,2	36,8	35,5
PLACE OF RESIDENCE			
urban	22,3	21,1	18,1
rural	16,9	19,2	19,1
LEVEL OF EDUCATION			
Primary or incomplete general secondary	21,6	26,4	26,9
Complete general secondary	24,5	27,5	22,6
Vocational (vocational school, lyceum)	32,4	22,6	20,3
Incomplete Higher/Secondary specialized (technical school, college, junior specialist)	17,3	20,1	18,0
Basic higher (bachelor's degree)	14,9	12,3	10,0
Complete higher education (specialist, master's degree)	13,8	15,9	15,1
REVENUE			
up to 1000 UAH	16,7	18,9	19,1
1001–1500 UAH	11,3	24,2	24,4
1501–2000 UAH	31,1	29,5	28,1
2001–2500 UAH	33,5	27,2	18,7
over 2500 UAH	16,3	15,5	13,3
HEALTH STATUS			
Very poor	38,6	30,3	40,4
Poor	33,6	41,7	35,9
Average	27,8	22,1	19,4
Good	6,8	9,2	6,7
Very good	3,0	7,9	2,6



The doctor suggested. The doctor did not suggest. Insisted themselves

Fig. 4.1. The doctor's role in the consumption of medicines by patients through participation in the "Affordable Medicines" program (division of answers to the question: "Did the doctor suggest you use the "Affordable Medicines" program, i.e. wrote a prescription?")

Since a patient is usually prescribed several different medicines, an important aspect is the ability to get them all in one pharmacy. The availability of the necessary medicines in the pharmacy closest to the patient indicates the availability of the Program. In 2020, the lowest percentage of people who could not get medicines at the pharmacy under the Program was recorded (14%), as well as the highest percentage of those who received all medicines, which is a positive trend in the availability of medicines under the Program. The majority indicates that they were able to get all medicines under the Program at the pharmacy when answering the question "Were you able to get medicines under the "Affordable Medicines" program at the pharmacy?": 62.4% in 2020, 47.2% in 2019, and 43.8% in 2018 (**Fig. 4.2**).

As in previous years, the lack of necessary medicines in the pharmacy is the most mentioned reason by the respondents (37 people) for not receiving medicines under the Program. The remaining barriers are less common: respondents could not get to a pharmacy that participates in the Program (15 people), the doctor did not have the appropriate prescription forms (10 people), the doctor refused to provide a prescription for another reason (15 people), or pharmacies refused to provide medicines (8 people).

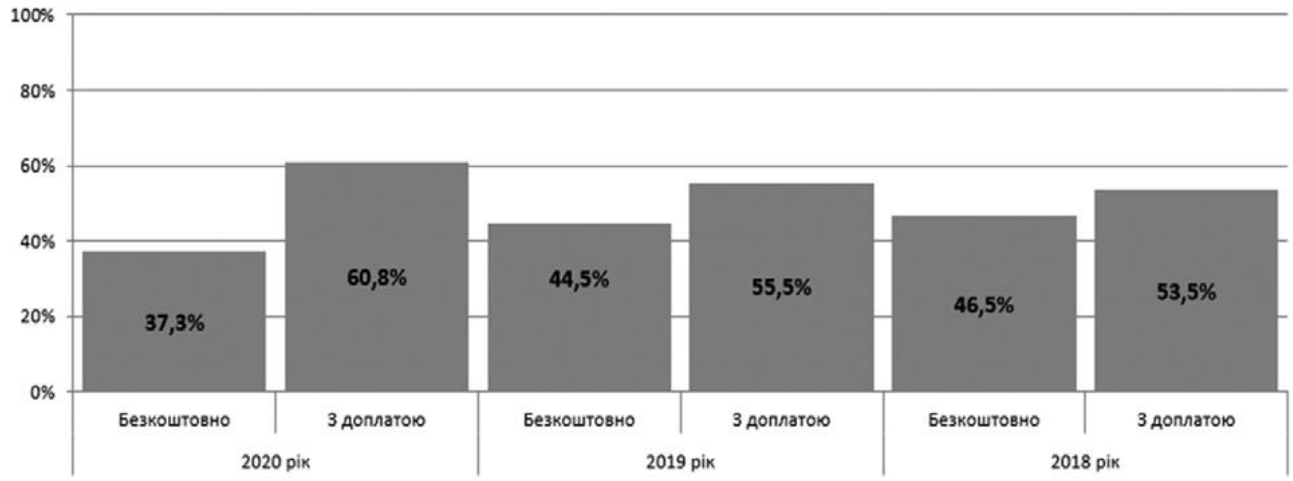
Received all the medicine. Received partially. Could not receive.

Figure 4.2. Availability of medicines at the pharmacy under the "Affordable Medicines" program (distribution of answers to the question: "Were you able to get medicines under the "Affordable Medicines" program at the pharmacy?")

On the other hand, there is a tendency towards a decrease in the share of those who receive all medicines under the Program for free (**Fig. 4.3**): in 2020, 37.3% received medicines for free and 60.8% – with a surcharge, in 2019 – 44.5% for free and 55.5% with a surcharge, and in 2018 – 46.5% for free and 53.5%

with a surcharge. Thus, the difference between 2020 and 2018 is almost 10 percentage points. In terms of other factors in the availability of medicines under the Program, such as rural-urban area, there are no significant differences between different sociodemographic groups in the answers to the above three questions. An increase in the share of those who receive medicines under the Program with surcharge is not necessarily a negative trend since the mechanism of co-payments allows you to consider specific characteristics and preferences and still have the opportunity to choose.

Certain questions urged respondents to assess the availability of medicines under the Program. Answers to the question about the perception of availability, and on the other hand, to the question about whether consumers received all the medicines, indicate an increase in the availability of medicines under the Program. Thus, in 2020, 3/4 of the Program's users, compared to slightly more than half (57.5%) in 2019, believed that medicines had become more accessible (**Table 4.2**).



For free. *With surcharge.*

Figure 4.3. Co-payment for medicines in the reimbursement program (division of answers to the question: "Did you get these medicines for free or with a surcharge?")

Possible explanations for the greater availability of medicines include changes in the Program administration that took place in April 2019: the National Health Service of Ukraine took charge of this Program, patients began to receive electronic prescriptions instead of paper ones, etc. However, both in 2019 and 2020, residents of rural areas are less inclined to positively evaluate the results of the Program in terms of greater availability of medicines. A smaller percentage of Program participants who live in rural areas indicate that due to the Program, medicines have become more accessible (65.6% versus 78.8% of participants from urban areas), and a larger percentage indicates that medicines have not become more accessible (34.4% against 21.2% respectively). Similarly, respondents from less wealthy groups do not observe positive shifts towards greater availability of medicines under the Program.

Table 4.2
Perceptions of improvements in the availability of medicines due to the Affordable Medicines program: a comparison by years, %

	2020		2019		2018	
	Medicines became more affordable	Medicines have NOT become more affordable	Medicines became more affordable	Medicines have NOT become more affordable	Medicines became more affordable	Medicines have NOT become more affordable
OVERALL	75,5	24,5	57,5	42,5	62,5	37,5
GENDER						
men	77,2	22,8	54,3	45,7	68,6	31,4
women	74,7	25,3	58,9	41,1	60,2	39,8
AGE GROUP						
18–29 years old	59,3*	40,7*	47,8*	52,2*	32,4*	67,6*
30–44 years old	39,8	60,2	48,7	51,3	74,4*	25,6*
45–59 years old	76,5	23,5	58,6	41,4	65,4	34,6
60 years and older	78,5	21,5	59,5	40,5	61,3	38,7
PLACE OF RESIDENCE						
urban	78,8	21,2	60,1	39,9	62,2	37,8
rural	65,6	34,4	50,3	49,7	63,2	36,8
LEVEL OF EDUCATION						
Primary or incomplete general secondary	86,0*	14,0*	68,7	31,3*	64,9	35,1*
Complete general secondary	75,3	24,7	59,9	40,1	66,9	33,1
Vocational, technical	79,0	21,0	52,4	47,6	60,4	39,6
Incomplete higher/secondary specialized (technical school, college, junior specialist)	73,1	26,9	66,2	33,8	63,9	36,1
Basic higher (Bachelor's)	64,2*	35,8*	57,4*	42,6*	52,6*	47,4*
Complete higher education	76,0	24,0	46,5	53,5	58,8	41,2
INCOME						
up to 1000 UAH	67,2	32,8*	59,9	40,1	67,6	32,4*
1001–1500 UAH	58,1	41,9*	58,0	42,0	62,5	37,5
1501–2000 UAH	74,9	25,1	56,1	43,9	60,6	39,4
2001–2500 UAH	82,7	17,3	57,5	42,5	69,2	30,8
over 2500 UAH	74,5	25,5	55,9	44,1	59,3	40,7
HEALTH STATUS						
Very poor	62,1*	37,9*	58,8	41,2*	42,1	57,9
Poor	69,7	30,3	60,1	39,9	69,6	30,4
Average	76,6	20,4	54,6	45,4	60,4	39,6
Good	72,5	27,5	61,9	38,1	61,3	38,7
Very good	44,6*	55,4*	55,5*	44,5*	100,0*	0,0*

*We cannot draw reliable conclusions for this group due to its small size (up to 20 respondents)

4.2. Taking medicines without a doctor's prescription

The "Health Index" study measures the experience of medicine consumption both during seeking medical assistance and without a doctor's prescription. In 2020, 30.4% of respondents (N = 3,320) reported an illness or injury in the past 12 months (Section 1.6). Of them, 73.2% sought professional medical help, and 26.8% (N = 890) engaged in self-medication.

Most of those who did not seek medical help in case of illness or injury, namely 82.9%, bought medicines (**Fig. 4.4**). This percentage in 2020 is the lowest for all years of the study (in 2017 it was the highest – 100%).

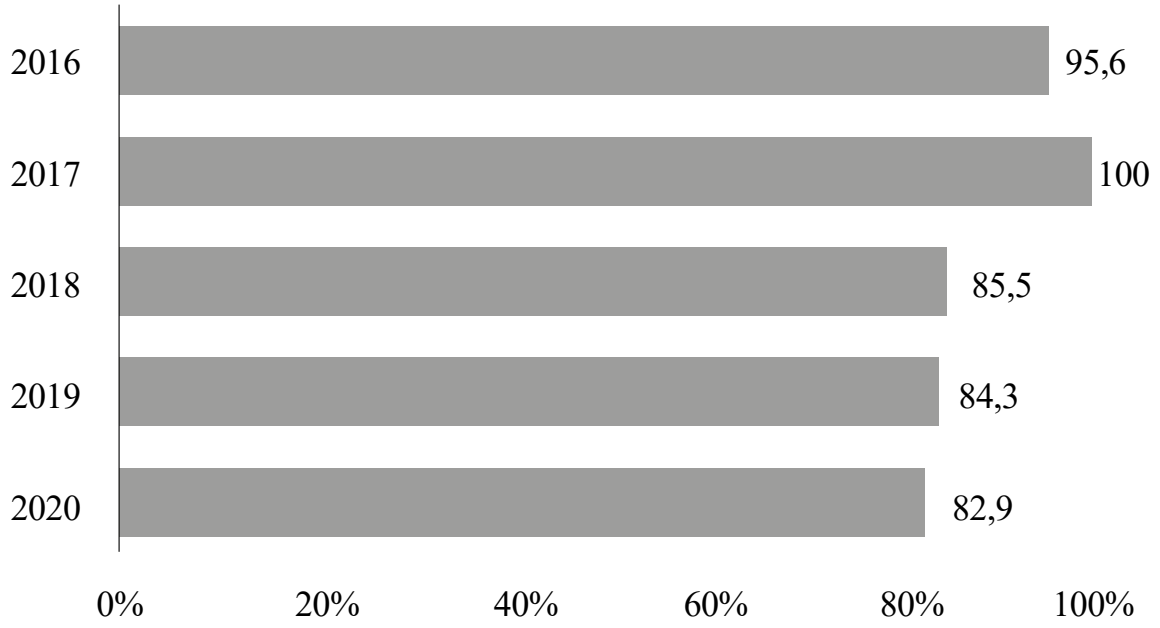


Figure 4.4. Proportion of people who had medicine costs related to the last illness or injury, among those who did not contact a doctor/paramedic for medical assistance, according to the results of surveys in 2016, 2017, 2018, 2019 and 2020.

Sociodemographic features in the consumption of medicines without a doctor's prescription are presented in the **table 4.3**: income, place of residence, etc., are not potential determinants of medicine costs in the case of self-medication. However, we noticed a difference of 8 percentage points by gender (slightly more women than men had expenses for medicines) and almost 12 percentage points between the youngest and oldest groups of respondents (older people are less likely to buy medicines on their own, without a doctor's prescription).

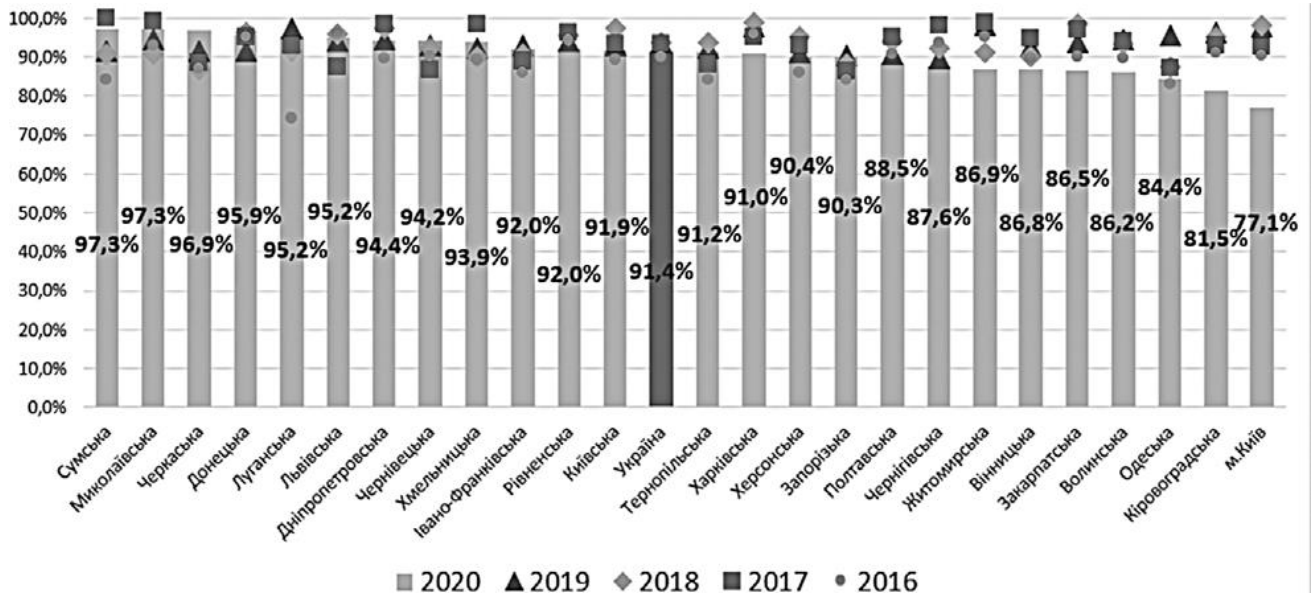
Table 4.3
The share of people who had expenses for medicines related to the last illness or injury, among those who did not turn to a doctor/paramedic for medical help, according to the results of surveys in 2016, 2017, 2018, 2019 and 2020: sociodemographic breakdown, %

	2020	2019	2018	2017	2016
OVERALL	**82,9**	**84,3**	**85,5**	**100,0**	**95,6**
GENDER					
men	78,4	81,0	82,9	100,0	92,5
women	86,3	86,9	87,0	100,0	97,0
AGE GROUP					
18–29 years old	89,2	88,6	82,1	100,0	94,4
30-44 years old	82,0	84,7	88,8	100,0	95,1
45–59 years old	87,9	84,8	87,1	100,0	97,5
60 years and older	77,6	80,6	83,6	100,0	95,0
PLACE OF RESIDENCE					
urban	82,1	85,8	86,7	100,0	96,8
rural	84,7	79,9	82,1	100,0	93,5
LEVEL OF EDUCATION					
Primary or incomplete general secondary	59,6*	53,0	80,6	100,0	94,0
Complete general secondary	74,9	78,8	86,6	100,0	97,8
Vocational (vocational school, lyceum)	79,1	81,1	80,3	100,0	94,5
Incomplete higher/secondary specialized	85,7	85,1	86,5	100,0	98,4
Basic higher (Bachelor's)	89,7	88,2	85,2	100,0	95,3
Complete higher education	88,3	90,5	88,6	100,0	91,5
INCOME					
up to 1000 UAH	90,7	82,1	81,9	100,0	94,4
1001–1500 UAH	89,2	89,7	79,1	100,0	96,2
1501–2000 UAH	77,4	86,3	84,0	100,0	95,4
2001–2500 UAH	82,7	87,2	89,6	100,0	94,8
over 2500 UAH	82,5	83,1	88,6	100,0	95,3

On average, respondents spent UAH 1,828.10 on self-purchased medicines in the summer of 2019 – summer of 2020, and this is the highest expenditure for all years. This is three times more than the average costs in 2019 (650.82 UAH, the average value with standard deviation (47.69 UAH) is presented below). Indeed, every year we see an increase in the amount that people spend on over-the-counter medicines. However, the median value remains stable at UAH 300, as in 2019, which indicates a greater spread of values and a greater frequency of large expenses (**Table 4.4**). In terms of the sociodemographic characteristics of the respondents, the median value is somewhat higher (400 UAH, not 300, as in other groups) for representatives of households with incomes of 1,001 - 1,500 UAH per person per month.

4.3. Use of medicines during outpatient treatment

In 2020, 91.4% of outpatient care consumers noted that they were prescribed medication. Over the years of the survey, this percentage practically does not change (**Fig. 4.5**). Regarding the number of medicines prescribed, the average value is 4 units – quite similar to the value of previous years (3.8 in 2020, 4.1 in 2019, 3.6 in 2018, **Fig. 4.6**).



Sumy, Mykolaiv, Cherkasy, Donetsk, Luhansk, Lviv, Dnipro, Chernivtsi, Khmelnytskyi, Ivano-Frankivsk, Rivne, Kyiv, Ukraine, Ternopil, Kharkiv, Kherson, Zaporizhzhia, Poltava, Chernihiv, Zhytomyr, Vinnytsia, Zakarpattia, Volyn, Odesa, Kirovohrad, Kyiv city

Figure 4.5. Percentage of patients who received a medication prescription during the last outpatient visit

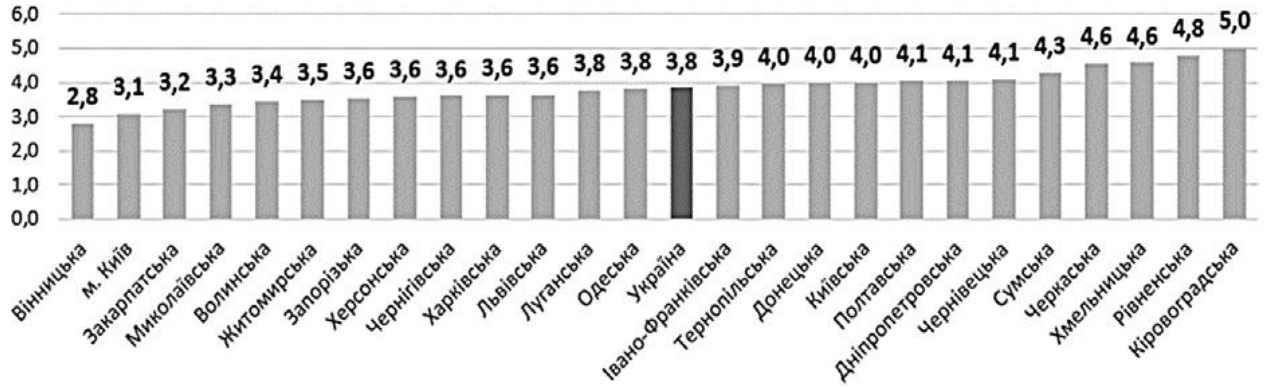
It should be recalled that only those respondents who visited a doctor during the year (summer 2019 - summer 2020) answered the question about the prescription of medicines. As stated in Section 2, it is about 33.1% of the adult population who visited a doctor at an outpatient clinic.

As for the regional breakdown in 2020, the fewest respondents who indicated the prescription of medicines during outpatient treatment are in the city of Kyiv (77.1%), as well as in Kirovohrad (81.5%) and Odesa (84.4 %) regions. It should be emphasized that in 2019 the city of Kyiv showed the highest percentage of patients who were prescribed medicines (97.8%). Sumy (97.3%), Mykolaiv (97.3%) and Cherkasy (96.9%) regions are the top three regions with the highest percentage of medicine prescription at the outpatient level. This year, 20 percentage points are divided between the regions placed as far to the left and right as possible in **Fig. 4.5**, while in 2019 the difference between the maximum and minimum value was only 8 percentage points. There are no sociodemographic differences in the data on the prescription of medicines during the patient's visit to the doctor.

Table 4.4
Out-of-pocket costs for medicines among those who self-medicated (UAH)

		2020			2019			2018			2017			2016		
		average expenses	standard deviation	Median	average expenses	standard deviation	Median	average expenses	standard deviation	Median	average expenses	standard deviation	Median	average expenses	standard deviation	Median
	In total	1828,10	697,31	300	650,82	**47,69**	**300**	**428,22**	**45,08**	**250**	**342,45**	**18,59**	**200**	**256,45**	**19,9**	**150**
GENDER	men	1394,61	344,80	300	738,71	84,69	300	497,37	119,26	200	371,58	34,6	250	261,91	38,42	150
	women	2117,16	1139,78	300	584,34	53,87	300	389,93	23,36	300	324,54	21,17	200	254,07	23,19	150
AGE GROUP	18–29 years old	458,24	47,37	300	664,77	144,64	300	348,31	32,91	250	308,19	43,51	200	223,68	37,55	150
	30-44 years old	857,75	206,56	300	451,97	36,52	300	514,51	144,7	300	330,34	25,11	250	240,39	36,75	150
	45–59 years old	4864,46	2618,03	350	703,10	108,70	300	442,14	72,27	250	331,87	38,84	200	269,27	46,74	150
	60 years and older	769,51	131,64	300	817,42	98,44	350	388,26	39,69	250	380,23	38,8	220	277,3	33,01	150
PLACE OF RESIDE	urban	1926,44	1014,47	300	548,74	37,06	300	447,56	57,77	270	320,94	18,65	200	278,63	28,76	150
	rural	1624,65	425,34	300	963,52	155,69	380	369,28	47,78	250	387,04	41,96	200	216,52	20,43	150
LEVEL OF EDUCATION	Primary or incomplete general secondary	681,60	286,47	300	1353,05	518,57	250	291,84	49,89	200	391,84	128,59	200	184,62	22,35	180
	Complete general secondary	1003,46	292,23	300	875,07	150,52	300	577,64	180,94	300	371,42	48,7	200	229,93	35,24	100
	Vocational, technical	1977,87	753,43	300	715,84	108,83	300	301,32	25,04	200	400,84	38,67	250	184,44	24,33	120
	Incomplete higher/ secondary specialized	838,60	198,14	300	661,88	106,27	300	368,03	42,6	250	317,34	37,26	200	280,97	44,4	160
	Basic higher	670,30	207,70	300	431,83	39,32	300	369,89	65,09	300	272,87	28,05	200	198,33	61,18	150
	Complete higher	3949,76	2675,49	300	504,67	46,73	300	495,2	77,7	300	320,93	30,74	260	345,08	56,01	150
HOUSEHOLD INCOME PER PERSON	up to 1000 UAH	2577,73	1369,30	300	729,88	91,52	400	404,64	73,43	250	317,07	43,58	200	264,05	58,73	150
	1001–1500 UAH	630,00	110,75	400	505,11	76,21	300	289,66	35,17	200	405,21	50,04	200	217,1	21,95	120
	1501–2000 UAH	1065,92	296,06	300	768,64	123,59	300	364,91	52,0	230	294,73	25,49	200	239,37	48,49	150
	2001–2500 UAH	1464,76	432,16	300	482,14	80,87	300	697,62	342,17	300	280,45	51,9	200	171,03	23,44	120
	over 2500 UAH	2885,04	1885,90	300	656,04	104,76	300	426,86	26,51	300	298,34	34,52	250	186,48	22,1	150

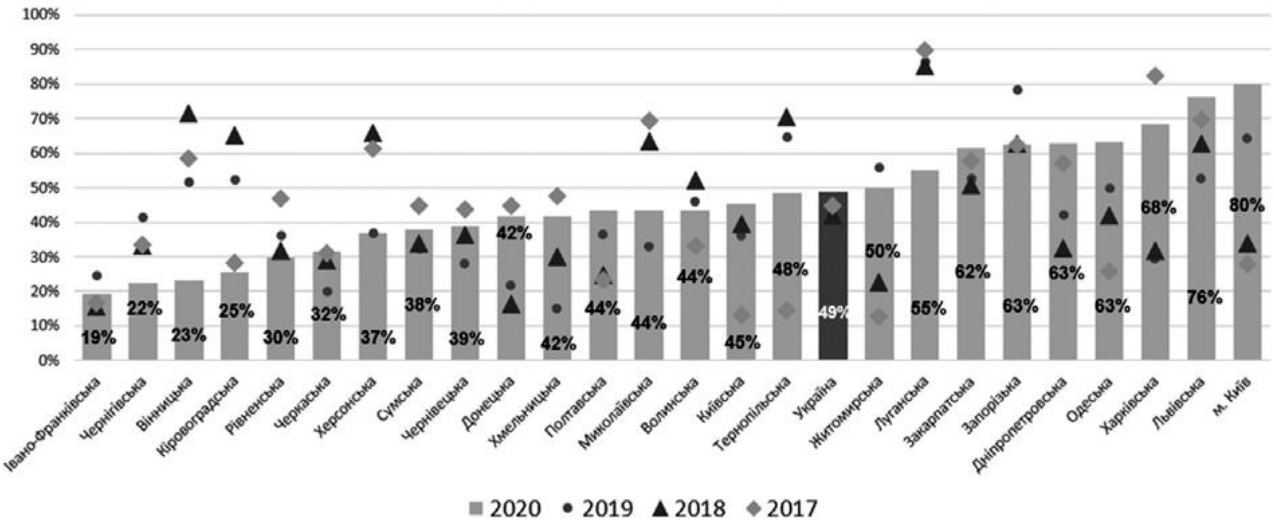
As for the average number of prescribed medicines and regional differences (**Fig. 4.6**), the fewest prescriptions were again in Zakarpattia (3.2 names), as well as in Vinnytsia (2.8) regions and in the city of Kyiv (3.1), and the largest – in Kirovohrad (5.0) region.



Vinnytsia, the city of Kyiv, Zakarpattia, Mykolaiv, Volyn, Zhytomyr, Zaporizhzhia, Kherson, Chernihiv, Kharkiv, Lviv, Luhansk, Odesa, Ukraine, Ivano-Frankivsk, Ternopil, Donetsk, Kyiv, Poltava, Dnipro, Chernivtsi, Sumy, Cherkasy, Khmelnytskyi, Rivne, Kirovohrad

Figure 4.6. The average number of medicines prescribed (among those consumers of outpatient care who received such prescriptions in 2020)

To the question "Have you been given a prescription without which it is impossible to purchase medicine or receive reimbursement?" the highest percentage of positive responses was recorded between 2017 and 2020 (49.0% confirmed the presence of a prescription in 2020, 43.9% in 2019). Although in 2016 there was a much higher proportion of those who received a prescription (66.9%), at that time such a large-scale reimbursement program did not operate, so the understanding of the prescription was different. In **fig. 4.7**. regional and time peculiarities are shown. In a more modern context (2020), those who live in the city of Kyiv (80%), Lviv (76%) and Kharkiv (68%) regions recall receiving recipes the most, the least – in Ivano-Frankivsk (19%), Chernihiv (22%) and Vinnytsia (23%) regions. It is interesting that over the years there are significant fluctuations across regions, but there are some regions with relatively stable percentages – Ivano-Frankivsk, Chernivtsi and Zakarpattia.

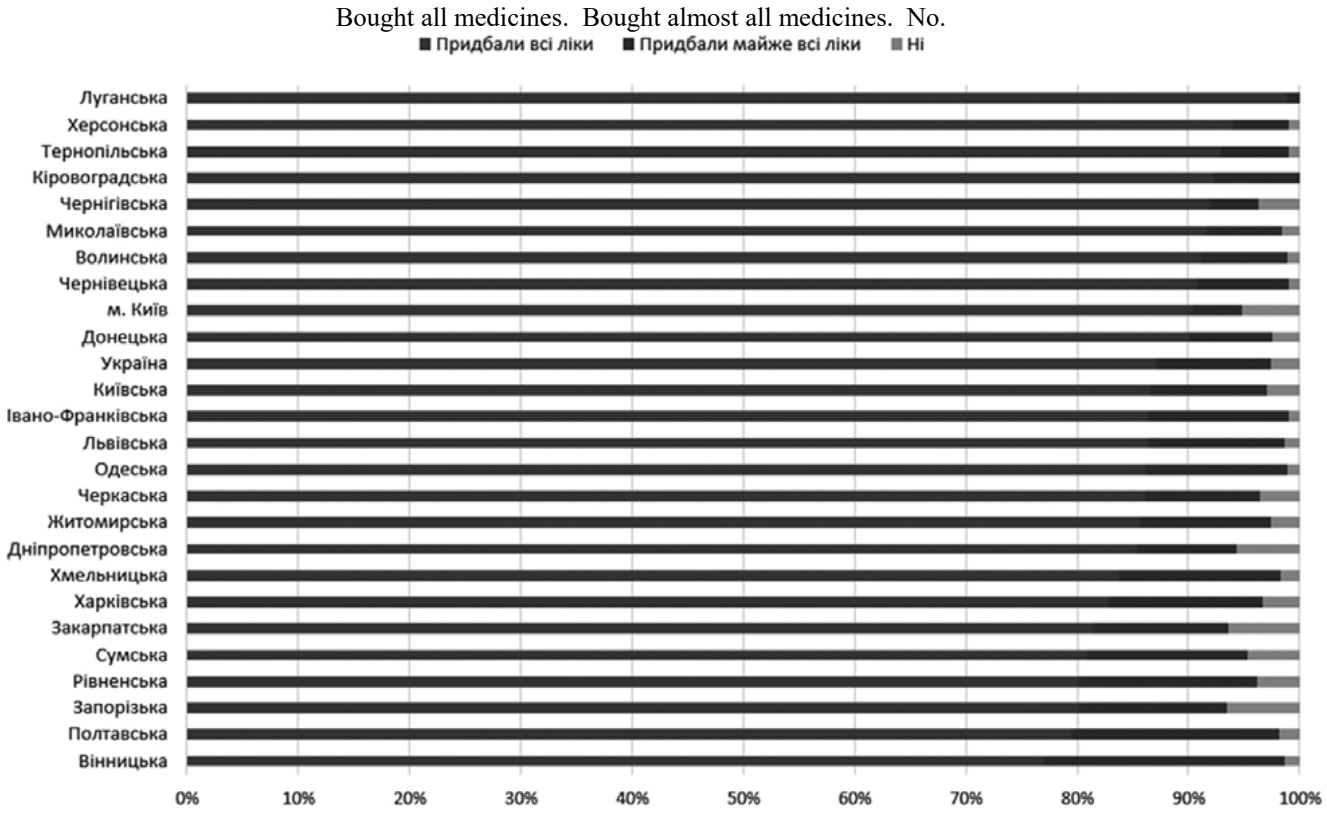


Ivano-Frankivsk, Chernihiv, Vinnytsia, Kirovohrad, Rivne, Cherkasy, Kherson, Sumy, Chernivtsi, Donetsk, Khmelnytskyi, Poltava, Mykolaiv, Volyn, Kyiv, Ternopil, Ukraine, Zhytomyr, Luhansk, Zakarpattia, Zaporizhzhia, Dnipro, Odesa, Kharkiv, Lviv, the city of Kyiv

Figure 4.7. Percentage of affirmative answers to the question "Have you been given a prescription without which it is impossible to purchase medicine or receive reimbursement?": division by regions in 2016, 2017, 2018, 2019 and 2020.

As for socio-demographic differences, in 2020, as in previous years, older people (60 years and older) receive prescriptions somewhat more often – 58.1% versus younger respondents: 41.4% and 36.9 % in the 18–29 and 30–44 years old groups, respectively.

Undoubtedly, an important measure of the (non)consumption of prescribed medicines is the proportion of patients who have the financial ability to purchase all medicines, or the understanding of the need to consume all the doctor's prescriptions. Thus, most respondents report that they buy or receive all medicines: 97.4% in 2020, 96.8% in 2019, and 93.7% in 2016 (**Fig. 4.8.).** There is a gradual decrease in the share of outpatients who "buy almost all" medicines: in 2020 - 10.4%, in 2019 - 13.9%, and in 2016 - 17.3%. There are some variations between regions: the minimum value of "purchased all medicines" is observed in Vinnytsia region (77%), and the maximum value in Luhansk region (99%).



Luhansk, Kherson, Ternopil, Kirovohrad, Chernihiv, Mykolaiv, Volyn, Chernivtsi, city of Kyiv, Donetsk, Ukraine, Kyiv, Ivano-Frankivsk, Lviv, Odessa, Cherkasy, Zhytomyr, Dnipro, Khmelnytskyi, Kharkiv, Zakarpattia, Sumy, Rivne, Zaporizhzhia, Poltava, Vinnytsia

Figure 4.8. Division of respondents who purchased all or not all medications prescribed by a doctor during outpatient treatment in 2020, by region.

The sociodemographic distribution of responses in 2020 does not indicate that certain groups deviate from the mean, unlike in 2019, where minor differences were found.

We asked those who did not buy the medicine or not all the medicines about the reasons for this behavior. It turns out that 40.3% (158 people) in 2020, as well as 42.5% (263 people) in 2019, did not consider it necessary to buy all medicines. This may indicate both a lack of trust in the doctor-patient relationship and insufficient communication about the importance of taking all prescriptions. Also, the shares of respondents who indicated other reasons have hardly fluctuated in recent years: 45.7% in 2020, 44.3% in 2019, 40.6% in 2018 (a difference of 5% is within the statistical range errors) – they did not buy medicine because they did not have funds; 14.8% in 2020, 17.2% in 2019, 15.8% in 2018 – medicines were not in the pharmacy or could not be found. A key finding remains that the financial barriers for almost the same proportion of patients remain identical from year to year, so it is necessary to identify the characteristics of this group in order to improve their access to medicines. Based on our data, such groups may include older people (60+) and people with lower income levels. Over the course of all four years, older people more often indicate a lack of funds as a reason for not buying all medicines or not buying medicines at all: 54.7% in the 60+ group versus 26.3% among the youngest and 41.9% in the 30-44 years

old group (**table 4.5**). People with a lower income level (56.8% with incomes under 1000 UAH per month per person, 51.0% 1001–1500 UAH, 36.2% with incomes over 2500 UAH) obviously have more financial obstacles.

Table 4.5

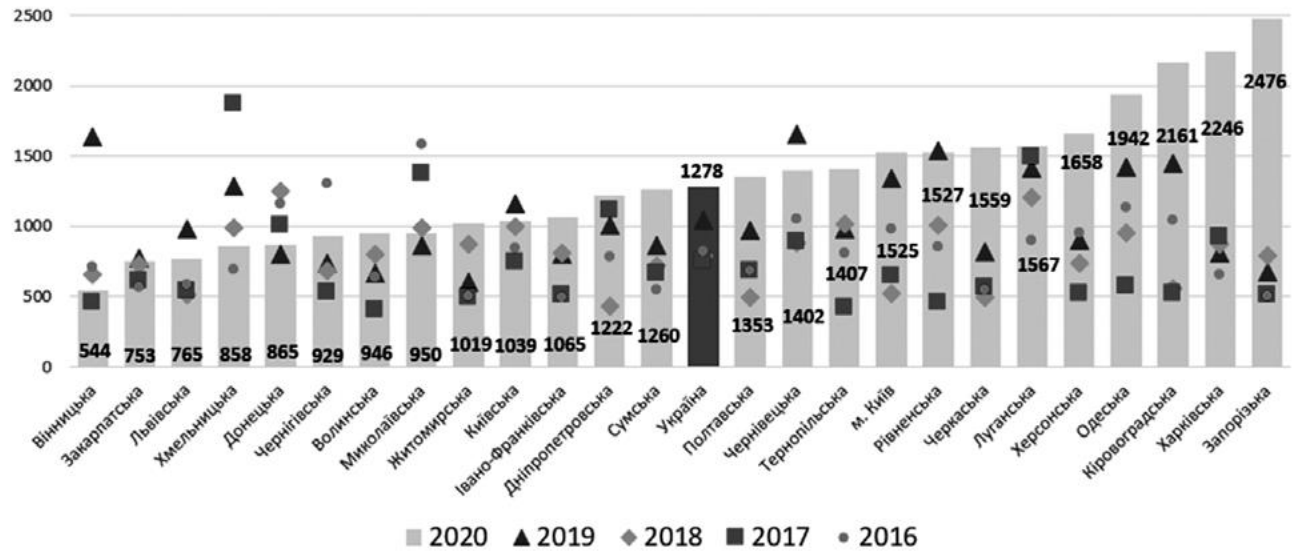
Share of outpatient care consumers who did not purchase all medications due to lack of funds: socio-demographic breakdown during 2016–2020.

			Purchased not all medicines due to the lack of funds				
			2020	2019	2018	2017	2016
		%	45,7	44,3	40,6	47,2	51,5
GENDER	Men	N	172	298	195	333	435
		%	41,6	39,3	37,9	42,0	43,6
	women	N	39	60	46	75	86
		%	47,6	46,8	42,5	49,8	55,6
AGE GROUP	18–29 years old	N	133	238	149	258	349
		%	26,3	40,1	22,4	42,9	36,3
	30-44 years old	N	10	21	12	31	31
		%	41,9	32,0	31,4	32,8	41,0
	45–59 years old	N	30	39	36	46	80
		%	46,1	34,0	51,1	49,2	61,1
	60 years and older	N	46	53	54	95	130
		%	54,7	58,1	52,7	59,2	60,4
PLACE OF RESIDE	urban	N	86	185	93	161	194
		%	45,6	44,3	42,2	46,6	47,9
	rural	N	112	195	134	229	288
		%	45,8	44,3	36,2	49,2	63,1
LEVEL OF EDUCATION	Primary or incomplete general secondary	N	60	103	61	104	147
		%	79,6	74,2	81,1	69,6	60,7
	Complete general secondary	N	10	19	16	21	31
		%	57,9	51,3	50,9	54,7	68,6
	Vocational-technical	N	46	66	47	73	106
		%	47,9	62,4	39,8	49,7	60,9
	Incomplete higher /Secondary specialized	N	35	83	38	66	72
		%	40,2	44,4	41,8	44,5	50,3
	Basic higher (bachelor's degree)	N	50	85	54	91	126
		%	41,6	16,8	32,9	43,8	34,8
	Complete higher (specialist, master's)	N	8	11	9	14	18
		%	37,0	26,4	27,0	40,0	39,2
		N	23	34	29	66	79
HOUSEHOLD INCOME PER PERSON	up to 1000 UAH	%	56,8	50,1	54,1	62,8	69,7
		N	25	37	19	49	102
	1001–1500 UAH	%	51,0	57,6	47,7	57,5	63,9
		N	20	68	42	106	168
	1501–2000 UAH	%	63,4	50,9	42,0	48,0	44,9
		N	31	59	48	63	65
	2001–2500 UAH	%	46,5	42,6	47,5	39,0	27,7
		N	27	30	25	18	21
	over 2500 UAH	%	36,2	26,5	31,9	32,5	34,7
		N	41	43	25	26	14

Most of the respondents paid for medicine, but in 2020 we found a difference of several percentage points between years: 92.8% in 2020 vs. 97.6% in 2019, 96.2% in 2017. Regionally, only Luhansk region shows twice as low a share of those who paid for medicine out of their own pockets: 51.7% against, for example, 98.6% in Lviv region, 91.2% in Dnipro region, and 98.1% in Poltava region. The sociodemographic section does not reveal differences that would be greater than 5 percentage points, except in terms of education (86.9% with incomplete higher or secondary special education versus 97.9% with complete higher education, 95.0% with complete general average education).

The size of the patient's "out-of-pocket" expenses is gradually increasing: on average, in 2020, outpatient care users spent UAH 1,278.22 on medicines prescribed by a doctor (77.20 – standard deviation, UAH 500 – median), and in previous years (2019 and 2018), they spent an average of 1,039.99 UAH (45.25 – standard deviation, 500 UAH – median) and 793.32 UAH (25.96 – standard deviation, 400 UAH – median) (**Fig. 4.9**).

The highest average values of medicine costs in 2020 are observed in Zaporizhzhia (2,479.03 UAH), Kharkiv (2,246.38 UAH), Kirovohrad (2,160.69 UAH, as well as one of the highest median values – 800 UAH), Odesa (1,941 70 UAH) and Kherson (1658.38 UAH) regions. Among the five years of data collection, these values are the highest for these regions, in contrast to other regions: for example, the highest medicine costs in Chernivtsi region were recorded in 2019 (UAH 1,652.19), in Khmelnytskyi – in 2017 (1873.89), in Mykolayiv – in 2016 (1584.10 UAH). In 2020, the highest median value of medicine costs at the outpatient clinic was observed in the city of Kyiv (1000 UAH versus 500 UAH in the country).



Vinnytsia, Zakarpattia, Lviv, Khmelnytskyi, Donetsk, Chernihiv, Volyn, Mykolaiv, Zhytomyr, Kyiv, Ivano-Frankivsk, Dnipro, Sumy, Ukraine, Poltava, Chernivtsi, Ternopil, city of Kyiv, Rivne, Cherkasy, Luhansk, Kherson, Odessa, Kirovohrad, Kharkiv, Zaporizhzhia

Figure 4.9. The average value of "out-of-pocket" costs for medicines prescribed during the last outpatient treatment, UAH

Patients from the income group "up to 1000 UAH per month per person" show slightly lower median costs for medicines (400 UAH) than other groups divided by income level (500 UAH, but there is also 550 UAH in the group 1501–2000 UAH). Other differences in median values between socio-demographic categories were not observed.

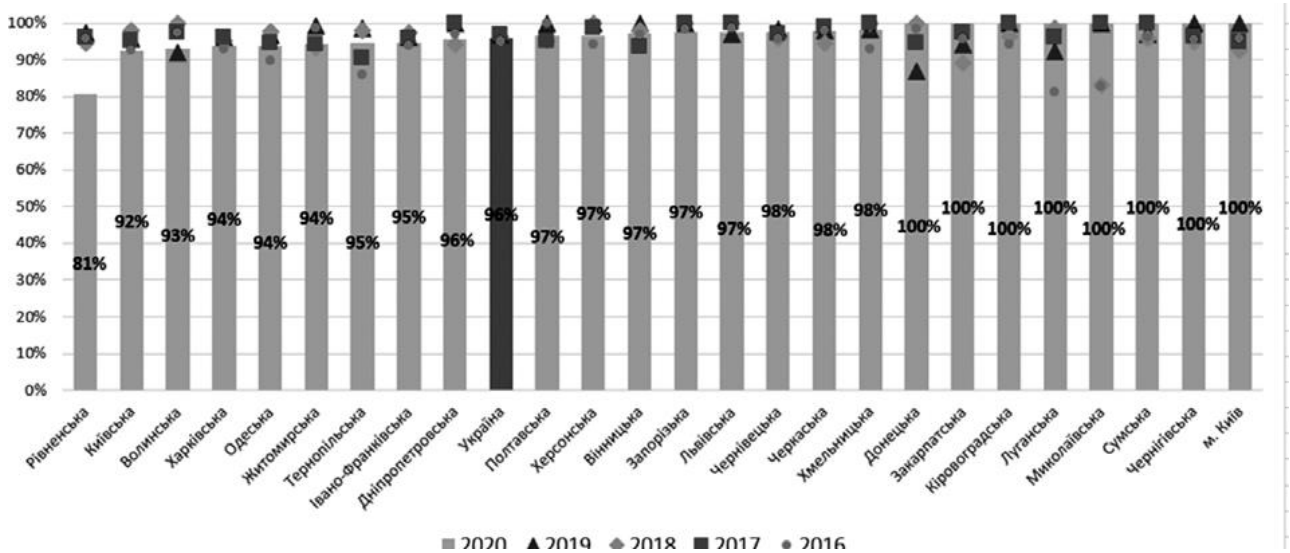
The state reimburses some of the outpatient care consumers all or part of the cost of medicines. In 2020, 10.9% indicate full or partial exemption from payment for medicines, which is almost identical to the value of 2019 (10.2%). This percentage has tripled in four years: in 2016 – 3.0%, in 2017 – 8.5% and in 2018 – 7.6%. Such changes can be explained by the functioning of the government program "Affordable Medicines" since 2017. A greater share of patients aged 60+ indicate that the state partially or fully reimbursed them for the cost of medicines (19.4% in 2020, 14.8% in 2019). A smaller percentage is in the younger groups of 18–29 years old and 30–44 years old, respectively: 4.1% and 4.0% in 2020, as well as 5.7% and 5.5% in 2019.

More noticeable changes occurred in the fact that doctors prescribe the active substance instead of the trade (brand) name of the medicine – 35.7% of outpatient care users indicate this in 2020, in 2019 – 26.2%

(**Table 4.6**). In addition, starting in 2017, we asked the question "Did the doctor offer cheaper and more expensive options when prescribing medicines?", and as a result: 28.4% in 2020 indicated that the doctor offered different price options for medicines. In 2019 and 2018, similar shares (20.3% and 30.9, respectively) were observed. Given the small number of respondents in this category, it is not possible to compare regional differences. There are certain differences in the sociodemographic categories: various options were received more often by representatives of the age group 18–29 years old and 60+ (34.3% and 31.0%, respectively) against 21.6% from the group 30-44 years old, as well as people with an income of 2001–2005 UAH per month per person (38.2%), against those who are listed in the income group over 2500 UAH (24.9%), as well as in the group of 1001–1500 UAH (23.6%) and 1,501–2,000 UAH (25.4%).

4.4. Consumption of medicines during inpatient treatment

In Section 3, it is indicated that 9.2% of the respondents had the experience of hospitalization in 2020 and 96.1% of them were prescribed medicines. Hospital patients in the Rivne region (80.8%) received the fewest prescriptions of medicines, and patients in the seven regions and the city of Kyiv received the most (100.0%) (**Fig. 4.10**). A larger share of older inpatients indicate receiving prescriptions for medications (98.8% among 60-year-olds and older versus 87.0% among 18-29-year-olds). Similar results – both regarding the share of patients who received prescriptions and regarding the division in age groups – are also relevant for other waves of data.



Rivne, Kyiv, Volyn, Kharkiv, Odesa, Zhytomyr, Ternopil, Ivano-Frankivsk, Dnipro, Ukraine, Poltava, Kherson, Vinnytsia, Zaporizhzhia, Lviv, Chernivtsi, Cherkasy, Khmelnytskyi, Donetsk, Zakarpattia, Kirovohrad, Luhansk, Mykolaiv, Sumy, Chernihiv, Kyiv city

Figure 4.10. The number of respondents who were prescribed medicines during the last hospitalization: distribution by regions

On average, one respondent was prescribed 5.8 medicines in 2020 (similar to the results of the 2016, 2017, 2018 and 2019 research: 6.4, 6.3, 5.9 and 6.4, respectively). The lowest average number of medicines was recorded in Lviv (4.4 names) and Kharkiv (4.5) regions in 2020 (**Fig. 4.11**), and the largest number – in Kirovohrad (12.9) and Zhytomyr (8.9)).

There are no significant differences between the socio-demographic groups of hospitalized patients in the average number of prescribed medicines, except for educational groups: on average, 7 medicines were prescribed to those who had primary or incomplete general secondary education, against 5.2 and 5.3 prescriptions to patients with a basic or complete higher education, respectively.

Out-of-pocket costs for medicines during inpatient treatment are also increasing (**Fig. 4.12**). In 2020, 94.1% of hospital patients paid for medicines (**Table 4.7**) and spent an average of UAH 4,550.30 (UAH 312.90 – standard deviation). Compared with 2019 and 2018, the median value increased slightly – from UAH 2,000 to UAH 2,500, but the average increased more (in 2019, the average was UAH 3,793.30, the standard deviation was 259.90; in 2018, it was 2,971,30 UAH and standard deviation was 189.90, and in 2017 it was UAH 2525.13, 4265.5 – standard deviation and UAH 1450 – median).

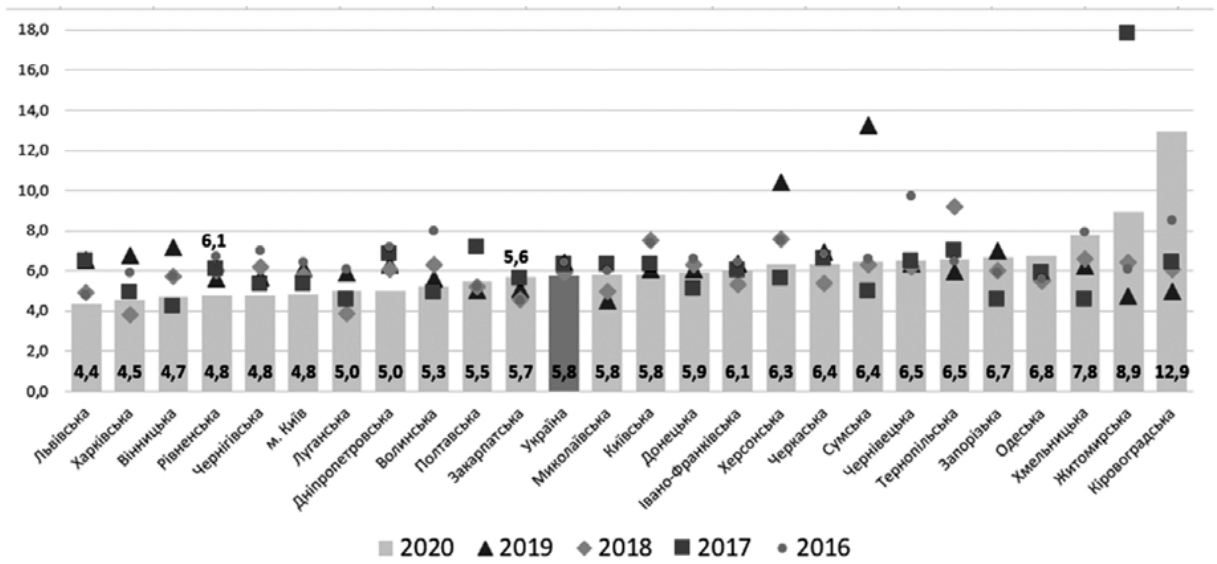
Table 4.6

Division of answers to the question "Did the doctor offer cheaper and more expensive options when prescribing medicine?" and "Did the doctor prescribe the active substance, not the name of the medicine?": a socio-demographic breakdown.

			Did the doctor offer cheaper and more expensive options when prescribing medicine? (Yes)				Did the doctor prescribe the active substance, not the name of the medicine? (Yes)			
			2020	**2019**	**2018**	**2017**	**2020**	**2019**	**2018**	**2017**
Overall		%	28,4	30,3	30,9	40,4	35,7	26,2	24,1	30,9
		N	622	866	766	1014	644	585	457	678
GENDER	men	%	24,4	26,1	29,0	38,5	33,5	25,4	26,6	29,1
		N	145	185	171	254	153	136	110	168
	women	%	30,4	32,6	31,9	41,4	36,9	26,6	22,8	31,8
		N	477	681	595	760	491	449	347	510
AGE GROUP	18–29 years old	%	34,3	29,1	26,6	37,0	36,1	29,5	22,7	30,2
		N	83	104	69	110	82	80	49	86
	30-44 years old	%	21,6	29,3	27,9	38,9	29,7	24,1	21,9	29,4
		N	124	202	150	206	142	146	87	146
	45–59 years old	%	27,9	30,9	32,4	38,5	37,5	26,8	26,9	29,0
		N	150	210	221	260	163	150	146	157
	60 years and older	%	31,0	31,2	34,0	45,1	38,3	25,7	23,9	34,0
		N	265	350	326	438	257	209	175	289
PLACE OF RESIDENCE	urban	%	29,2	30,4	30,1	41,2	35,1	27,1	24,4	33,2
		N	396	557	468	679	403	394	310	494
	rural	%	26,6	30,0	32,7	38,4	37,1	23,5	23,3	24,6
		N	226	309	298	335	241	191	147	184

Table 4.6. (continuation of the table)

			Did the doctor offer cheaper and more expensive options when prescribing medicine? (Yes)				Did the doctor prescribe the active substance, not the name of the medicine? (Yes)			
			2020	**2019**	**2018**	**2017**	**2020**	**2019**	**2018**	**2017**
LEVEL OF EDUCATION	primary or incomplete general secondary	%	17,8	36,5	21,6	34,6	21,6	34,1	20,2	27,4
		N	12	31	21	36	13	21	14	17
	complete general secondary	%	26,4	28,9	32,1	38,9	37,3	25,0	22,1	30,5
		N	109	172	169	177	113	114	89	109
	vocational and technical	%	37,3	32,6	26,6	35,7	40,2	24,7	22,9	30,3
		N	124	147	118	163	118	84	71	111
	incomplete higher /Secondary specialized	%	25,7	29,6	28,0	40,0	32,7	24,3	22,3	28,5
		N	195	256	230	303	201	165	135	195
	Basic higher (bachelor's degree)	%	25,6	37,7	35,1	34,8	42,7	40,2	26,8	23,5
		N	46	52	40	37	57	41	28	32
	complete higher (Specialist, master's degree)	%	29,0	28,1	37,2	45,7	34,7	25,6	28,7	34,9
		N	135	205	185	294	141	156	118	210
HOUSEHOLD INCOME PER PERSON	up to 1000 UAH	%	30,0	31,4	34,9	34,5	28,1	20,9	24,9	23,0
		N	65	121	70	117	46	62	39	65
	1001–1500 UAH	%	23,6	28,2	35,6	40,0	32,5	20,8	33,9	32,7
		N	47	119	109	260	54	76	77	169
	1501–2000 UAH	%	25,4	32,0	34,6	42,8	31,7	28,9	23,7	33,9
		N	85	156	171	205	89	102	88	143
	2001–2500 UAH	%	38,2	29,	24,5	41,8	41,7	27,8	17,9	37,9
		N	127	93	81	86	121	69	46	68
	over 2500 UAH	%	24,9	31,8	28,0	46,4	35,2	30,1	26,5	30,6
		N	188	238	149	153	215	169	113	111



Lviv, Kharkiv, Vinnytsia, Rivne, Chernihiv, city of Kyiv, Luhansk, Dnipro, Volyn, Poltava, Zakarpattia, Ukraine, Mykolaiv, Kyiv, Donetsk, Ivano-Frankivsk, Kherson, Cherkasy, Sumy, Chernivtsi, Ternopil, Zaporizhzhia, Odesa, Khmelnytskyi, Zhytomyr, Kirovohrad

Figure 4.11. The number of medicines (average value) prescribed during the last hospitalization: division by regions.

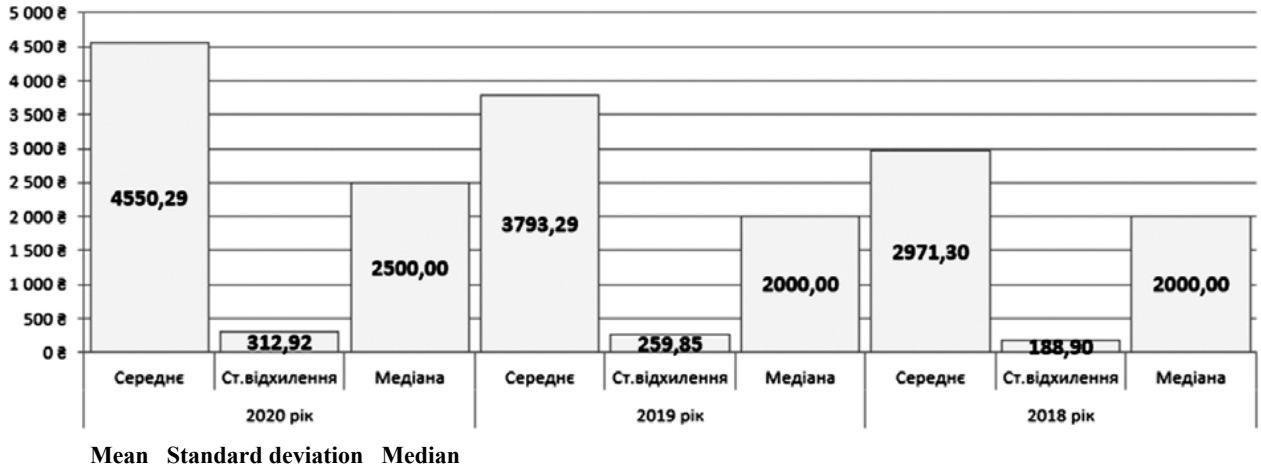


Figure 4.12. Average out-of-pocket costs for medicines prescribed during the last hospitalization, UAH.

As in the case of outpatient care, it was important to determine whether the interviewees bought all the medicines. It was found that in 2020, most inpatients bought all prescribed medicines (89.8%), and this is more than in 2019 (79.6%). In 2018, the value was quite high too (94.5%). The 2019 value is currently the lowest in all four years of observation. Among those who did not buy all the medicines, 39 hospitalized stated that they did not have the necessary funds, 24 did not consider it necessary to buy all of them, and 15 did not find them in the pharmacy. In 2018, 2017, and 2016, there were also the largest number of those who did not buy all the medicines because they did not have the funds for the medicines. Due to the insufficient number of groups, we cannot draw conclusions about sociodemographic differences.

4.5. Total costs for medicines

After sharing the experience of outpatient and inpatient medical care consumption, the respondents were asked several summary questions in order to (a) find out the expenses of the respondents for treatment, which are not related to their own experience of illness, but, for example, arose due to the illness of another family member, (b) minimize recall error. We asked all respondents about their expenses for medicines "within the last 30 days."

Table 4.7
The share of inpatient care consumers who spent money "out of pocket" for the purchase of medicines: socio-demographic breakdown from 2016 to 2020.

			2020	2019	2018
	Overall	%	94,1	88,8	97,3
GENDER	men	N	**805**	**1175**	**1123**
		%	93,9	89,4	95,9
	women	N	241	365	302
		%	94,2	88,4	98,2
AGE GROUP	18–29 years old	N	564	810	821
		%	96,9	85,1	96,8
	30-44 years old	N	72	113	121
		%	93,6	84,3	95,9
	45–59 years old	N	146	218	199
		%	93,6	91,5	97,8
	60 years and older	N	181	310	329
		%	93,8	90,6	98,0
PLACE OF RESIDENCE	urban	N	406	534	474
		%	93,7	86,8	97,3
	rural	N	477	716	703
		%	94,7	93,3	97,3
LEVEL OF	Primary or incomplete general secondary	N	328	459	420
		%	89,9	91,7	93,6
	Complete general secondary	N	31	65	45
		%	96,0	87,1	96,8
	Vocational (vocational school, lyceum)	N	193	264	260
		%	92,1	93,7	98,6
	incomplete higher / secondary specialized	N	135	204	208
		%	93,1	88,6	97,3
	Basic higher (Bachelor's)	N	249	324	325
		%	90,4	85,4	96,1
	Complete higher education (specialist, master)	N	37	65	54
		%	96,6	86,9	97,6
HOUSEHOLD INCOME PER PERSON	up to 1000 UAH	N	158	247	229
		%	92,5	86,3	92,2
	1001–1500 UAH	N	65	146	82
		%	95,7	90,6	96,8
	1501–2000 UAH	N	85	182	174
		%	93,8	90,2	98,6
	2001–2500 UAH	N	141	225	250
		%	97,0	90,7	98,0
	over 2500 UAH	N	154	138	124
		%	91,9	86,6	98,2
		N	204	240	221

According to the "Health Index - 2020", on average, 53.6% of the respondents in Ukraine report spending on medicines during the last 30 days, as shown in **Fig. 4.13**. There are no significant fluctuations in the values between years: in 2019, 56.0% had expenses for medicines, 54.8% in 2018, and 52.5% in 2017. However, there are several significant differences in sociodemographic terms, and they persist throughout years of examination. A higher proportion of women report spending on medicines: 61.6% vs 43.2% of men, and a higher proportion of older people (60+) buy medicines: 68.2% vs 53.9% among people aged 45– 59 years old, 45.4% in the 30–44 age group, 40.7% in the youngest group of respondents (18–29 years old). A smaller share of people with an income of over UAH 2,500 per month per person spends money on medicine (50.9%) compared to other groups (55.2–62.6%).

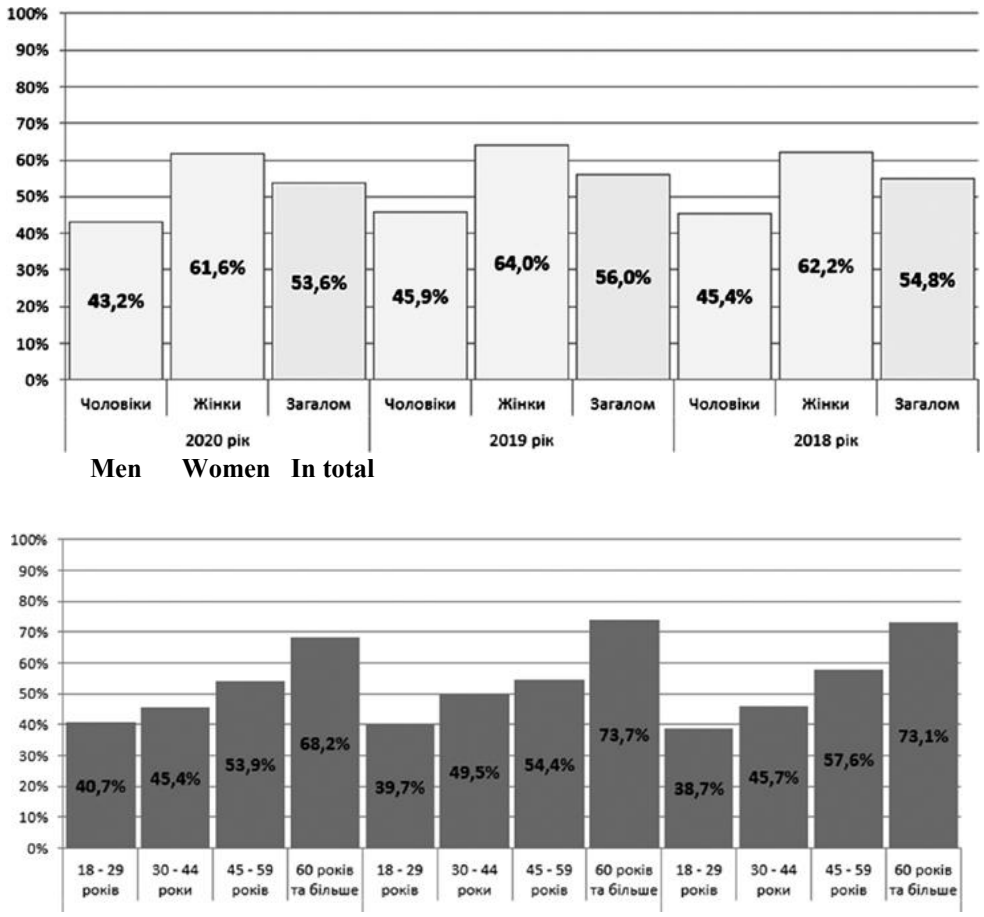
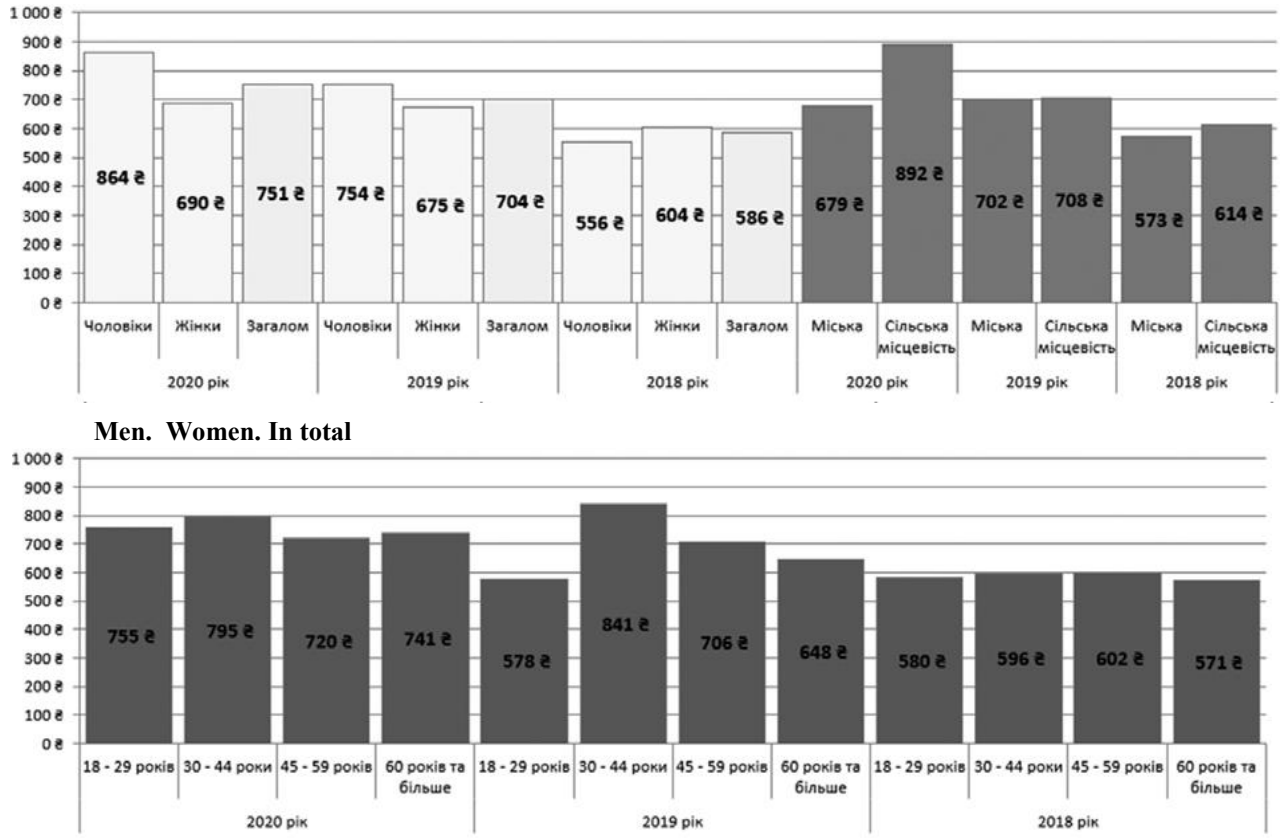


Figure 4.13. Share of payers for medicines during the last 30 days (2018-2020): gender and age breakdown

As for the average amount of expenses during the last 30 days, they are 750.50 UAH in 2020 (32 – standard deviation), and there was an increase in such expenses in recent years: 703.80 UAH in 2019 (20.6 – standard deviation), UAH 586.30 in 2018 (20 – standard deviation) (**Fig. 4.14**). The highest median value was observed in 2019: UAH 350 against UAH 300 in both 2020 and 2018.



Men. Women. In total

Figure 4.14. Average out-of-pocket costs for medicines in the last 30 days (2018-2020): sociodemographic breakdown

Residents of rural areas spent more (891.90 UAH) than residents of cities (678.70 UAH) on medicines within 30 days. Also, men report higher expenses for medicines (864.70 UAH) than women (689.50 UAH). In previous years, such differences were not observed.

As a result, the "Health Index. Ukraine" in 2020 received a positive evaluation of the "Affordable Medicines" program by its direct consumers – patients. They believe that medicine has become more accessible. However, there remain many nosologies that are not included in the "Affordable Medicines" program, and the treatment of such conditions may be associated with "out-of-pocket" costs of patients for medicines in cases of self-medication and consumption of outpatient care.

In general, we observe that the amount of expenditure on medicinal products increases every year. However, there are several areas in which positive dynamics are observed: the share of outpatient care consumers who were reimbursed for the cost of medicines is increasing; the share of those who buy medicines during self-medication is decreasing. Shares of payers, as well as the amount of payments by region, fluctuate from year to year, which does not allow us to draw conclusions that would characterize regions in terms of medicine costs and consumption characteristics.

SECTION 5.
SATISFACTION WITH MEDICAL CARE AND PERCEPTION OF HEALTH CARE REFORMS

Key findings:

- most of the population is satisfied with the medical care provided by the various health care entities, although the level of satisfaction varies with the various components. According to 2020 data, residents of the country are most satisfied with family doctors ("rather" or "completely satisfied" 74.1%), dentists (72.9%), pediatricians (72.2%), somewhat less with emergency medical care (66.5%), narrow specialists in the polyclinic (62.7%), maternity hospitals (59.3%) and the least - with help in the hospital (51.1%);
- compared to last year, the population's satisfaction with the work of emergency medical services slightly increased (by 5.7 percentage points, from 60.8% in 2019 to 66.5% in 2020). Satisfaction with the work of family doctors and dentists has remained high in recent years, but satisfaction with the medical care provided by narrow specialists in polyclinics, as well as care in hospitals, compared to the beginning of monitoring, has decreased by 5 percentage points;
- satisfaction with medical care remains uneven regionally, which may indicate differences in the quality and availability of health care services in different regions or different expectations from the population. According to the 2020 survey, residents of Volyn, Kherson, Rivne, Zhytomyr, and Donetsk regions are most satisfied with various components of the health care system, and residents of Kirovohrad, Sumy, Vinnytsia, Zaporizhzhia, and Zakarpattia regions are the least satisfied;
- the majority of the country's residents did not feel changes in the quality or financial, territorial, or time availability of medical care during the past year, but among the rest, there are slightly more those who reported the deterioration of the situation rather than the improvement. Of the negative changes, the largest share of the population pointed to the deterioration of the financial availability of medical care at all levels: 20.5% reported the deterioration of the financial availability of medical care provided by family doctors or pediatricians, 20.8% – by specialists in polyclinics, 20.7% – in hospitals. As for the improvements, respondents most often reported the improvement in the quality of medical care: according to 10.9%, the quality of medical care provided by a family doctor or pediatrician improved over the past year, 4.7% – by specialists in a polyclinic, 4.1% – in a hospital;
- the high cost of medicines (54.3% named it among the three main problems) and the high cost of treatment (50.9%) are the main problems in the health care system, according to most of the respondents. Lack of modern equipment (34.9%) and corruption in the Ministry of Health (31.7%) are also highly relevant problems;
- the public's perception of who is responsible for improving the functioning of a medical facility remains stable. As in previous years, most of the population (74.0%) believe that improving the work of medical institutions depends on the Minister of Health, 42.2% – on the chief physician, 32.8% – on the president, 27.1 % – on the Prime Minister.

The population's satisfaction with medical care is an important indicator of its quality, as it comprehensively characterizes the extent to which the available services meet the expectations and needs of the population. Accordingly, monitoring satisfaction with medical care can be a useful tool for identifying gaps and making decisions aimed at improving the quality and availability of medical care in the country.

Satisfaction with medical care not only indicates the quality and availability of health care services, but is also important for improving the health of the population in the future, as it positively affects people's behavioral intentions and practices in the event of illness, in particular people who are satisfied with the health care system health less often resort to self-medication[23], better adhere to the doctor's recommendations and the prescribed treatment[24], which, in turn, helps to preserve human health.

In this study, satisfaction with medical care is considered as a multidimensional concept that includes the actual measure of satisfaction with medical care provided by various health care entities. In addition, the study captures how people perceive the changes that are taking place, as well as people's perceptions of the most pressing problems in the field of health care, which complements the picture of the perception of the current situation and the population's expectations of medical reform.

5.1. Satisfaction with medical care

Satisfaction with medical care in this study was measured with the help of questions: "How satisfied or dissatisfied you are with the medical care that is provided today by [health care entity] given your own experience of visits to private or public health care institutions or the experience of relatives or close friends?" The response scale had four categories, from 1 – "not satisfied at all" to 4 – "completely satisfied".

According to the results of the 2020 survey, most of the population remains generally satisfied with how the various components of the health care system in Ukraine work: the percentage of those who indicated that they are "rather" or "quite satisfied" with medical care, exceeds 50 for all components (**Fig. 5.1**).

As in previous years, residents of the country are most satisfied with family doctors (74.1% are "rather" or "completely satisfied"), dentists (72.9%), pediatricians (72.2%), to a somewhat lesser extent with emergency medical services assistance (66.5%), narrow specialists in the polyclinic (62.7%), maternity hospitals (59.3%) and the least – with assistance in hospitals (51.1%).

Survey data show that the population's satisfaction with most aspects of medical care has not improved in recent years. Compared to last year, only the share of those who are satisfied with the work of an ambulance increased (by 5.7 percentage points, from 60.8% in 2019 to 66.5% in 2020); however, the level of satisfaction with the work of the ambulance is still lower than at the beginning of the monitoring. The level of satisfaction with the work of family doctors and dentists has practically not changed in recent years. Satisfaction with medical care provided by pediatricians, as well as care in maternity hospitals, increased slightly in 2018, after which it returned to the previous level. At the same time, satisfaction with the work of narrow specialists in the polyclinic, as well as with help in hospitals, has a downward trend and, compared to 2016, decreased by approximately 5 percentage points.

[23] Grigoryan, L., Burgerhof, J. G., Degener, J. E., Deschepper, R., Lundborg C. S., et al. (2008). Determinants of self-medication with antibiotics in Europe: the impact of beliefs, country wealth and the healthcare system. J Antimicrob Chemother 61: 1172–1179 https://pubmed.ncbi.nlm.nih.gov/18296694/; Alghanim, S.A. (f2011)f. Self-medication practice among patients in a public health care system. EMHJ - Eastern Mediterranean Health Journal, 17 (f5)f, 409–416. URL: https://apps.who.int/iris/handle/10665/118634

[24] Barbosa, C. D., Balp, M. M., Kulich, K., Germain, N., & Rofail, D. (2012). A literature review to explore the link between treatment satisfaction and adherence, compliance, and persistence. *Patient preference and adherence*, *6*, 39–48. URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3262489/

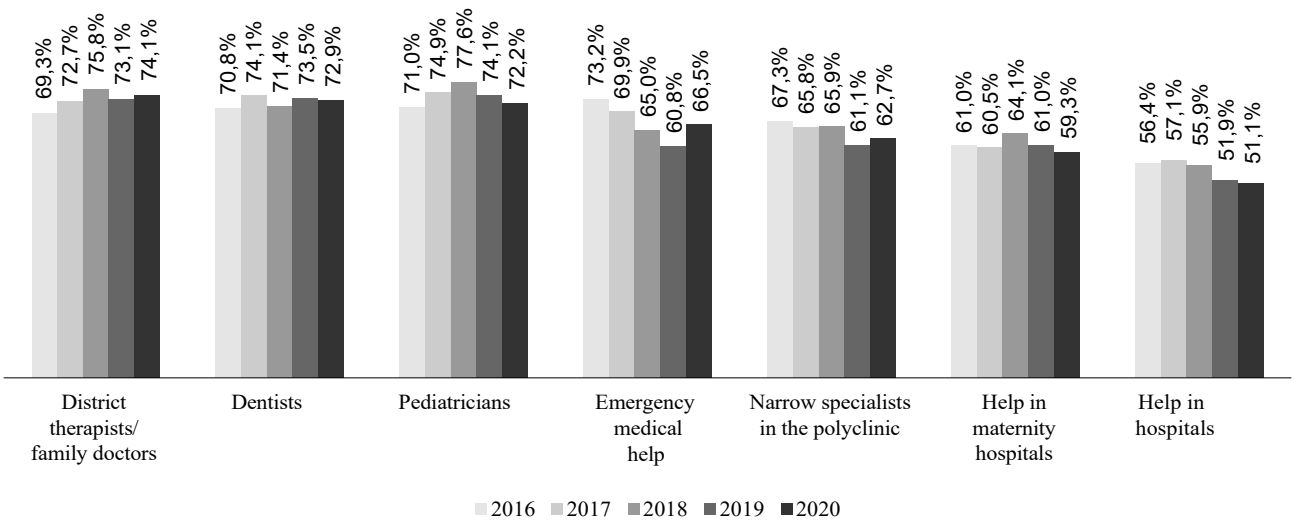


Figure 5.1. Satisfaction with medical care among the population: comparison by year (percentage of responses "rather satisfied" or "completely satisfied")

Satisfaction with medical care is influenced by both the characteristics of medical care (quality, availability, etc.) and the consumers' characteristics (socio-demographic characteristics, health status, etc.), which determine needs and expectations regarding medical care, based on which people evaluate own satisfaction with these services.

According to the survey, women, younger people (18–29 years old), urban residents, people with an average or high level of wealth (over UAH 1,000 per person) and in good health are somewhat more satisfied with medical care in Ukraine. On the other hand, older people, residents of rural areas, people with low incomes and poor health are on average slightly less satisfied with the medical care they receive (**table 5.1**).

The difference in the level of satisfaction with medical care between urban and rural residents may indicate that the quality of available medical care is slightly higher in cities than in villages. People who are older, in poor health, or low in wealth may be less satisfied with health care due to high need for health services and limited access to them, especially given that these factors (older age, poor health, and low income) are often combined. Although in general the inhabitants of the country are more satisfied than dissatisfied with medical care, the level of satisfaction with medical services significantly depends on the needs and financial capabilities of the recipients, and vulnerable categories of the population (people of older age, with poor health and low incomes) are less likely to have access to services with the quality of which they would be satisfied.

Table 5.1
Satisfaction with medical care by socio-demographic characteristics, 2020 (answers "rather satisfied" or "completely satisfied"), %

	Family doctors	Dentists	Pediatricians	Emergency medical help	Narrow specialists in the polyclinic	Help in maternity hospitals	Help in hospitals
Overall	74,1	72,9	72,2	66,5	62,7	59,3	51,1
GENDER							
men	72,8	71,7	67,4	63,6	61,9	50,1	48,2
women	75,1	73,8	75,3	68,7	63,4	63,9	53,3
AGE GROUP							
18–29 years old	82,6	83,2	81,2	67,7	73,7	73,5	58,8
30-44 years old	76,6	76,2	77,7	66,3	63,1	61,7	50,1
45–59 years old	68,7	68,9	61,6	62,2	55,3	49,6	45,8
60 years and older	71,9	65,3	59,5	69,6	63,0	46,0	52,9
PLACE OF RESIDENCE							
urban	75,7	73,8	74,6	67,8	64,6	61,7	51,9
rural	70,6	70,7	66,9	64,0	58,7	54,4	49,6
HOUSEHOLD INCOME PER PERSON							
up to 1000 UAH	66,3	64,9	63,5	55,6	56,0	47,9	43,5
1001–1500 UAH	74,7	72,0	75,0	65,7	61,5	62,4	51,2
1501–2000 UAH	74,5	70,6	75,3	74,9	65,4	66,9	57,4
2001–2500 UAH	77,0	69,0	78,3	70,3	61,7	61,5	50,0
over 2500 UAH	75,8	76,6	73,4	67,4	65,2	60,6	52,7
SELF-ASSESSMENT OF HEALTH							
Very poor	56,6	64,5	49,0	68,4	49,3	42,6	47,1
Poor	64,1	60,4	55,2	65,7	56,8	40,7	50,5
Average – not good, but not bad either	68,8	68,6	65,3	64,8	57,3	48,3	47,7
Good	79,5	75,8	76,3	68,0	66,6	66,5	53,0
Very good	83,0	84,1	82,8	68,1	74,5	66,9	60,3

Survey data indicate the existence of significant regional differences in satisfaction with medical care. In general, according to the 2020 survey, residents of the Volyn, Kherson, Rivne, Zhytomyr, and Donetsk regions are most satisfied with the various components of the health care system: in these regions, the degree of satisfaction with all medical care components is higher than the national average. A relatively lower level of satisfaction with medical care is observed in the Kirovohrad, Sumy, Vinnytsia, Zaporizhzhia, and Zakarpattia regions (**Table 5.2**).

Table 5.2
Satisfaction with medical care by region, 2020 (answers "rather satisfied" or "completely satisfied"), %

	Family doctors	Dentists	Pediatricians	Emergency medical help	Narrow specialists in the polyclinic	Help in maternity hospitals	Help in hospitals
Ukraine	74,1	72,9	72,2	66,5	62,7	59,3	51,1
Vinnytsia	55,9	57,1	51,4	50,5	38,2	34,7	31,4
Volyn	86,4	81,1	86,0	74,0	73,3	75,7	66,4
Dnipro	77,3	78,9	74,6	82,8	64,1	60,7	55,0
Donetsk	80,1	82,2	89,1	82,8	75,1	64,8	58,1
Zhytomyr	87,3	80,6	88,7	71,2	70,4	82,5	54,1
Zakarpattia	69,7	64,2	61,9	57,7	51,4	39,5	35,2
Zaporizhzhia	62,8	67,6	69,0	44,7	42,8	41,8	33,3
Ivano-Frankivsk	71,9	82,3	74,3	58,5	58,9	51,9	51,3
Kyiv	67,9	70,2	70,1	61,8	58,9	49,2	43,5
Kirovohrad	32,8	68,5	45,2	21,3	46,1	59,0	36,4
Luhansk	94,2	22,2	57,8	84,7	61,3	98,9	81,9
Lviv	82,1	80,3	82,4	58,4	70,8	68,4	56,7
Mykolaiv	69,6	70,7	85,5	63,3	67,2	70,5	57,4
Odesa	70,9	71,6	74,3	67,0	63,1	52,0	49,3
Poltava	67,8	70,5	68,5	69,3	61,0	59,4	52,8
Rivne	80,0	82,3	83,3	74,0	74,0	75,8	68,5
Sumy	58,5	56,1	50,2	42,1	44,5	32,6	31,0
Ternopil	78,8	85,8	75,8	63,1	73,0	65,4	60,9
Kharkiv	77,7	77,8	73,1	68,5	76,5	65,2	55,8
Kherson	80,0	79,9	83,4	82,4	80,0	68,4	66,0
Khmelnytskyi	71,6	68,4	59,4	63,6	53,0	55,7	47,0
Cherkasy	70,3	65,5	69,7	73,2	62,7	57,2	57,1
Chernivtsi	78,9	82,9	78,9	70,9	71,8	61,6	49,7
Chernihiv	71,7	78,9	85,9	79,0	72,3	74,3	57,2
The city of Kyiv	68,0	80,2	66,5	53,6	52,1	62,5	45,8

If we look at the dynamics of satisfaction with medical care by region (**Fig. 5.2**), the level of satisfaction is consistently high or is improving in some regions, while the study does not record other trends towards improvement.

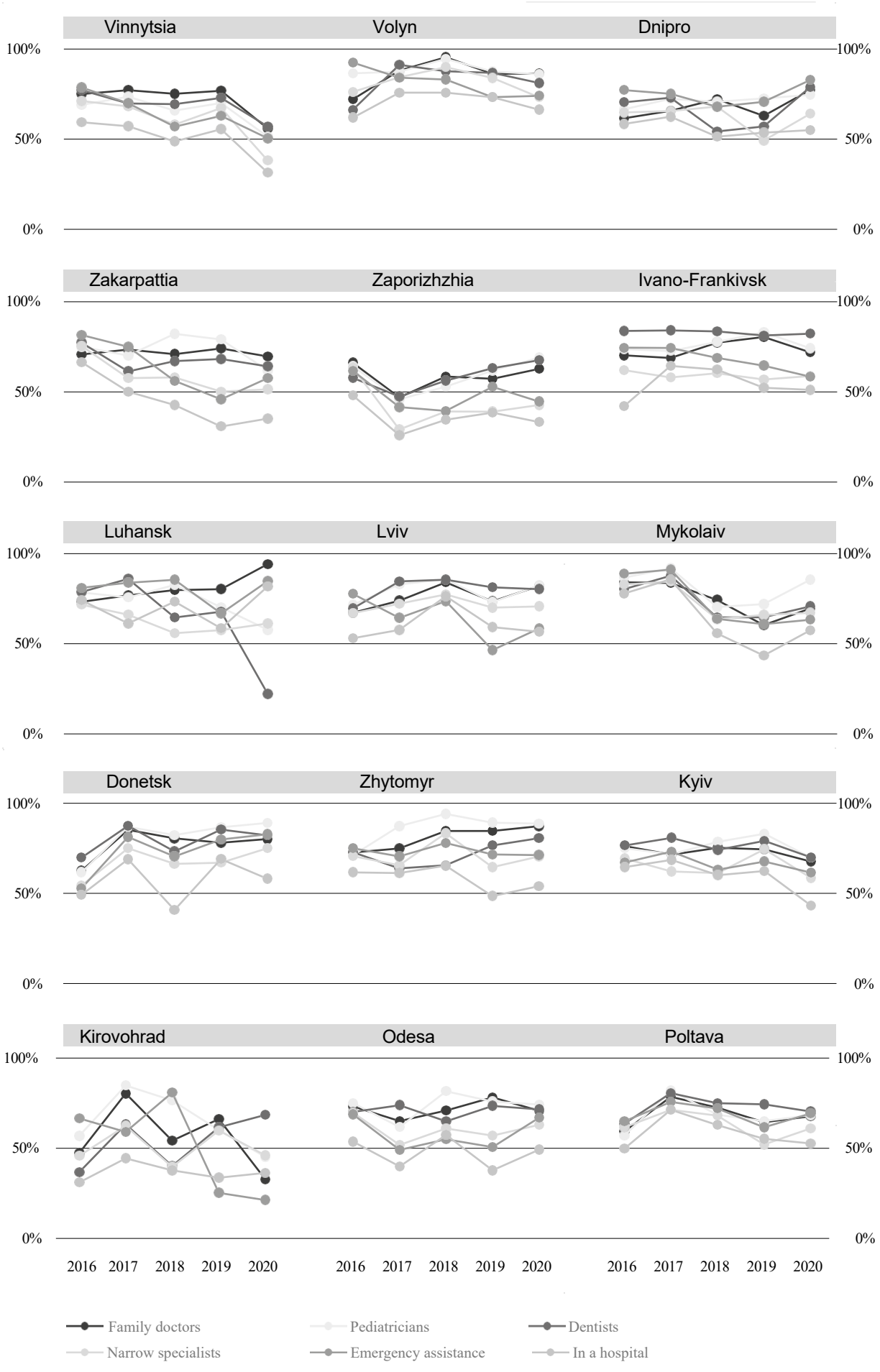
In particular, Volyn, Lviv, Rivne, Ternopil, Kherson and Chernihiv are regions with a relatively consistently high level of population satisfaction with medical care. Residents of Zhytomyr, Donetsk and Chernivtsi regions are also quite satisfied with various components of medical care, in addition to inpatient treatment. Residents of Luhansk region are satisfied with family doctors, emergency care, and inpatient treatment, but to a lesser extent with medical care provided by narrow specialists, pediatricians, and dentists.

A low level or a tendency towards worsening of the population's satisfaction with medical care can be observed in the Vinnytsia, Zakarpattia, Kyiv, Kirovohrad, and Sumy regions.

In Zaporizhzhia region, the level of population satisfaction with medical care remains lower than the national average, but over the past three years there has been a tendency to improvement, especially in relation to the work of family doctors, pediatricians, and dentists.

In the Mykolayiv region, satisfaction with the work of pediatricians has slightly increased over the past three years, but the level of satisfaction with other types of medical care remains relatively lower than three years ago.

That is, the population's satisfaction with medical care in the regional aspect remains heterogeneous and has different tendencies to change.



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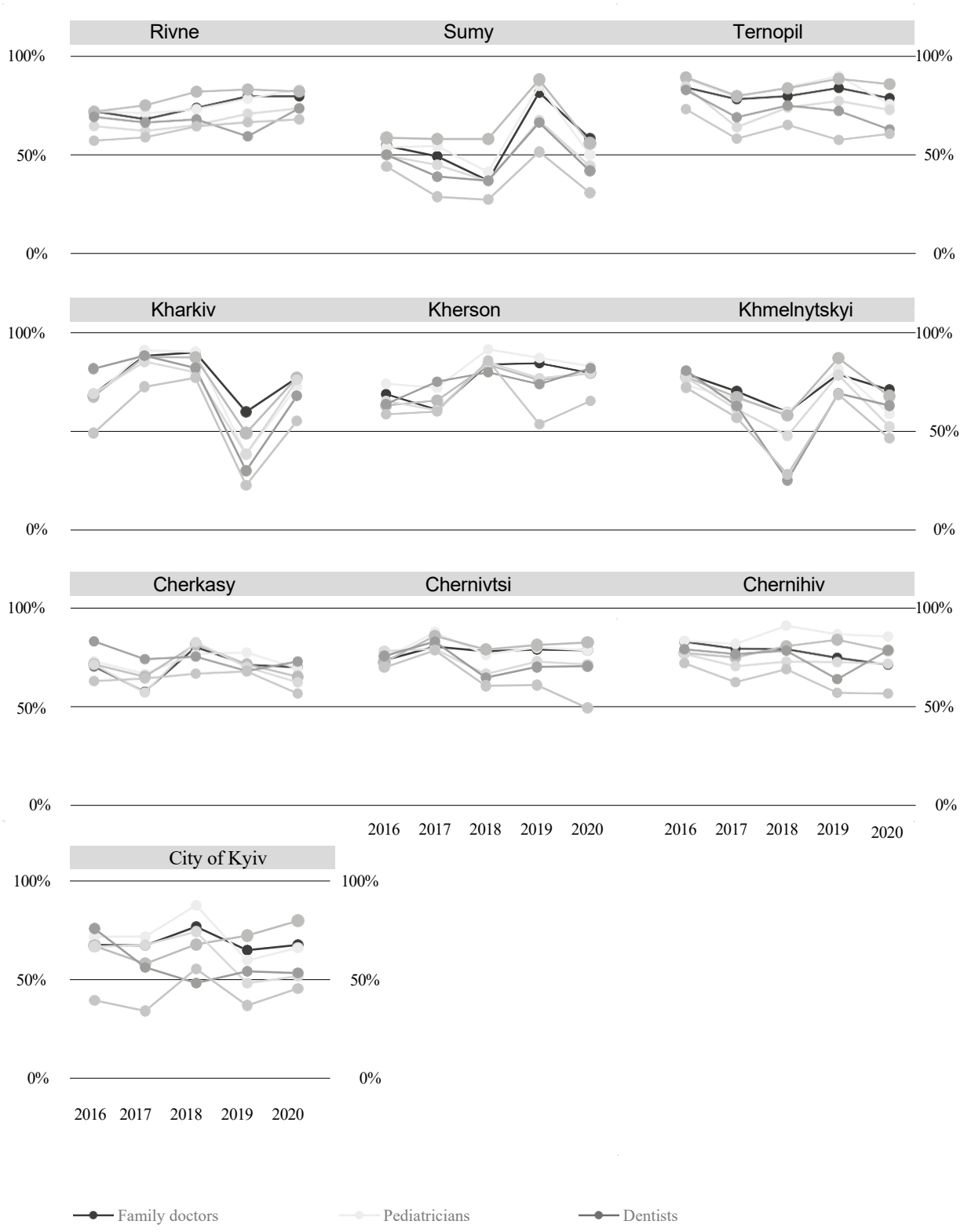

Figure 5.2. Dynamics of satisfaction with medical care by region, 2016–2020 (answers "rather satisfied" or "completely satisfied"), %

5.2. Perception of changes in the provision of health care services

During this year's survey, as in previous studies, respondents were asked to rate the changes they could observe during the last year in three aspects of medical care (quality, financial availability, and territorial or time availability) for three levels of this care: family doctor or pediatrician, narrow specialists in a polyclinic and in a hospital.

According to the obtained data, the majority of the country's residents did not observe any changes in the quality or availability of medical care during the past year, but among the rest, those who believe that the situation has worsened predominate (**Fig. 5.3**).

In particular, when answering questions about medical care provided by a family doctor or pediatrician, 75.6% indicated that the quality of these services did not change during the past year, 10.9% stated that it improved, and 13.4% – worsened. According to 75.8%, the financial availability of medical care provided by a family doctor or pediatrician has not changed, 3.7% stated that it had improved, and 20.5% – that it had worsened. Territorial or time availability of primary medical care has not changed according to 83.6%, improved – 4.3%, worsened – 12.1%.

When evaluating changes in the medical care provided by specialists in the polyclinic, the majority (81.1%) answered that the quality of this type of medical care did not change during the past year, according to 4.7%, it improved, and 14.2% believe that it worsened. According to 77.0%, the financial availability of medical care provided by specialists in the polyclinic has not changed, improved – 2.2%, worsened – 20.8%. According to 83.7%, territorial or time availability of this medical care has not changed, improved – 2.6%, worsened – 13.7%.

Respondents evaluated changes in the medical care provided in hospitals as follows. According to the majority (81.8%), the quality of medical care provided in hospitals has not changed during the last 12 months, 4.1% stated that it had improved and 14.0% – that it has worsened. According to 77.7%, the financial availability of inpatient treatment has not changed, it has improved – 1.6%, it has worsened – 20.7%. Territorial or time availability of this medical care has not changed, according to 88.8%, improved – 1.3%, worsened – 9.9%.

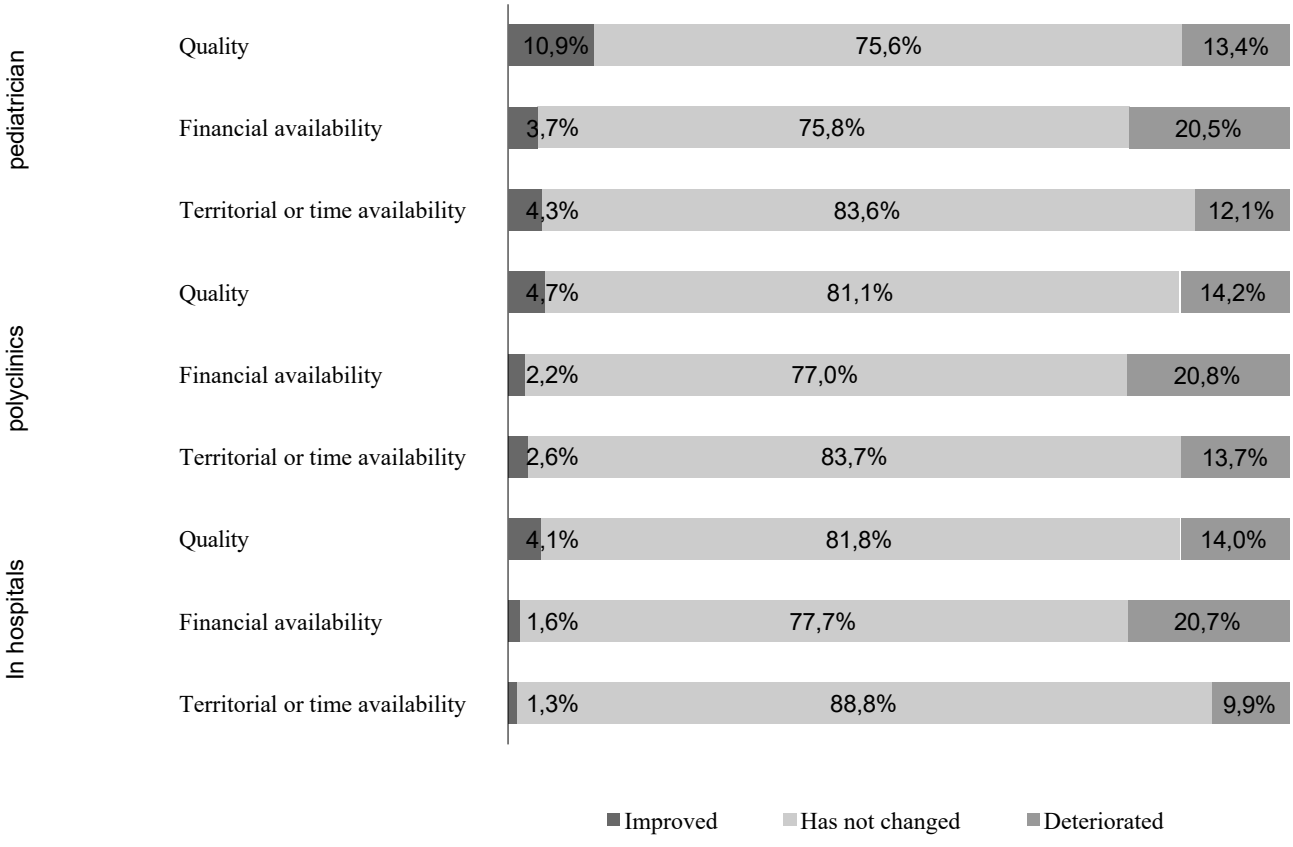

Figure 5.3. Assessment of changes in the quality and availability of different levels of medical care over the past 12 months, 2020.

As can be seen from **Table 5.3**, deterioration of the quality and financial availability of medical care at various levels is more often reported by older people, as well as people with poor health and lower income levels, that is, precisely those categories of the population that are most in need of medical care and for whose medical expenses are most tangible. On the other hand, young people (18–29 years old) and people with good health slightly more often reported that the quality of medical care improved during the past year. That is, the perception of changes in the provision of medical care is also influenced by the needs and expectations of consumers of this care, and the higher these needs are, the more critically people perceive the changes that are taking place.

By regions, changes in the quality and availability of various levels of medical care are perceived most positively by residents of Lviv and Kherson regions, and most negatively by residents of Vinnytsia, Zaporizhzhia, Kirovohrad, and Khmelnytskyi regions (**Table 5.4**). As mentioned earlier (**Fig. 5.2**), the level of population's satisfaction with medical care has also decreased in Vinnytsia, Kirovohrad, and Khmelnytskyi regions, which may indicate a real deterioration in the quality and availability of medical care in these regions. At the same time, the level of satisfaction with medical care is gradually improving in the Zaporizhzhia region, although it remains below the average, so perceptions of the deterioration of the quality or availability of medical care may partially reflect dissatisfaction with the current situation, and not indicate negative dynamics.

Table 5.3

Assessment of changes in the quality and availability of different levels of medical care over the past 12 months by socio-demographic characteristics, 2020, %

	FAMILY DOCTOR/PEDIATRICIAN									NARROW SPECIALISTS IN THE POLYCLINIC										IN THE HOSPITAL								
	Quality of medical care			Financial availability			Territorial or time availability			Quality of medical care			Financial availability			Territorial or time availability			Quality of medical care			Financial availability			Territorial or time availability		
	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed
Overall	**10,9**	**13,4**	**75,6**	**3,7**	**20,5**	**75,8**	**4,3**	**12,1**	**83,6**	**4,7**	**14,2**	**81,1**	**2,2**	**20,8**	**77,0**	**2,6**	**13,7**	**83,7**	**4,1**	**14,0**	**81,8**	**1,6**	**20,7**	**77,7**	**1,3**	**9,9**	**88,8**
GENDER																											
men	9,9	13,6	76,5	3,5	19,2	77,3	3,9	11,0	85,1	4,2	14,3	81,5	2,3	19,6	78,1	2,5	13,1	84,4	3,8	13,8	82,5	1,4	19,9	78,8	1,1	9,8	89,2
women	11,8	13,3	75,0	3,9	21,4	74,8	4,6	13,0	82,4	5,0	14,2	80,8	2,1	21,7	76,2	2,7	14,1	83,2	4,5	14,2	81,3	1,8	21,4	76,8	1,4	10,1	88,5
AGE GROUP																											
18–29 years old	14,2	9,1	76,7	4,3	12,6	83,1	5,2	9,8	85,1	6,1	11,2	82,7	2,2	16,6	81,2	3,2	11,9	84,9	5,6	9,8	84,6	2,0	16,1	81,9	1,5	8,4	90,1
30-44 years old	12,2	11,6	76,2	4,5	17,9	77,6	5,8	11,2	83,0	5,3	13,7	81,1	2,8	18,3	78,9	3,3	12,9	83,8	4,4	13,1	82,5	1,8	19,0	79,1	1,5	9,8	88,8
45–59 years old	10,0	15,4	74,6	3,1	23,1	73,8	3,4	12,3	84,3	4,2	15,4	80,4	1,9	22,8	75,3	2,1	13,6	84,3	2,9	14,6	82,6	1,6	22,1	76,3	0,9	10,2	89,0
60 years and more	18,7	15,8	75,4	3,1	24,9	72,0	3,1	14,1	82,8	3,8	15,3	80,8	1,8	23,8	74,4	2,0	15,5	82,5	4,3	16,8	79,0	1,2	23,5	75,3	1,2	10,7	88,0
PLACE OF RESIDENCE																											
urban	10,9	13,2	75,9	4,0	19,6	76,4	4,8	10,8	84,5	5,0	13,6	81,4	2,3	19,5	78,2	2,9	12,5	84,5	4,3	12,8	82,9	1,7	19,1	79,1	1,5	7,8	90,7
rural	11,1	13,9	75,0	3,1	22,3	74,7	3,2	15,1	81,7	4,0	15,7	80,3	1,8	23,8	74,3	1,8	16,3	81,9	3,7	16,9	79,4	1,3	24,3	74,4	0,7	14,6	84,6
HOUSEHOLD INCOME PER PERSON																											
up to 1000 UAH	7,8	18,0	74,2	3,3	21,5	75,3	2,3	12,7	85,0	2,6	23,5	73,9	1,2	28,1	70,7	1,9	17,7	80,4	2,8	23,3	73,9	1,2	24,4	74,3	0,8	15,4	83,8
1001–1500 UAH	11,8	15,2	73,0	4,2	23,1	72,8	4,0	14,9	81,1	5,8	15,8	78,4	2,2	23,4	74,4	2,2	17,1	80,7	4,3	19,6	76,1	0,6	24,5	74,9	1,7	13,9	84,5
1501–2000 UAH	11,1	12,9	75,9	4,3	22,7	73,0	4,9	11,8	83,3	4,7	11,9	83,4	1,9	20,9	77,2	2,5	13,4	84,1	5,4	11,8	82,8	2,3	21,7	76,0	1,9	8,0	90,1
2001–2500 UAH	12,5	14,5	73,0	2,4	25,5	72,1	3,9	12,7	83,5	4,5	16,7	78,9	2,2	23,3	74,4	1,4	14,7	83,9	3,4	14,9	81,7	1,0	23,6	75,4	1,0	10,8	88,2
over 2500 UAH	11,1	10,9	78,0	3,7	16,8	79,5	5,0	10,6	84,4	4,8	11,2	84,0	2,2	17,2	80,6	3,1	10,7	86,2	3,9	9,5	86,6	2,0	16,4	81,6	1,1	7,1	91,7
SELF-ASSESSMENT OF HEALTH STATUS																											
Very poor	9,4	37,0	53,7	0,5	37,8	61,6	0,6	23,9	75,5	2,3	19,1	78,5	1,0	39,1	59,9	1,8	26,5	71,7	1,4	25,1	73,5	0,0	35,4	64,6	0,6	11,9	87,5
Poor	7,6	22,6	69,9	3,0	30,1	66,9	3,0	15,8	81,2	3,6	21,0	75,4	1,0	32,3	66,7	3,0	18,8	78,2	4,8	19,6	75,6	1,5	29,7	68,8	0,9	12,7	86,5
Average – not good and not bad	8,3	15,6	76,0	2,8	24,3	72,9	3,1	15,4	81,5	4,0	17,7	78,3	1,9	24,3	73,8	1,9	16,9	81,1	3,8	17,9	78,3	1,4	24,4	74,2	1,2	13,5	85,3
Good	13,4	10,0	76,7	4,6	16,6	78,7	5,4	9,1	85,5	5,4	11,1	83,4	2,6	17,2	80,2	3,2	10,6	86,2	4,6	10,1	85,3	1,8	16,7	81,6	1,4	7,2	91,4
Very good	13,2	9,4	77,5	3,7	12,2	84,0	5,1	8,2	86,7	5,1	8,2	86,8	2,3	11,3	86,4	2,0	9,5	88,5	3,4	10,1	86,5	1,3	14,8	83,9	1,1	6,3	92,6

Table 5.4

Assessment of changes in the quality and availability of various levels of medical care over the past 12 months by region, 2020 %

	FAMILY DOCTOR/PEDIATRICIAN									NARROW SPECIALISTS IN THE POLYCLINIC										IN THE HOSPITAL								
	Quality of medical care			Financial availability			Territorial or time availability			Quality of medical care			Financial availability			Territorial or time availability			Quality of medical care			Financial availability			Territorial or time availability		
	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed	Improved	Deteriorated	Has not changed
Ukraine	**10,9**	**13,4**	**75,6**	**3,7**	**20,5**	**75,8**	**4,3**	**12,1**	**83,6**	**4,7**	**14,2**	**81,1**	**2,2**	**20,8**	**77,0**	**2,6**	**13,7**	**83,7**	**4,1**	**14,0**	**81,8**	**1,6**	**20,7**	**77,7**	**1,3**	**9,9**	**88,8**
Vinnytsia	6,4	23,2	70,4	1,4	23,7	74,9	1,7	8,9	89,4	2,6	38,9	58,5	0,8	39,1	60,2	2,2	16,9	80,9	5,7	37,0	57,3	1,4	37,3	61,2	1,0	14,6	84,4
Volyn	18,9	8,6	72,5	4,7	29,6	65,7	10,1	6,7	83,2	8,8	9,8	81,5	3,1	27,2	69,7	4,6	4,0	91,4	10,0	9,0	81,0	2,6	24,2	73,2	3,8	4,9	91,3
Dnipro	4,2	9,8	86,0	1,8	8,2	89,9	1,2	8,5	90,3	1,8	8,6	89,5	0,6	9,4	90,0	0,8	11,9	87,3	0,8	6,0	93,2	0,0	10,0	90,0	0,0	6,5	93,5
Donetsk	1,6	6,3	92,1	1,2	15,9	82,9	1,1	24,3	74,6	1,2	4,4	94,4	0,6	16,4	82,9	1,3	23,4	75,3	3,0	4,8	92,2	0,7	11,3	87,9	0,2	13,6	86,2
Zhytomyr	24,1	11,0	64,9	8,8	32,5	58,7	9,7	10,8	79,5	8,9	18,5	72,5	3,7	29,6	66,7	2,6	17,1	80,3	7,4	21,5	71,1	1,7	40,1	58,2	1,5	10,5	87,9
Zakarpattia	5,6	8,0	86,4	2,8	24,5	72,7	4,9	12,8	82,3	2,7	16,5	80,8	3,7	37,3	59,0	4,1	15,8	80,1	2,6	12,5	84,9	2,7	34,1	63,2	1,8	17,4	80,8
Zaporizhzhia	4,8	38,8	56,4	3,4	49,3	47,2	2,5	40,0	57,5	3,0	51,6	45,4	2,3	52,4	45,4	1,4	49,0	49,6	5,3	43,1	51,6	0,8	45,6	53,6	0,9	41,9	57,1
Ivano-Frankivsk	18,4	10,3	71,3	5,5	13,4	81,1	8,2	7,5	84,3	7,5	10,3	82,2	3,2	12,4	84,4	4,4	5,0	90,6	6,2	12,4	81,4	1,9	15,2	83,0	2,6	6,8	90,6
Kyiv	7,2	19,0	73,7	2,8	18,1	79,1	2,8	13,6	83,6	2,4	13,5	84,1	1,4	16,0	82,6	1,3	17,7	81,0	2,2	11,9	85,9	0,6	14,3	85,1	0,5	11,8	87,7
Kirovohrad	0,9	30,2	68,9	0,0	21,5	78,5	1,4	7,1	91,5	0,7	20,8	78,5	0,3	22,9	76,9	0,0	6,5	93,5	4,5	15,6	79,9	0,0	24,3	75,7	0,0	4,1	95,9
Luhansk	0,6	0,7	98,7	0,1	10,4	89,5	0,0	0,4	99,6	0,8	0,3	98,9	0,2	10,8	89,0	0,0	0,0	100,0	0,6	0,0	99,4	0,5	9,1	90,3	0,0	0,0	100,0
Lviv	35,1	10,4	54,5	13,4	24,9	61,7	15,8	8,0	76,2	14,6	12,3	73,1	8,9	25,5	65,6	8,6	7,0	84,4	10,3	13,8	75,9	5,5	24,1	70,4	3,6	3,5	92,9
Mykolaiv	5,8	19,0	75,2	2,1	16,2	81,6	0,2	23,2	76,6	3,1	11,8	85,1	1,8	10,0	88,1	0,0	10,5	89,5	2,7	6,3	91,0	1,7	8,0	90,3	0,0	2,0	98,0
Odesa	17,1	8,6	74,3	3,9	18,3	77,8	2,8	6,0	91,1	6,6	14,7	78,7	1,4	25,1	73,4	2,3	8,9	88,8	5,5	9,1	85,4	0,8	25,9	73,3	0,7	7,5	91,8
Poltava	11,6	19,9	68,5	2,3	36,2	61,6	0,9	12,2	86,9	6,8	27,4	65,9	2,0	37,7	60,3	0,9	21,2	77,9	3,8	21,1	75,1	0,6	34,4	65,0	0,5	8,5	91,0
Rivne	16,3	9,4	74,3	3,1	21,2	75,7	3,8	8,1	88,1	6,9	8,5	84,6	1,4	16,1	82,5	1,0	6,8	92,2	5,3	6,3	88,4	1,2	13,8	85,0	0,2	5,2	94,6
Sumy	2,6	15,6	81,8	1,3	21,8	76,9	8,2	19,3	72,5	3,2	18,3	78,4	2,3	22,9	74,7	3,6	18,6	77,8	2,7	22,9	74,4	1,7	22,1	76,3	5,4	19,5	75,1
Ternopil	9,1	5,1	85,8	0,4	2,4	97,2	1,1	3,4	95,4	3,8	3,9	92,3	0,2	2,5	97,3	1,2	2,7	96,1	2,3	3,7	94,0	0,4	1,5	98,1	0,0	2,0	98,0
Kharkiv	9,9	11,9	78,2	3,6	19,7	76,7	5,9	8,9	85,2	3,3	10,9	85,8	2,3	18,5	79,2	4,4	11,5	84,2	3,7	13,2	83,1	2,8	21,3	75,9	1,4	8,1	90,5
Kherson	18,8	8,6	72,5	12,3	17,2	70,5	14,1	10,6	75,3	17,1	13,8	69,1	8,7	22,1	69,2	11,2	12,5	76,4	9,6	16,3	74,1	4,9	32,0	63,1	2,1	10,6	87,3
Khmelnytskyi	22,3	34,0	43,7	8,3	21,5	70,2	9,1	19,3	71,5	11,5	26,5	62,0	6,6	14,7	78,7	7,7	19,4	72,9	8,7	43,3	48,0	6,9	32,1	61,0	6,3	24,1	69,6
Cherkasy	14,1	12,1	73,9	3,0	16,6	80,4	2,7	7,5	89,8	4,5	14,1	81,3	2,1	15,4	82,5	0,7	8,4	90,9	8,2	15,5	76,3	3,2	15,0	81,8	0,6	6,8	92,6
Chernivtsi	20,9	12,1	67,0	7,9	9,1	83,0	6,7	6,1	87,1	7,3	10,8	81,9	3,3	7,7	89,0	4,6	4,4	91,1	5,8	16,1	78,1	3,3	11,4	85,3	2,7	4,0	93,3
Chernihiv	11,4	14,0	74,5	1,5	27,4	71,2	0,5	10,2	89,3	2,9	3,6	93,5	0,6	12,9	86,4	1,2	16,4	82,5	2,1	1,6	96,3	0,0	11,9	88,1	0,0	7,4	92,6
The city of Kyiv	9,1	16,6	74,2	1,8	28,0	70,2	0,8	7,0	92,2	2,3	12,4	85,3	0,4	25,5	74,0	0,4	9,4	90,2	0,5	17,6	81,9	0,4	26,5	73,0	0,4	6,0	93,7

In addition to the question of how, in the respondents' opinion, the situation with the provision of medical care has changed, the interviewees pointed to the improvement or deterioration of services, and were asked to specify what exactly, in their opinion, has improved or worsened. The distribution of answers to these questions is given in the **table 5.5**.

According to the answers of the respondents, the treatment of patients by doctors and medical personnel has improved: in relation to medical care provided by family doctors or pediatricians (69.4% chose this option), in relation to the work of narrow specialists (50.6 %) and medical care in hospitals (50.6%) – of those who indicated that the quality of these services improved during the last 12 months. On the other hand, those who experienced a deterioration in the quality of medical care most often indicated a deterioration in the effectiveness of treatment (56.1% of those who indicated a deterioration in the quality of medical care provided by family doctors or pediatricians, 64.0 % – narrow specialists in polyclinics, 64.0% – in hospitals) in response to the question of what exactly worsened.

The views of the population were ambiguous regarding what exactly has improved or worsened in the financial availability of medical care. Those who indicated that financial access to health care had improved mostly reported that their ability to obtain treatment, including counseling, diagnostic and laboratory tests, or medical procedures, had improved during the past year, and the ability to purchase or obtain prescription medicines was the next most common aspect where, according to the interviewees, improvement was taking place. At the same time, those who indicated that the financial availability of medical care has worsened, reported a deterioration in the same aspects. Such answers may indicate a difference in the experience of receiving medical care, that is, some people may have heard of or used programs aimed at facilitating the financial accessibility of treatment, while some may not have been aware of these changes or were not affected by them.

When answering the question, what exactly has improved in the territorial or time availability of medical care, the vast majority reported the improvement in the ability to make an appointment with a doctor in advance and the ability to choose a doctor. At the same time, some respondents reported a deterioration in territorial or time accessibility, primarily due to the territorial inconvenience of the medical institution or accessing it, which could be a consequence of the closure of some medical institutions.

The country's residents noticed both positive and negative changes in the provision of medical care during the past year. Positive changes are the improvement of medical workers' attitude to patients, more convenient appointments, and a better opportunity to choose a doctor. At the same time, some residents of the country noticed a deterioration in the effectiveness of treatment and the territorial convenience of the institution or access to it. Respondents evaluate the financial availability aspects of medical care ambiguously: some observe an improvement, some observe a deterioration in the ability to receive treatment or purchase medicine.

Table 5.5
Aspects of improvement/deterioration of medical care over the past 12 months (respondents who indicated a corresponding change in services), %

Aspects of improvement	FAMILY DOCTOR/ PEDIATRIST		NARROW SPECIALISTS IN THE POLYCLINIC		IN HOSPITAL	
	What exactly has improved	What exactly worsened	What exactly has improved	What exactly worsened	What exactly has improved	What exactly worsened
Treatment of patients by doctors and medical personnel	69,4%	45,6%	50,6%	44,6%	50,6%	44,6%
Professionalism of doctors	27,2%	44,0%	31,9%	52,7%	31,9%	52,7%
Effectiveness of treatment	26,2%	56,1%	38,6%	64,0%	38,6%	64,0%
Conditions under which medical assistance is provided (repair, cleanliness of premises, including bathrooms)	34,1%	22,0%	34,7%	23,5%	34,7%	23,5%
Ability to purchase or receive medication as prescribed by a doctor	61,5%	40,6%	35,9%	60,8%	45,9%	59,9%
Ability to receive treatment, including consultation, diagnostic and laboratory tests, treatment procedures	58,5%	47,3%	65,7%	63,8%	60,3%	64,3%
Availability of equipment in the institution and the possibility of receiving medical services using it	32,7%	20,2%	34,1%	35,2%	34,7%	38,9%
Ability to choose a doctor	51,2%	24,5%	48,0%	26,7%	46,0%	21,7%
Waiting time for the doctor	27,6%	49,0%	25,7%	47,4%	33,5%	39,3%
Doctor's appointment schedule	26,6%	41,0%	34,1%	37,1%	31,3%	33,2%
Possibility of making an appointment with a doctor in advance for the required time	60,5%	46,9%	57,7%	47,7%	45,5%	37,7%
Territorial convenience of the medical institution and transport connection with it	18,1%	47,2%	21,4%	50,1%	25,4%	55,6%

5.3. Perception of problems in the health care system and responsibility for improving its functioning

As part of the survey, respondents were prompted to answer the question "In your opinion, what are the main problems in the health care system? Name up to three problems, starting with the most important".

As in previous years, according to most of the population, the main problems in the health care system remain the high cost of medicines and the high cost of treatment (**Fig. 5.4**). According to the 2020 survey, 54.3% named the high cost of medicines among the three main problems, including 21.7% who put this problem in the first place. The high cost of treatment is one of the three main problems, according to 50.9%, including 12.9% of respondents named it the most important.

Also, the lack of modern equipment (was named by 34.9% among the three main problems, including the most important – by 11.3%) and corruption in the Ministry of Health (was named among the three main problems by 31.7%, including the most important – by 19.4%) are also highly relevant problems.

Compared to previous years, there is a certain decrease in the share of those who consider the existence of informal payments to doctors to be a problem, although the relevance of this problem remains high: in 2017, 34.7% chose this option among the three main problems, in 2020 – 25.3 %.

According to the population, the lack of professionalism and negligence of the medical staff also remains a tangible problem: among the three main problems, the incompetence of the medical staff was indicated by 24.4% (the most important – 7.0%), negligence – by 23.5% (the most important – 7.9%).

As before, the lack of medical staff (was named by 12.7%), inconvenient schedule, long queues (11.3%), unsatisfactory sanitary, and hygienic condition of institutions (5.2%) remain relatively least urgent problems from the list.

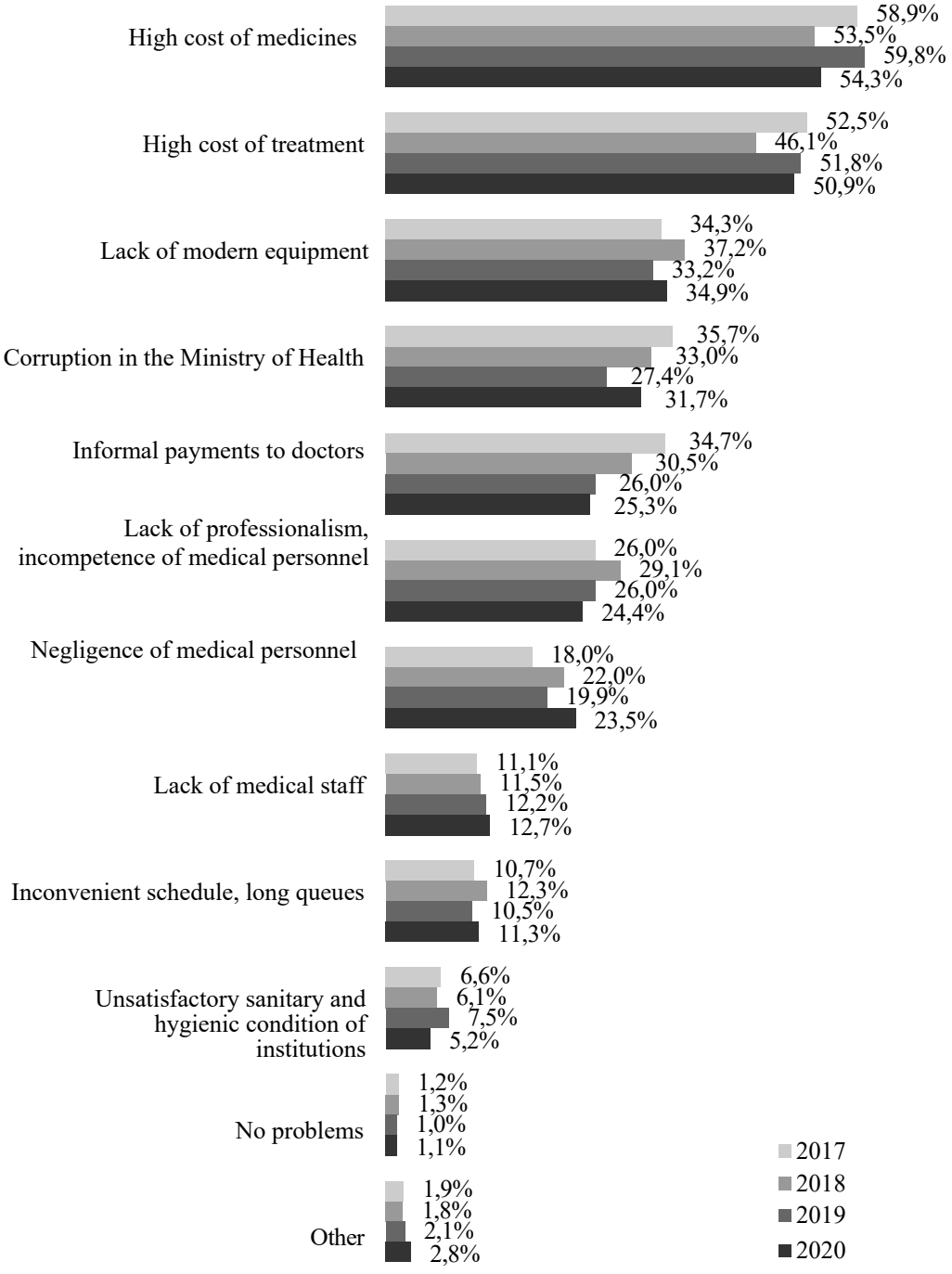

Figure 5.4. Perception of the main problems in health care (one of three choices): comparison by year

As before, the improvement of the work of medical institutions depends on the Minister of Health according to the absolute majority of the population (74.0%). In addition, about 42.2% assign responsibility for improving the work of medical institutions to the chief physician, 32.8% to the president, and 27.1% to the prime minister. Compared to the previous years of the study, the share of those who place the responsibility for improving the work of medical institutions on the head of the city/settlement/community slightly increased (from 15.4% to 20.7%). However, in general, the population's views on this issue during the study period remained quite stable (**Fig. 5.5**).

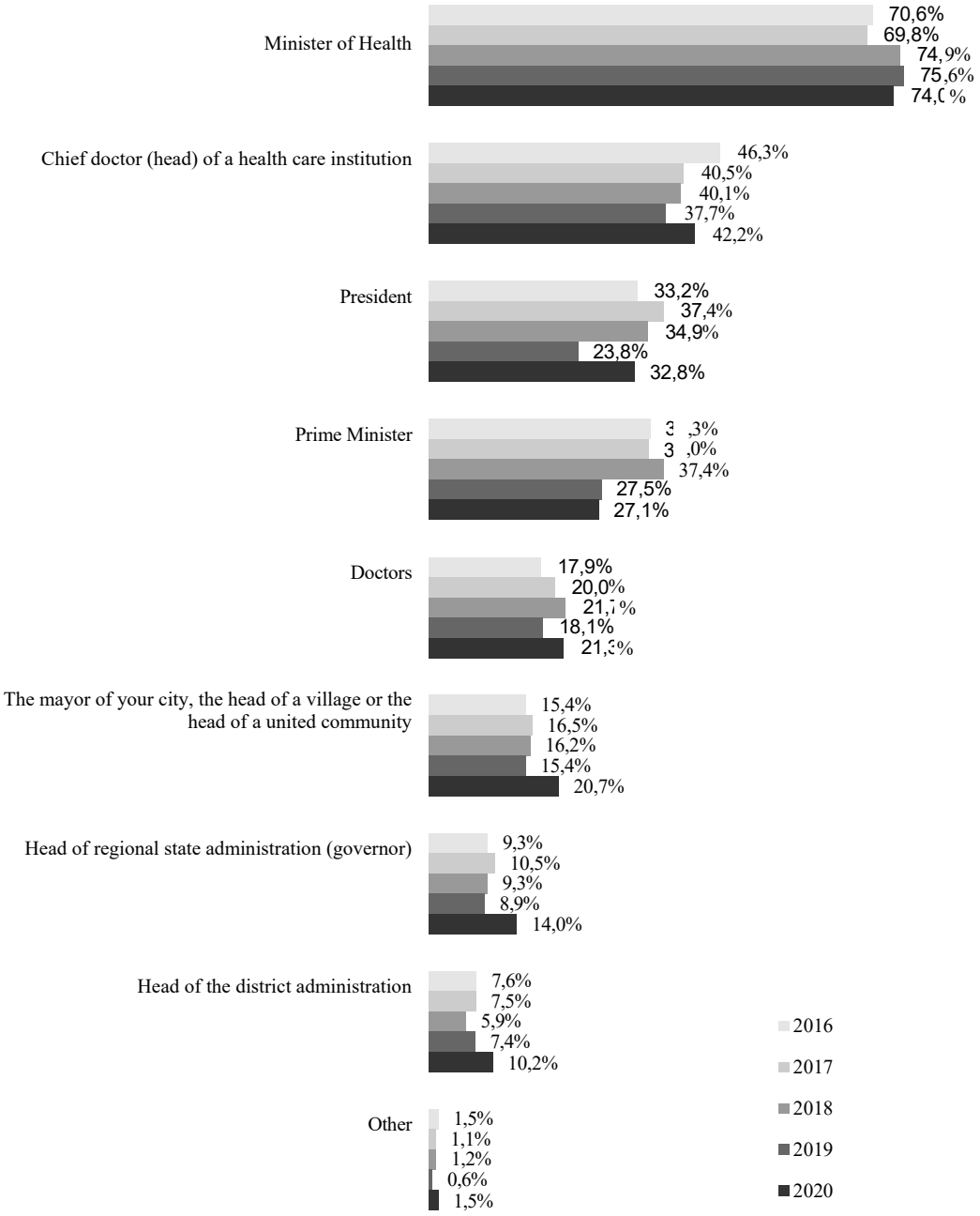

Figure 5.5. Responsibility for improving the functioning of medical institutions: comparison by year (*respondents could choose several answers*)

Thus, during the entire period of the study (2016–2020), residents of Ukraine remain mostly satisfied with all components of the health care system, to the greatest extent – with family doctors, dentists, pediatricians and a little less – with emergency medical care, narrow specialists in polyclinics, maternity homes, hospital care. In 2018, the study recorded a 3-4 percentage point increase in population satisfaction with medical care provided by family doctors and pediatricians, as well as care in maternity hospitals, which indicates a

generally positive perception by the population of the changes that took place after the start of the medical reform at the primary levels. However, satisfaction with medical care provided by specialists in the polyclinic and care in hospitals did not improve and was lower at the time of the last survey than at the beginning of the monitoring. Analysis of the situation is currently complicated by the fact that a relatively small percentage of the population has experience of contact with these institutions, as well as the possible impact of the COVID-19 epidemic.

In terms of satisfaction with medical care, the financial availability of health care services remains the most painful issue for the population. About a fifth of the population reported a deterioration in the financial availability of various medical care levels during the past year, in particular, a deterioration in the ability to purchase medicines as prescribed by a doctor and the ability to receive treatment, diagnostic services, or medical procedures. About half of the population considers the high cost of medicines and the high cost of treatment to be the main problems in the health care system. At the same time, a positive trend is that a part of the population reports the improvement of the medical care quality, in particular, a more polite and attentive attitude of medical workers to patients, as well as better options for choosing a doctor and improving the possibility of making an appointment with a doctor in advance. That is, in general, there are positive changes in the quality and availability of medical care for the population, but problems with the financial availability of treatment remain relevant, which, in turn, surely affects the population's satisfaction with medical care.

SECTION 6. HIV, TUBERCULOSIS AND HEPATITIS C

Key findings:

- 95.5% of the adult population have heard of HIV/AIDS;
- about half (54.1%) of the respondents demonstrate sufficient knowledge of the HIV transmission ways (they chose only the correct answers, all or part of them); 2.0% named only wrong answers, and 4.6% could not name exactly how HIV is transmitted;
- half (51.4%) of the respondents could not name a single symptom of HIV infection; a third (32.7%) chose only the correct symptoms (all or some of them), and 3.2% named only the wrong symptoms;
- about half (52.4%) of the entire population know where to get a quick or laboratory blood test for HIV. The majority (59.1%) know that HIV cannot be completely cured, but it is possible to maintain a satisfactory state of health. 42.3% could not answer the question about exactly how HIV treatment is paid for in Ukraine; according to 46.4%, the patient pays at least part of the costs, and only 11.3% answered that all medicines for HIV treatment are provided by the state for free;
- among the adult population, 29.5% have taken an HIV test, including 16.6% in the last two years. Among them, 98.1% know their result and 62.8% were diagnosed for free;
- the absolute majority of those who did not undergo an HIV diagnosis at all or during the last two years stated that they did not see the need for it and did not consider themselves to be in the risk group (90.9%), and about a tenth of them do not know where to do it (11.9%);
- a large part of the population has prejudice and fear of people living with HIV;
- 32.4% would buy fresh vegetables from the seller if they knew that this person had HIV, 67.6% would not;
- 22.4% agree that if a schoolteacher is HIV positive, they should be allowed to continue teaching at school, 77.6% do not agree;
- 20.3% would allow their child to attend kindergarten, school, or classes together with children infected with HIV, 79.7% would not allow;
- 79.0% know that one cannot become infected with HIV through food prepared or served by an HIV-infected person, but one in five (21.0%) thinks otherwise;
- almost everyone in Ukraine (98.0% of the adult population) has ever heard of tuberculosis;
- 9.3% of respondents named only the correct ways of tuberculosis infection (one or both), 15.9% named only incorrect answers, and 3.1% could not name exactly how tuberculosis is transmitted;
- 78.1% of respondents named only correct symptoms of tuberculosis (all or some), 0.5% of respondents named only incorrect answers, and 4.7% could not name any symptom of tuberculosis;
- almost three-quarters of the population (73.5%) know where an X-ray or sputum analysis can be done to diagnose tuberculosis. 91.8% were tested for tuberculosis: 90.9% had a fluorography; 8.8% did screening (questionnaire by a doctor) for tuberculosis; 7.3% had a sputum test;
- 42.6% of the population know that tuberculosis is curable. Approximately the same number (39.8%) believe that tuberculosis cannot be cured completely, but it is possible to maintain a satisfactory state of health, and 3.7% of the population believe that this disease is incurable, and it is impossible even to improve the quality of life of the infected person. Quite a lot of people (13.9%) answered that they do not know whether tuberculosis can be cured completely;
- a third (36.1%) of Ukrainian residents could not answer the question about how tuberculosis treatment is paid for in Ukraine; according to 54.5%, the patient pays at least part of the costs, and only 9.4% believe that all medicines for the treatment of tuberculosis are provided by the state for free;

- the absolute majority of those who have not been diagnosed for tuberculosis at all or in the last two years indicated that they did not see the need for it and did not consider themselves to be in the risk group (83.4%), and about a tenth do not know where to go (12.5%) or do not have free time for diagnosis (10.1%);
- a large part of the population has prejudices and fears about tuberculosis patients:
    - only 5.6% would buy fresh vegetables from the seller if they knew that this person had tuberculosis, 94.4% would not buy;
    - only 3.7% agree that if a schoolteacher is a carrier of tuberculosis, they should be allowed to continue teaching at school, 96.3% do not agree;
    - only 3.4% would allow their child to attend kindergarten, school, or classes together with children infected with tuberculosis, 96.6% would not allow;
    - only a third (30.3%) know that you cannot get infected with tuberculosis if you eat food prepared or served by a person infected with tuberculosis, but 69.7% believe that infection is possible;

- 83.6% of the adult population of Ukraine have heard of hepatitis C;

- 50.6% named only the correct ways of hepatitis C infection (all or some); 4.2% named only wrong answers; 16.6% could not answer how hepatitis C is transmitted;

- only 7.0% of respondents know that hepatitis C can be asymptomatic, and 24.1% could not name a single symptom of hepatitis C;

- a little less than half of those who have heard of this disease (46.8%) know where to get a quick or laboratory blood test for hepatitis C;

- only 19.3% of the population know that hepatitis C is curable; the majority (44.8%) believe that hepatitis C cannot be cured completely, but it is possible to maintain a satisfactory state of health, and 7.1% believe that this disease is incurable and it is impossible even to improve the quality of life of the infected person; quite a lot of people (28.8%) answered that they do not know if hepatitis C can be cured completely;

- 43.5% of respondents could not answer how exactly hepatitis C treatment is paid for in Ukraine; according to 54.2%, the patient pays at least part of the costs, and only 2.4% know that all medicines for the treatment of hepatitis C are provided by the state free of charge;

- 19.7% of the adult population had ever taken a hepatitis C test, including 11.7% within the last two years. Among them, 98.0% know their result, 47.4% fully or partially paid for this test, and 52.6% were diagnosed for free;

- the absolute majority of those who have not been tested for hepatitis C at all or in the last two years said that they do not see the need for it and do not consider themselves to be in a risk group (84.7%) and almost a fifth do not know where to go (18.3%);

- a large part of the population has prejudices and fears about people who have hepatitis C:
    - a quarter (24.1%) would buy fresh vegetables from the seller if they knew that this person had hepatitis C, 75.9% would not buy;
    - only 16.5% agree that if a schoolteacher is a carrier of hepatitis C, they should be allowed to continue teaching at school, 83.5% do not agree;
    - only 15.7% would allow their child to attend kindergarten, school, or classes with children infected with hepatitis, 84.3% would not allow;
    - almost two-thirds (62.2%) know that you cannot become infected with hepatitis C if you eat food prepared or served by an infected person, but 37.8% believe that it is possible.

For many years, Ukraine has remained a country with a high level of HIV spread among the countries of the European region[25]. According to estimates, about 200,000 HIV-positive people aged 15 and older lived in Ukraine as of the beginning of 2019 (excluding temporarily uncontrolled territories). According to official statistics, as of January 1, 2019, 137,200 citizens of Ukraine were under medical supervision in the institutions of the AIDS prevention and control service, that is, almost a third of HIV-positive people do not know about their positive status and are not under medical supervision.[26] Prevention of infection and support for people living with HIV/AIDS are important components of combating the spread of HIV.

Tuberculosis remains one of the most urgent health care problems in Ukraine. Despite the tendency to decrease morbidity and mortality from this disease, the epidemic situation with tuberculosis in Ukraine is still difficult. According to official data, more than 25,000 new cases of tuberculosis were registered in Ukraine in 2019, including relapses (60.1 people per 100,000 population), and more than 3,000 people died from this disease (8.8 people per 100,000 of population)[27]. According to WHO estimates, the estimated incidence rate of tuberculosis in Ukraine is 80 people per 100,000 population, that is, about a quarter of cases of the disease in Ukraine are not detected. Also, in the European region, Ukraine remains one of the countries with the highest rate of tuberculosis with multiple drug resistance, which is not treated with standard therapy[28]. Among the reasons for the difficult situation with tuberculosis in Ukraine are insufficient awareness of the population about tuberculosis, and, as a result, a high level of stigmatization and self-stigmatization, insufficient motivation to undergo timely diagnosis and start treatment, late application of tuberculosis patients for medical assistance, inconsistent or partial treatment, etc. Therefore, to control the spread and successful treatment of tuberculosis, it is extremely important to increase public awareness of this disease and its treatment, to overcome stigma and discrimination of people suffering from tuberculosis, and to make the population aware of the importance of timely diagnosis and treatment of the disease.

Also, one of the most dangerous diseases is hepatitis C, which can be both acute and chronic and can vary in severity. Hepatitis C is one of the leading causes of liver cancer and can lead to serious health problems or death[29]. Despite the significant prevalence of the disease, the level of hepatitis C diagnosis remains unsatisfactory. According to WHO estimates, only 20% of hepatitis C cases were diagnosed in the world in 2015[30]. According to experts' estimates, more than 2 million people are infected with viral hepatitis C in Ukraine, of which about 1.5 million have chronic hepatitis C. At the same time, as of the beginning of 2019, only 82,654 people with chronic hepatitis C were under medical supervision, which is 5 .4% relative to the estimated number[31], that is, a significant number of hepatitis C patients do not know about their diagnosis. In many cases, the disease is asymptomatic or has general non-specific symptoms, so only a small number of patients seek medical help and are tested for hepatitis C. Low level of awareness about this disease is also among the reasons for insufficient detection of patients. With this in mind, public awareness of hepatitis C, testing options, benefits of early detection, and treatment prospects are extremely important.

To assess the knowledge, attitudes, and behavioral attitudes of the population of Ukraine regarding HIV/AIDS, tuberculosis, and hepatitis C in 2020, the "Health Index" study included a block of questions regarding awareness of diseases, their transmission routes, and symptoms, as well as the experience of undergoing diagnostics and ideas about the treatment of these ailments in Ukraine. The obtained results are presented in this section.

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27 Central Research Institute of the Ministry of Education and Science of Ukraine. Tuberculosis in Ukraine. Tables with statistical data for 2019 https://phc.org.ua/sites/default/files/users/user90/TB_surveillance_statistical-information_2019_table.xls

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30 World Health Organization. Global Hepatitis Report, 2017. Geneva: WHO, 2017

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6.1. Knowledge about HIV/AIDS, its symptoms, and ways of transmission

Residents of Ukraine are largely aware of the existence of such a disease as HIV/AIDS: among the adult population, 95.5% have heard of this disease. The percentage of those who know about the existence of this disease is high in all socio-demographic categories, but those who know about HIV/AIDS are somewhat less among older people (91.4% among people aged 60 and older ever heard about HIV/AIDS), residents of rural areas (92.8%), people with primary or secondary education (92.2%) and people from low-income households (92.8%) (**Table 6.1**).

All questions about HIV were only asked of those who had ever heard of the infection. Thus, according to survey data, the population is quite well informed about the ways of HIV transmission, although awareness is not complete. Most (71.3% of those who have ever heard about HIV) respondents know that HIV can be transmitted during unprotected sexual contact. Fewer residents of the country know about the possibility of parenteral infection: 64.9% indicated that HIV can be infected during the use of injection drugs, 61.2% - during a blood transfusion, 34.0% - using non-sterile tools during dental procedures, ear piercing, manicure, tattooing, etc. The population is the least aware that HIV can be transmitted from mother to child during pregnancy or childbirth (25.7%) or during breastfeeding (9.2%).

At the same time, quite a lot of people have inaccurate or wrong ideas about the ways of HIV transmission. The most common misconception is the opinion that HIV infection is possible through the use of certain hygiene items (shared blades, manicure scissors) with an infected person (30.4%), although infection through shared hygiene items is considered impossible since the HIV virus quickly dies in the environment. In addition, about 5.7% are of the opinion that it is possible to become infected with HIV when infected biological material comes into contact with intact skin, through the use of shared dishes (5.0%), during the use of drugs through nose inhalation (4.7%), through saliva (kissing with an infected person when the patient spits, coughs) (4.2%), through the use of shared nozzles when smoking a hookah (3.8%), by airborne droplets (1.7%), while staying in unsanitary conditions (1.3%), while swimming in a reservoir or pool (0.8%), through handrails in public transport (0.4%). That is, part of the population shares false stereotypes about the possibility of HIV infection in everyday life or in the process of social interaction, which can lead to unfounded fear and stigmatization of people living with HIV.

About 4.6% of those who had ever heard of HIV/AIDS admitted that they did not know exactly how to get infected with HIV.

People over the age of 60, residents of rural areas, as well as people with a relatively lower level of education (primary, general secondary) and income (up to 1000 UAH per person) are a little less informed about the ways of HIV transmission: in these categories, there is a slightly higher percentage of those who answered that they do not know exactly how one can get infected with HIV, and there are fewer who named the correct ways of transmitting HIV. In general, most people in all socio-demographic categories correctly named the ways of HIV transmission.

People are less aware of the symptoms of HIV than they are of the ways of transmission. According to the survey, 18.9% know that increased fatigue and weakness is a symptom of HIV, 12.2% correctly named unmotivated weight loss among the symptoms, 11.7% – an increase in body temperature, 10.4% – an increase in lymph nodes, 5.9% – increased sweating, and 18.6% know that the patient may not have symptoms. Half (51.4%) of those who have ever heard of HIV/AIDS answered that they do not know the symptoms of this disease.

The percentage of those who do not know the symptoms of HIV is highest among older people (60 years and older) and people with a lower level of education (primary, general secondary), although the level of awareness of HIV symptoms in general is low in all socio-demographic groups (**Table 6.2**).

Table 6.1

Awareness of HIV and ways of transmission by socio-demographic characteristics, 2020.

	All interviewed		Those who have ever heard of HIV/AIDS																	
			Knowledge of ways of HIV transmission (those who indicated that HIV can be infected...)							Misconceptions about ways of HIV transmission (those who indicated that HIV can be infected through…), %										
	N	those who have ever heard of HIV/AIDS,	N	during unprotected sexual contact, %	during injection drug use, %	during blood transfusion, %	in case of using non-sterile instruments during dental procedures, ear piercing, manicure, %	from mother to child during pregnancy or childbirth, %	during breastfeeding (if the mother in labor is infected), %	due to the use of some hygiene items (shared blades, manicure scissors) with an infected person, %	during exposure of infected biological material to undamaged skin, %	using shared utensils with an infected person, %	during drug use through nasal inhalation, %	through saliva - kissing with an infected person, when the patient spits, coughs, %	due to the use of shared nozzles	when smoking hookah, %	by air droplet, %	while staying in unsanitary conditions (for example, dirty rooms or streets, etc.), %	while swimming in a reservoir or pool, %	through handrails in public transport, %	difficult to say/don't know, %
Ukraine	9887	95,5	9322	71,3	64,9	61,2	34,0	25,7	9,2	30,4	5,7	5,0	4,7	4,2	3,8	1,7	1,3	0,8	0,4	4,6
GENDER																				
men	3566	95,4	3367	72,3	65,6	60,0	32,4	22,5	7,6	28,2	5,3	5,3	5,0	4,3	4,0	1,7	1,1	0,6	0,3	4,4
women	6321	95,6	5955	70,5	64,4	62,1	35,4	28,4	10,5	32,3	6,0	4,7	4,5	4,2	3,6	1,8	1,4	1,0	0,5	4,8
AGE GROUP																				
18–29 years old	1414	98,2	1382	78,3	69,1	64,2	38,7	31,0	12,3	35,3	6,9	4,9	4,8	5,6	3,6	1,9	1,5	0,9	0,4	2,0
30-44 years old	2732	97,8	2661	76,1	70,0	63,8	36,0	29,1	11,2	31,7	5,7	5,2	4,0	4,4	4,3	1,9	1,2	0,7	0,3	2,4
45–59 years old	2468	95,6	2355	69,8	65,9	63,3	36,6	24,9	8,0	33,3	6,0	5,4	6,0	4,0	3,8	1,8	1,1	1,0	0,4	3,7
60 and older	3273	91,4	2924	63,2	55,8	54,5	26,6	19,5	6,0	23,5	4,4	4,4	4,4	3,4	3,3	1,5	1,4	0,7	0,5	9,5
PLACE OF RESIDENCE																				
urban	6195	96,6	5917	72,5	66,7	63,5	36,4	28,2	9,6	32,0	5,9	5,0	4,5	3,9	4,0	1,6	1,2	0,8	0,3	4,0
rural	3692	92,8	3405	68,4	60,6	55,5	28,1	19,6	8,0	26,6	5,0	5,0	5,3	5,1	3,1	2,2	1,5	0,8	0,5	6,3
LEVEL OF EDUCATION																				
primary, general secondary	2227	92,2	2002	65,7	56,8	57,0	28,0	19,8	6,9	26,2	5,0	4,2	3,9	4,2	3,2	1,4	1,2	1,1	0,4	8,6
vocational-technical, secondary special	4874	95,9	4612	72,1	65,9	61,5	35,7	26,8	8,9	31,6	5,0	5,3	5,3	3,9	3,3	2,0	1,2	0,6	0,3	4,1
higher, scientific degree	2786	97,0	2708	73,8	68,5	63,4	35,3	27,9	11,1	31,3	7,3	5,0	4,4	4,9	4,9	1,5	1,6	1,1	0,5	2,9
HOUSEHOLD INCOME PER PERSON																				
up to 1000 UAH	983	92,8	900	65,4	58,2	46,0	30,9	20,8	6,8	29,3	5,0	5,9	4,6	4,7	2,9	1,9	1,5	1,1	0,6	8,0
1001–1500 UAH	879	96,1	844	70,9	63,3	56,3	30,9	24,2	7,3	31,3	5,2	4,7	5,7	5,6	2,5	0,9	1,7	0,8	0,2	6,5
1501–2000 UAH	1212	93,4	1112	69,4	61,3	58,1	32,3	25,8	8,2	25,8	4,9	5,6	4,3	4,8	3,0	1,8	1,2	0,8	0,5	5,7
2001–2500 UAH	1281	95,2	1199	70,6	63,2	63,2	33,3	26,4	8,9	30,2	5,4	4,7	3,5	3,8	3,5	1,9	1,4	1,0	0,4	4,7
over 2500 UAH	3212	95,6	3049	74,8	68,3	66,8	37,9	27,8	10,8	34,0	5,9	5,7	5,3	4,3	4,8	2,0	1,1	0,7	0,3	2,5

Table 6.2

Awareness of HIV symptoms by socio-demographic characteristics, 2020.

	All interviewed	Those who have ever heard of HIV/AIDS														
		Knowledge of the correct symptoms of HIV (those who named the symptoms of HIV), %						Misconceptions about HIV symptoms (those who named HIV symptoms), %								
	N	increased fatigue and weakness	unexplained weight loss	unexplained increase in body temperature or fever	an increase in lymph nodes	increased sweating	the patient may not have	aches and pains in joints and	loss of appetite	nausea	a cough lasting more than two weeks	chest pain	jaundice (yellowing of the skin and mucous membranes)	cough with blood (hemoptysis)	darkening of urine or light stool	difficult to say/don't know
Ukraine	9313	18,9	12,2	11,7	10,4	5,9	18,6	7,3	5,7	2,7	1,9	1,8	1,5	1,5	0,9	51,4
GENDER																
men	3356	17,5	12,3	11,1	9,5	5,7	18,8	6,7	5,6	2,4	2,0	2,2	1,7	1,5	0,9	52,0
women	5957	20,1	12,2	12,3	11,1	6,1	18,5	7,7	5,7	2,9	1,9	1,5	1,4	1,5	0,9	50,9
AGE GROUP																
18–29 years old	1379	21,4	13,8	12,1	11,3	7,0	23,6	7,6	6,4	2,9	2,2	1,7	0,7	2,0	1,3	45,2
30-44 years old	2666	21,2	13,8	13,5	13,0	6,1	22,4	8,5	6,6	2,8	1,7	1,7	1,8	1,3	0,7	44,0
45–59 years old	2349	21,1	13,5	13,4	11,3	7,0	17,8	8,2	5,9	3,7	2,0	2,2	1,9	1,7	0,7	48,8
60 years and older	2919	12,9	8,3	8,0	6,1	4,0	12,1	4,8	3,9	1,4	1,8	1,6	1,4	1,1	1,1	65,9
PLACE OF RESIDENCE																
urban	5911	19,6	12,8	11,4	10,9	6,1	18,9	7,5	5,8	2,9	1,9	1,9	1,6	1,5	0,9	50,7
rural	3402	17,3	10,7	12,6	9,0	5,5	17,9	6,8	5,3	2,2	1,9	1,6	1,4	1,4	0,9	53,2
LEVEL OF EDUCATION																
Primary, general secondary	2000	15,5	8,3	10,4	5,1	4,2	13,6	4,5	3,7	2,0	1,7	1,4	0,7	1,3	0,8	63,5
vocational, secondary special	4607	17,4	10,9	10,7	9,9	5,5	18,4	7,2	5,9	2,4	1,9	2,3	1,7	1,3	0,8	52,1
higher education, scientific degree	2706	23,7	17,0	14,3	14,6	7,7	22,3	9,2	6,6	3,7	2,0	1,2	1,7	1,8	1,3	42,4
HOUSEHOLD INCOME PER PERSON																
up to 1000 UAH	898	16,2	10,7	9,5	9,0	6,4	15,3	5,3	5,5	2,5	3,2	2,5	1,4	3,1	1,2	55,6
1001–1500 UAH	841	16,8	13,1	13,9	13,0	5,8	14,6	8,3	4,8	2,2	1,8	1,6	1,4	2,4	0,5	50,1
1501–2000 UAH	1111	16,0	8,3	8,8	7,8	4,5	16,6	5,0	4,4	0,9	1,1	1,3	0,9	0,7	0,8	59,5
2001–2500 UAH	1195	16,8	9,0	9,8	6,8	5,4	15,4	6,0	4,8	2,4	1,4	1,3	1,3	0,9	1,1	59,5
over 2500 UAH	3049	23,3	14,7	14,2	11,6	7,6	20,0	8,4	7,2	4,0	2,0	2,7	1,7	1,5	1,0	45,9

6.2. HIV diagnostics

Respondents assess their risk of HIV infection differently: almost a third (31.9%) of those who answered the question believe that they are not at risk at all, 42.5% consider it unlikely, and 25.5% consider it likely or quite real (answer options "absolutely real", "relatively real" or "fifty-fifty") (**Fig. 6.1**).

In general, young people tend to estimate their own risk of HIV infection higher than older people: among people aged 18–29 years old, more than a third (36.6%) admit that the risk of infection is probable or quite real, while among people aged 30-44 years old 30.6% think so, 25.3% among 45-59 years old, and 13.8% among 60 years old and older.

In addition, men rate their risk of HIV infection somewhat higher (27.2% assume that the risk of infection is probable or quite real) than women (24.2%), as well as urban residents (26.3%) compared to those who live in rural areas (23.6%). That is, it can be assumed that the perception of one's own risk of HIV infection reflects more risky behavior in relation to HIV infection (risky experiences, in particular, sexual ones, are more characteristic of young people and men), and may also be related to the perception of the prevalence of HIV in their area (more in cities than in rural areas).

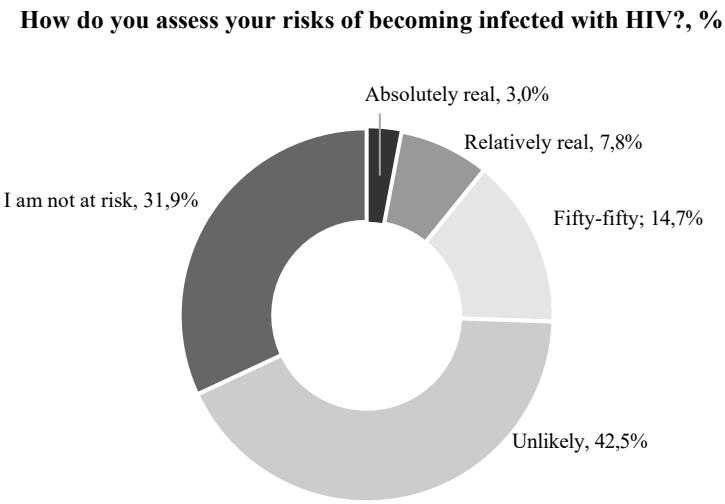

Figure 6.1. Population assessment of their own risk of becoming infected with HIV

To assess population coverage of HIV testing, respondents were asked whether they knew where an HIV test could be taken, as well as whether they had been tested and, if so, when exactly and whether they knew their results. The received answers for the population as a whole and individual socio-demographic categories are shown in the **table 6.3**.

According to the survey, about half (52.4%) of the population know where a rapid or laboratory blood test for HIV can be done. The percentage of those who know where to take an HIV test is slightly higher in cities (55.4%) than in rural areas (44.8%), as well as among younger people (59.7% in the age category 18–29 years old, 60.1% among people aged 30-44 years old, 54.9% - aged 45-59 years old), than 60 years and older (36.9%). In addition, people with higher education (62.5%) and higher income level (58.4%) are more informed about where to get an HIV diagnosis. That is, the population's awareness of where to undergo an HIV diagnostics is heterogeneous, which may be due to a difference in the perception of the risks of infection (in particular, older people are less likely to include themselves in the risk group for HIV infection and, as a result, are less interested in information about where you can undergo such a diagnosis), as well as the difference in the availability of such testing and information about it (for example, for residents of rural area).

Table 6.3
HIV diagnostics by socio-demographic characteristics, 2020.

	Those who have ever heard of HIV/AIDS				Those who have ever had an HIV test	
	N	know where to get a quick or laboratory blood test for HIV, %	ever had an HIV test, %	took an HIV test during the last two years, %	N	know the result, %
Ukraine	**9358**	**52,4**	**29,5**	**16,6**	**2572**	**98,1**
GENDER						
men	3376	51,5	26,1	15,3	785	97,3
women	5982	53,1	32,4	17,8	1787	98,6
AGE GROUP						
18–29 years old	1383	59,7	34,3	23,1	475	99,6
30-44 years old	2677	60,1	41,3	21,3	1054	97,9
45–59 years old	2362	54,9	29,5	17,6	649	98,6
60 years and older	2936	36,9	13,2	6,3	394	94,9
PLACE OF RESIDENCE						
urban	5945	55,4	31,9	18,4	1792	98,2
rural	3413	44,8	23,7	12,4	780	97,5
LEVEL OF EDUCATION						
Primary, general secondary	2007	42,2	18,6	10,4	318	97,4
Vocational and technical/secondary specialized	4634	50,2	27,8	14,9	1203	97,5
Higher education, scientific degree	2717	62,5	39,6	23,6	1051	98,9
HOUSEHOLD INCOME PER PERSON						
up to 1000 UAH	905	45,4	22,2	12,9	179	97,8
1001–1500 UAH	845	49,9	29,2	14,9	236	98,0
1501–2000 UAH	1112	44,2	22,3	12,8	241	98,0
2001–2500 UAH	1201	44,2	22,7	12,6	257	98,7
over 2500 UAH	3055	58,4	33,8	19,2	977	98,2

29.5% of all adults have ever taken an HIV test, including 16.6% within the last two years (**Fig. 6.2**).

The percentage of those who have ever taken an HIV test is higher among younger people (34.3% in the age category 18–29 years old, 41.3% – 30–44 years old), residents of cities (31.9%), people with higher education (39.6%) and a higher level of income (33.8%). Also, HIV testing coverage is higher among women (32.4%) than men (26.1%), which may be related to mandatory testing for this infection during pregnancy.

Among those who have ever taken an HIV test, about 98.1% know their result without significant differences by socio-demographic characteristics.

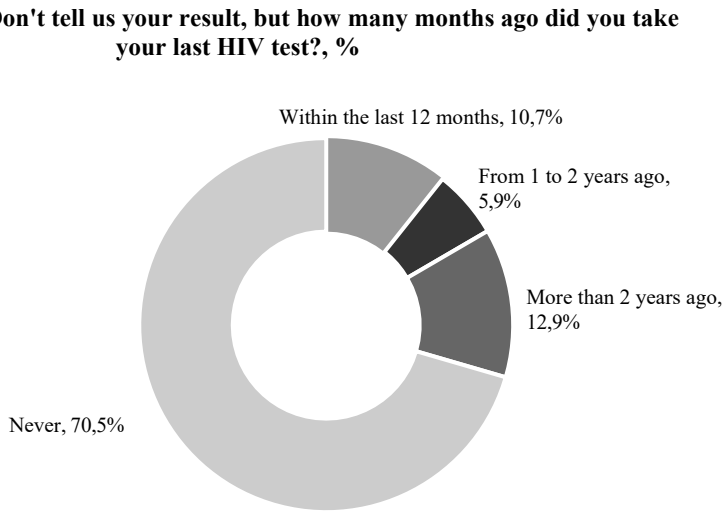

Figure 6.2. Getting tested for HIV

According to the survey, the majority of those who took an HIV test during the last two years underwent this diagnostic in a communal/departmental polyclinic (55.6%), about a fifth (17.7%) – in a general hospital, less than a tenth – in obstetrics and gynecology service (8.3%), private laboratory (7.8%) or specialized institutions (6.6%). Almost two-thirds (62.8%) of those who underwent an HIV diagnostic in the past two years received it for free, and a third (37.2%) paid for the diagnostic in whole or in part.

The absolute majority of those who did not undergo an HIV diagnostic at all or during the last two years indicated that they did not see the need for it and did not consider themselves to be at risk (90.9%), and about a tenth do not know where to go (11.9%). Respondents mentioned other reasons for not undergoing diagnostics much less often. In particular, 3.6% of those who did not undergo an HIV diagnostic during the last two years indicated that they did not do so because they did not have an institution nearby where they could undergo such a test; 3.1% did not have free time; 2.7% did not have funds for tests or transportation costs; 2.5% believed that it would be expensive; 2.0% did not know where the relevant institution was located; 1.2% were not tested because they were afraid to find out their result; 1.1% - due to the inconvenient location of the institution where the test can be taken; 1.0% - due to fear that the results will become known to others; 0.9% - due to the inconvenient work schedule of the institution where the test can be taken (**Fig. 6.3**).

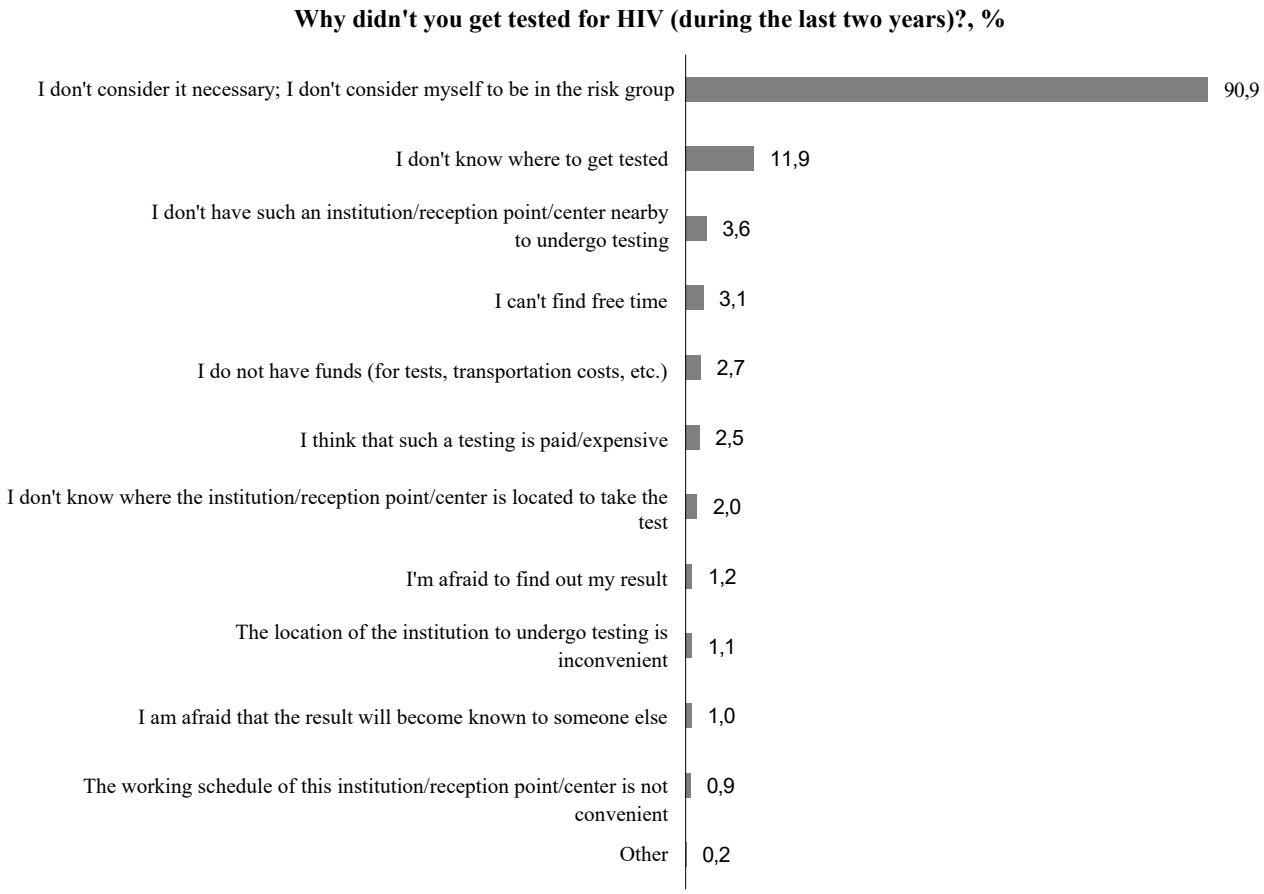

Figure 6.3. Reasons why respondents did not undergo HIV testing.

When asked why other people may not undergo HIV testing, the majority, as in the previous question, responded that the reason is that people do not consider it necessary, because they do not consider themselves to be in the risk group (82.9%). Also, quite a lot of people believe that the reasons why others do not undergo an HIV testing are that people do not know where to get an HIV test (19.2%), do not know about such a disease (14.8 %), are afraid to find out their result (11.7%), think that testing is expensive (11.3%), do not have free time (10.0%), or are afraid that the result will become known to others (9.5%) (**Fig. 6.4**).

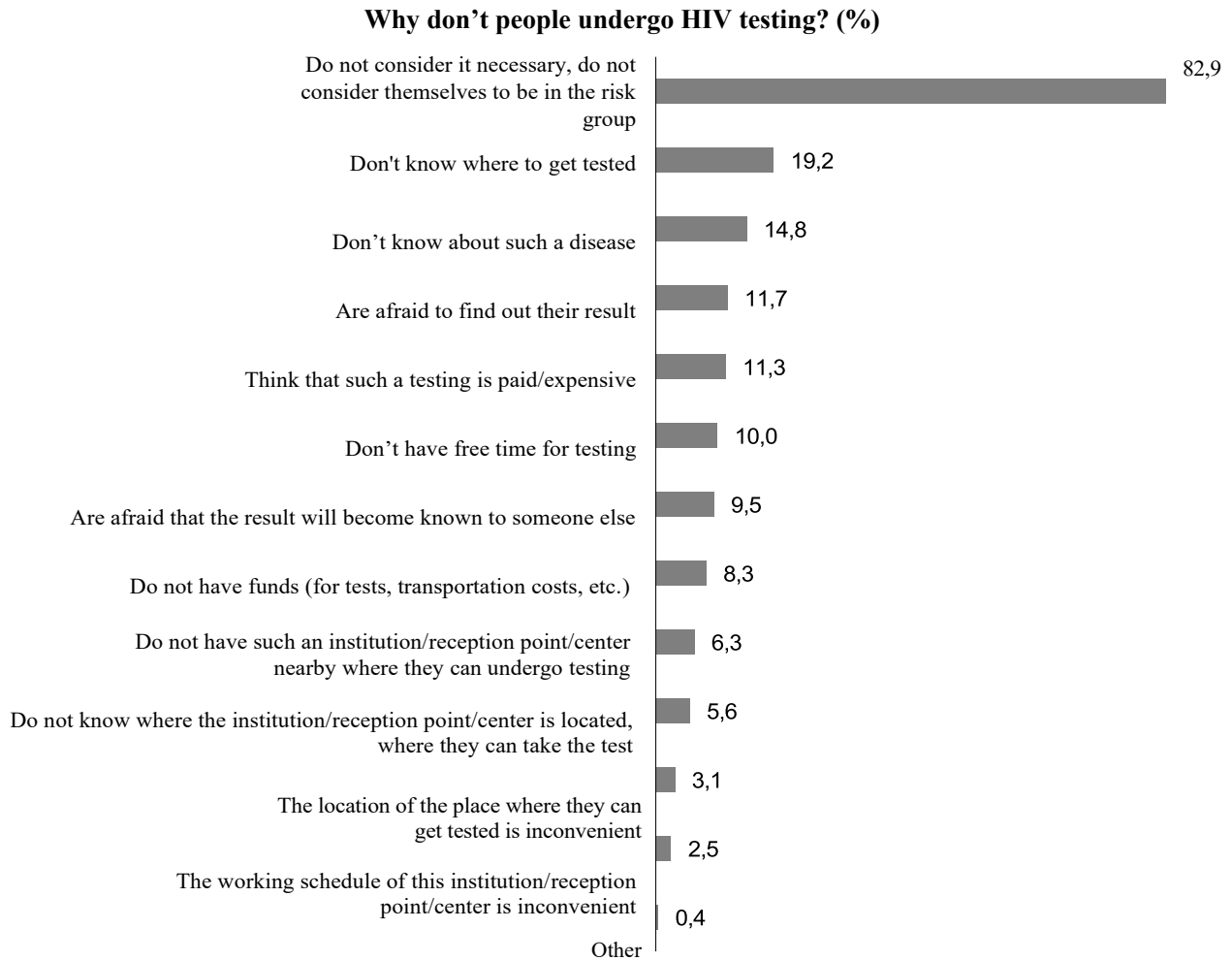

Figure 6.4. Reasons why respondents believe other people may not get tested for HIV

6.3. Perceptions and attitudes towards HIV

Most of the country's adult population (59.1%) knows that HIV cannot be completely cured, but it is possible to maintain a satisfactory state of health. About a fifth (19.7%) believe that this disease is incurable and it is impossible to even improve the quality of life of the infected person, and about 5.3% believe that HIV can be completely cured. At the same time, quite a lot of people (15.9%) admit that they do not know whether HIV is curable or not (**Fig. 6.5**).

Representatives of different socio-demographic categories have similar ideas about whether HIV can be completely cured: people older than 60 years (50.7%), residents of rural areas (56.9%), people with a lower level of education (primary or general secondary 52.7%) and a lower level of income (up to UAH 2000 per person, 53, 1%) are a little less aware of the fact that HIV is incurable, but it is possible to maintain a satisfactory state of health of the infected person under the condition of appropriate therapy.

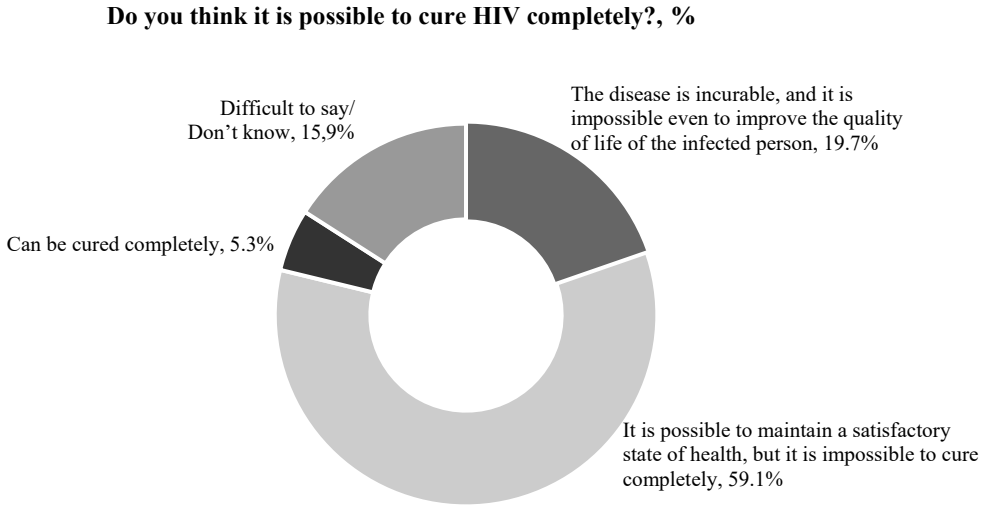

Figure 6.5. The population's perception of whether HIV can be completely cured.

Residents of Ukraine generally do not know how HIV treatment is paid for in Ukraine: 42.3% of those who have ever heard of HIV/AIDS answered this question as "difficult to say." Among those who chose a certain answer option, the majority tend to believe that HIV treatment is not free: about a third (34.5%) believe that the patient pays all or most of the costs, another 11.9% – that the patient pays some expenses, and only 11.3% think that all medicines for HIV treatment are provided by the state for free (**Fig. 6.6**).

Awareness of exactly how HIV treatment is paid for in Ukraine is low among all categories of the population: regardless of gender, age, place of residence, education or income, the vast majority indicated that they did not know exactly how HIV treatment is paid for in Ukraine, and among of those who responded, the majority believed that HIV treatment was fully or partially paid for by the patients.

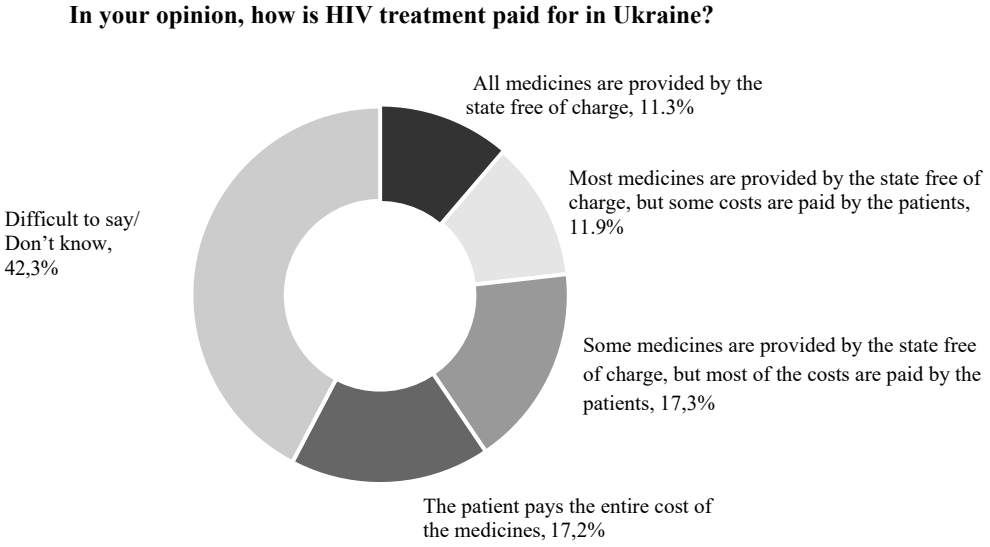

Figure 6.6. The population's perception of how HIV treatment is paid for in Ukraine

The conducted survey shows that, despite a fairly high awareness of the ways of HIV transmission, a significant part of the population is influenced by stereotypes and shows a prejudiced attitude towards people living with HIV. Yes, only a third (32.4%) of the respondents answered that they would buy fresh vegetables from the seller if they knew that this person had HIV, 67.6% - that they would not do it. Only a fifth (22.4%) agree that if a schoolteacher is HIV-positive, they should be allowed to continue teaching at school, 77.6% do not agree. Approximately the same number (20.3%) would allow their child to attend kindergarten, school, or classes together with children infected with HIV, 79.7% would not. According to the survey, young people and people with higher education answered that they do not see a threat in social interaction with people living with HIV slightly more often, but the majority still perceive people with HIV with fear (**Table 6.4**).

In a situation where a close person is infected with HIV, the majority would be ready to provide support to such a family member: 81.5% indicated that if they had learned that a member of their family had contracted HIV, they would be ready to take care of them at home, 18.5% - would not. At the same time, most respondents (72.9%) would try to keep it a secret if a member of their family was infected with HIV, expecting a negative attitude towards people living with HIV from society, and only 27.1% would not.

Table 6.4

Perception and attitude towards people with HIV, 2020.

		Affirmative responses among those who have ever heard of HIV/AIDS				
	N	would buy fresh vegetables from a shop owner or seller if they knew that this person had	would allow their child to attend kindergarten, school, or classes together with children infected with HIV, %	believe that if a schoolteacher is a carrier of HIV, she should be allowed to continue teaching at school, %	if they found out that a member of their family was infected with HIV, they would take care of him/her at home, %	if a member of their family became infected with HIV, they would not try to keep it a secret, %
Ukraine	**7922**	**32,4**	**20,3**	**22,4**	**81,5**	**27,1**
GENDER						
men	2838	34,6	21,7	24,3	80,9	30,0
women	5084	30,7	19,1	20,9	82,0	24,8
AGE GROUP						
18–29 years old	1180	40,7	25,7	30,0	81,1	29,6
30-44 years old	2309	37,3	22,7	25,3	80,8	28,8
45–59 years old	1990	34,3	21,8	23,3	83,0	25,7
60 years and older	2443	20,0	12,7	13,5	81,1	25,1
PLACE OF RESIDENCE						
urban	4972	33,4	20,8	22,7	81,6	25,7
rural	2950	30,2	18,9	21,9	81,2	30,7
LEVEL OF EDUCATION						
Primary, general secondary	1629	29,4	16,6	18,4	81,4	25,4
vocational, secondary specialized	3975	28,7	17,8	19,2	79,0	26,8
higher, scientific degree	2318	40,6	26,8	30,5	85,4	28,7
HOUSEHOLD INCOME PER PERSON						
up to 1000 UAH	801	27,7	18,5	22,1	70,0	27,7
1001–1500 UAH	720	30,8	22,7	23,0	79,5	29,8
1501–2000 UAH	932	29,6	18,1	20,0	81,6	25,7
2001–2500 UAH	1012	25,2	15,0	15,7	80,6	24,4
over 2500 UAH	2649	36,5	22,0	24,6	83,9	26,7

The main way of HIV infection in Ukraine is sexual[32], therefore, in matters of HIV prevention, the need for safe sexual behavior is particularly emphasized, in particular, the use of condoms, abstinence from sexual contact with little known partners, and fidelity to one partner/limiting the number of sexual partners. Survey data show that most adult residents of the country are aware of how to protect themselves from HIV infection through sexual contact. In particular, the absolute majority of respondents, without significant differences in terms of socio-demographic characteristics, agreed with the statement that the risk of HIV infection can be reduced if you use a condom with every sexual contact (97.0% among those who have ever heard of HIV/AIDS), and also that it is possible to reduce the risk of HIV infection if you have sex with only one non-infected partner who has no other partners (94.4%). Also, the absolute majority (92.3%) agree that a person who appears to be completely healthy can have HIV.

At the same time, misconceptions about the risks of HIV infection remain widespread. In particular, a quarter (28.1%) of those who have heard about HIV believe that it is possible to get infected with HIV through a mosquito bite, while 71.9% know that this is not the case. Although the majority (79.0%) know that one cannot become infected with HIV through food prepared or served by an HIV-infected person, one in five (21.0%) thinks otherwise. That is, general awareness of effective ways to prevent HIV does not exclude unfounded fear of the threat.

Table 6.5

Knowledge of ways to protect and reject stereotypes about HIV transmission, 2020.

		Those of the respondents who have ever heard about HIV/AIDS and know that:				
	N	the risk of HIV infection can be reduced if you use a condom during every sexual contact, %	you can reduce the risk of HIV infection if you have sex with only one uninfected partner who has no other partners, %	a person who appears to be completely healthy may have HIV, %	you cannot get HIV infection through a mosquito bite, %	you cannot become infected with HIV if you consume food prepared or served by an HIV-infected person, %
Ukraine	**8660**	**97,0**	**94,4**	**92,3**	**71,9**	**79,0**
GENDER						
men	3171	96,9	94,2	92,0	71,8	79,1
women	5489	97,0	94,6	92,6	71,9	79,0
AGE GROUP						
18–29 years old	1351	97,9	94,6	92,5	69,5	79,5
30-44 years old	2572	96,7	94,6	93,0	73,8	80,6
45–59 years old	2228	96,8	94,3	91,4	73,8	79,4
60 years and older	2509	97,0	94,2	92,4	69,2	76,4
PLACE OF RESIDENCE						
urban	5530	97,1	94,1	92,1	74,2	79,7
rural	3130	96,6	95,2	92,9	65,4	77,3
LEVEL OF EDUCATION						
primary, general secondary	1756	98,2	96,5	94,5	69,5	76,0

32 Central Health Service of the Ministry of Health of Ukraine. Operational information on officially registered cases of HIV infection, AIDS and the number of deaths caused by AIDS. https://phc. org.ua/kontrol-zakhvoryuvan/vilsnid/statistika-z-vilsnidu/statistichni-dovidki-pro-vilsnid

vocational and technical, secondary special	4324	96,4	94,0	91,6	73,5	80,4
higher, scientific degree	2580	97,2	93,8	92,2	70,6	78,5
HOUSEHOLD INCOME PER PERSON						
up to 1000 UAH	834	95,2	91,9	86,4	65,7	65,0
1001–1500 UAH	782	96,4	94,3	93,0	63,0	81,4
1501–2000 UAH	1010	97,0	94,6	95,4	70,4	78,2
2001–2500 UAH	1080	97,0	95,5	93,8	73,0	79,9

To assess the availability of condoms for younger adults, respondents aged 18–24 were asked if they knew where to buy condoms and if they could buy them when needed. According to the obtained data, younger people in the absolute majority do not experience obstacles in accessing condoms: 97.7% of respondents aged 18-24 indicated that they know where they can buy condoms, and among them 98.8% can always buy them when they need. The percentage of young people who do not have difficulty accessing condoms is the same for men and women, but slightly lower in rural areas (94.7% know where to buy condoms, and 97.1% can always buy condoms when they need) than in cities (98.8% know where to buy condoms and 99.4% can always buy condoms when they need).

6.4. Knowledge about tuberculosis, its symptoms, and ways of transmission

The absolute majority (98.0%) of the adult population has heard about the existence of such a disease as tuberculosis. Awareness of the existence of tuberculosis is universal: the absolute majority of both men and women, regardless of age, level of education, and financial status, have heard about the existence of this disease, in both cities and rural areas (**Table 6.6**).

All follow-up questions about tuberculosis were only asked of those who had ever heard of the infection. Therefore, the inhabitants of the country are mostly aware of how exactly it is possible to get infected with tuberculosis. Among those who have heard about this disease, the absolute majority (76.5%) know that it is possible to get infected with tuberculosis through airborne droplets (during a long stay in a closed room with a sick person). However, only about a quarter (24.3%) of the entire population know that it is possible to become infected with tuberculosis as a result of using shared nozzles while smoking a hookah.

At the same time, many people have inaccurate or false ideas about the ways of tuberculosis infection. Among the respondents, almost two-thirds (62.8%) believe that it is possible to become infected with tuberculosis through saliva (kissing with an infected person, when the patient spits, coughs). Also, many residents of the country are of the opinion that it is possible to become infected with tuberculosis through sharing utensils with an infected person (39.6%), while staying in unsanitary conditions (28.5%), using shared hygiene items (21.9%), during blood transfusions (21.7%), touching handrails in public transport (21.4%), using non-sterile instruments during dental procedures, ear piercing, manicure, tattooing, etc. (21.0%). About 3.1% of those who had ever heard of tuberculosis answered that they did not know exactly how it could be contracted.

Knowledge of the ways of tuberculosis transmission does not depend much on socio-demographic characteristics: the absolute majority in all socio-demographic categories that were included in the analysis know that tuberculosis is transmitted by airborne droplets, while a large number mistakenly believe that tuberculosis can be contracted through saliva, shared utensils, hygiene items, etc.

Thus, it can be concluded that knowledge about the ways of transmission of tuberculosis is not comprehensive:

although most of the population is aware of exactly how tuberculosis can be contracted, people are also poorly informed about how it is not transmitted, which can lead to fear and prejudice towards TB patients.

Based on the survey, the absolute majority of the population knows about certain symptoms of tuberculosis. The most well-known symptom of tuberculosis is a cough: 74.7% know that a sign of tuberculosis is a cough lasting more than two weeks, 72.9% know about coughing up blood. Respondents know less about other symptoms, in particular, 33.1% named chest pain as a symptom of tuberculosis, 27.7% – unexplained increase in temperature, 23.5% – increased fatigue and weakness, 19.4% – weight loss, 14.1% – increased sweating, 11.6% – loss of appetite, 7.2% – enlargement of lymph nodes. The fact that the patient may not have symptoms was indicated by only 0.8% of respondents. About 4.7% of those who had ever heard of tuberculosis admitted that they did not know the symptoms of this disease.

The level of awareness of tuberculosis symptoms is almost the same in different socio-demographic categories, but respondents with a higher education and a higher level of household income (over 2500 UAH per person) on average named slightly more symptoms than the rest of the population (**Table 6.7**).

Table 6.6
Awareness of tuberculosis and its ways of transmission by socio-demographic characteristics, 2020.

	Those who have ever heard of tuberculosis																		
	all interviewed		correct answers about the ways of tuberculosis transmission, misconceptions about the ways of tuberculosis transmission, %																
	N	%	N	by airborne droplets, %	due to the use of joint nozzles when smoking hookah, %	through saliva - kisses with an infected person, when the patient spits, coughs	through sharing utensils with an infected person	while in unsanitary conditions (for example, dirty rooms or streets, etc.)	due to the use of some hygiene items (shared blades, manicure scissors) with an infected person	during a blood transfusion	through handrails in public transport	when using non-sterile tools	during dental procedures, ear piercing, manicure	when using injection drugs	during exposure of infected biological material to undamaged skin	from mother to child during pregnancy or childbirth	during breastfeeding (if the mother in labor is infected)	during unprotected sexual contact	during the use of drugs through nasal inhalation	while swimming in a reservoir or pool	It is difficult to say/I do not know
Ukraine	**10058**	**98,0**	**9859**	**76,5**	**24,3**	**62,8**	**39,6**	**28,5**	**21,9**	**21,7**	**21,4**	**21,0**	**15,3**	**13,8**	**10,4**	**7,7**	**7,3**	**6,7**	**5,4**	**3,1**
GENDER																				
men	3607	97,6	3529	76,1	25,0	61,8	38,8	27,7	22,0	21,7	20,0	21,6	15,3	13,5	9,2	7,0	7,2	7,2	5,2	3,1
women	6451	98,3	6330	76,9	23,8	63,7	40,2	29,1	21,7	21,7	22,5	20,6	15,3	14,0	11,3	8,2	7,4	6,3	5,5	3,0
AGE GROUP																				
18–29 years old	1384	97,9	1353	77,0	27,2	65,2	38,0	28,2	19,9	20,5	21,2	19,4	16,1	13,7	10,2	8,0	7,4	7,8	5,3	3,1
30-44 years old	2739	98,0	2686	78,2	29,3	65,1	39,3	29,3	22,2	20,9	22,2	21,2	15,0	14,4	11,5	8,6	7,9	7,2	5,5	3,0
45–59 years old	2522	98,4	2488	74,8	25,3	60,6	42,0	30,5	24,9	24,7	20,9	23,9	18,2	13,7	10,9	7,6	7,4	6,9	5,7	2,5
60 years and older	3413	97,7	3332	76,1	17,0	61,3	38,5	26,0	19,9	20,5	21,2	19,3	12,7	13,2	9,0	6,5	6,7	5,4	4,9	3,6
PLACE OF RESIDENCE																				
urban	6284	98,2	6166	77,0	26,9	63,4	41,2	28,9	22,0	21,9	22,8	21,0	15,6	14,0	10,9	8,2	7,6	6,6	5,4	2,6
rural	3774	97,6	3693	75,5	18,3	61,5	35,6	27,5	21,6	21,4	18,2	21,2	14,5	13,2	9,1	6,4	6,8	6,9	5,3	4,2
LEVEL OF EDUCATION																				
Primary, general secondary	2317	97,8	2267	72,5	15,2	58,6	37,8	28,0	22,6	25,0	20,0	21,6	16,7	12,9	10,8	5,6	6,8	6,0	4,4	4,5
vocational, secondary specialized	4976	98,1	4876	77,9	26,6	65,2	40,8	26,9	21,0	20,6	19,8	20,6	13,1	14,4	9,1	8,0	7,7	5,8	5,5	2,8
higher, scientific degree	2765	97,9	2716	77,0	27,0	61,7	38,7	31,6	22,9	21,2	25,2	21,4	18,2	13,4	12,2	8,5	7,1	8,7	5,8	2,5
HOUSEHOLD INCOME PER PERSON																				
Up to 1000 UAH	1001	97,0	976	75,9	17,1	56,8	32,1	23,0	16,9	17,4	15,8	15,2	13,0	8,6	8,6	6,3	6,6	5,8	3,5	2,9
1001–1500 UAH	914	98,4	900	76,8	21,4	64,8	35,7	28,6	19,8	16,6	20,3	16,9	12,7	15,1	9,5	7,9	6,2	7,3	5,5	2,8
1501–2000 UAH	1243	97,8	1213	76,5	21,3	63,8	37,4	25,7	25,1	23,0	20,8	23,0	14,5	13,9	11,7	9,6	9,9	5,0	6,6	4,3
2001–2500 UAH	1332	98,6	1310	77,5	23,7	65,5	42,1	28,3	23,0	25,2	22,1	24,6	16,3	15,8	10,2	6,5	7,8	5,9	5,0	2,6
Over 2500 UAH	3227	97,9	3166	76,4	28,5	64,4	44,6	30,3	23,7	24,9	24,2	23,9	18,1	14,9	12,5	8,1	8,1	7,9	5,5	2,2

Table 6.7
Awareness of tuberculosis symptoms by socio-demographic characteristics, 2020.

	Those who have ever heard of tuberculosis															
		Know the correct symptoms of tuberculosis										Misconceptions about the symptoms of tuberculosis, %				
	N	a cough lasting more than two weeks, %	coughing up blood (haemoptysis),%	chest pain, %	unexplained increase in body temperature or fever, %	increased fatigue and weakness, %	unexplained weight loss, %	Increased sweating, %	loss of appetite, %	enlargement of the lymph nodes, %	the patient may not have symptoms, %	aches and pains in joints and muscles	jaundice (yellowing of the skin and mucous membranes)	nausea	darkening of urine or light-colored feces	hard to say / don't know
Ukraine	**9861**	**74,7**	**72,9**	**33,1**	**27,7**	**23,5**	**19,4**	**14,1**	**11,6**	**7,2**	**0,8**	**12,4**	**3,1**	**2,7**	**0,7**	**4,7**
GENDER																
men	3531	74,6	72,3	33,3	26,5	22,6	17,2	12,2	11,3	6,7	0,5	11,4	3,4	2,4	0,6	5,1
women	6330	74,7	73,4	33,0	28,7	24,2	21,1	15,6	11,8	7,7	1,0	13,3	2,9	3,0	0,8	4,4
AGE GROUP																
18–29 years old	1353	74,1	74,8	33,8	23,4	24,7	15,6	13,1	10,0	7,3	0,9	14,1	3,1	2,3	0,8	4,8
30-44 years old	2685	76,1	71,1	33,8	29,1	24,4	21,0	14,4	11,7	8,4	0,7	13,2	3,2	2,4	0,4	4,7
45–59 years old	2488	75,4	74,6	35,4	28,8	25,3	22,6	16,9	13,2	7,4	0,9	12,6	3,5	3,6	1,2	4,3
60 years and older	3335	72,9	72,3	30,1	27,7	20,3	17,0	11,9	10,9	5,8	0,7	10,5	2,7	2,5	0,5	5,1
PLACE OF RESIDENCE																
urban	6168	74,3	72,8	34,2	30,8	24,1	19,9	14,8	11,9	7,6	0,8	12,4	3,7	2,9	0,7	3,9
rural	3693	75,6	73,3	30,6	20,4	21,9	18,1	12,3	11,0	6,2	0,7	12,4	1,9	2,2	0,8	6,6
LEVEL OF EDUCATION																
Primary, general secondary	2266	73,8	69,8	28,1	24,6	22,7	19,1	14,4	10,9	5,2	0,6	10,7	2,0	1,9	0,4	5,9
vocational, secondary specialized	4877	74,1	73,4	32,8	29,4	22	18,7	12,5	10,8	6,4	0,7	11,8	3,2	2,8	0,8	4,8
higher education, scientific degree	2718	76,2	74,2	37,2	27,0	26,6	20,7	16,6	13,5	10,1	1,1	14,8	3,9	3,2	0,8	3,7
HOUESEHOLD INCOME PER PERSON																
up to 1000 UAH	976	75,3	66,7	29,3	23,4	17,6	15,7	11,8	9,7	7,2	0,5	10,5	2,6	2,0	1,7	7,0
1001–1500 UAH	900	73,9	70,2	31,5	21,5	22,2	20,4	10,9	11,1	7,8	1,6	13,5	3,6	2,0	0,5	5,7
1501–2000 UAH	1213	70,4	73,8	33,4	24,3	20,3	16,6	12,2	9,7	5,5	0,8	9,9	2,3	3,1	0,5	5,6
2001–2500 UAH	1310	76,1	74,7	32,3	28,5	22,6	17,4	13,7	11,5	4,9	0,5	11,6	2,4	2,4	0,6	3,7
over 2500 UAH	3165	76,3	75,6	38,0	32,1	27,0	22,0	17,0	13,6	8,1	0,7	12,8	3,6	3,4	0,7	2,6

6.5. Diagnosis of tuberculosis

Residents of Ukraine are mostly inclined to assess their risk of tuberculosis infection as probable or quite real: more than half (58.8%) of those who heard about this disease assessed the risk as "absolutely real", "relatively real" or "fifty-fifty"; a little less than a third (31.2%) consider the possibility of tuberculosis infection unlikely, and about a tenth (10.0%) answered that, in their opinion, they are not at risk at all (**Fig. 6.7**).

Younger and middle-aged people rate their own risk of becoming infected with tuberculosis slightly higher (61.2% of respondents aged 18–29 years old, 63.4% aged 30–44 years old and 65.0 % aged 45–59 years old), than people aged 60 and older (47.4%). In addition, people with higher education (66.4%) rate their risk of tuberculosis infection somewhat higher than those without higher education (55.6%), and people from categories with low (60.6% in the category with household income up to 1,500 UAH per person) or high income (61.8% in the category with household income over 2,500 UAH per person) than in the middle income category (52.6% in the category with household income 1,501–2,500 UAH per person). There is no significant difference in the perception of one's own risks of tuberculosis infection by gender and type of locality. That is, the perception of one's own risks of being infected with tuberculosis is weakly correlated with the categories of the population that may actually have a greater risk of the disease[33], which may be related to insufficient awareness of how exactly tuberculosis is not transmitted and, accordingly, an unjustified fear of the disease.

[33] Anyone can get tuberculosis, but according to the Central Health Service, the categories of the population that have a greater risk of tuberculosis include: persons who are in constant contact with a person with tuberculosis; HIV-infected and AIDS patients; persons who suffer from alcoholism, smoke, use drugs; persons with weakened immunity due to improper nutrition, poor living conditions or chronic diseases (diabetes); children, because their immune system is not formed; elderly people due to weakening of their immune system. (Public Health Center of the Ministry of Health of Ukraine, https://phc.org.ua/dlya-pacientiv/pro-tuberkuloz).

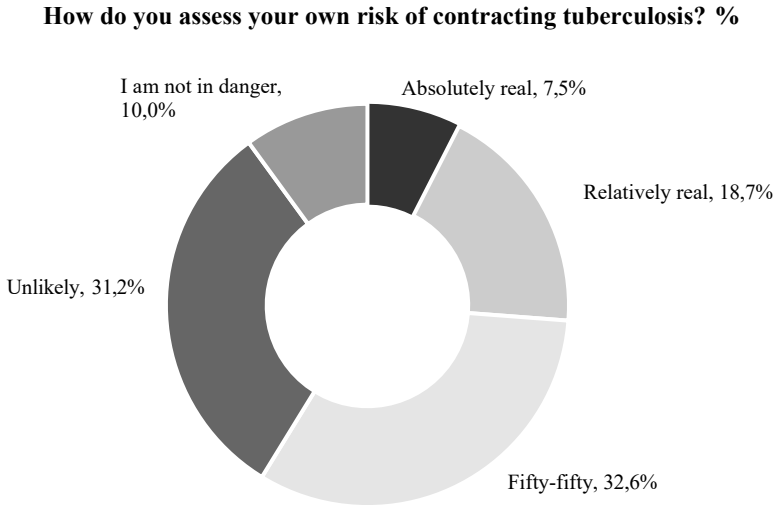

Figure 6.7. Population assessment of their own risk of becoming infected with tuberculosis

Almost three-quarters (73.5%) know where an X-ray or sputum test can be taken to diagnose tuberculosis. According to the survey, the absolute majority in all socio-demographic categories know about where to get a tuberculosis diagnosis, but people over 60 years of age (69.0% know where to get an X-ray or sputum analysis), people with a lower level of education (70.9% among those with primary or general secondary education, 72.3% with secondary special education) and residents of rural areas (71.4%) are somewhat less aware of it (**Table 6.8**).

Table 6.8
Tuberculosis diagnosis by socio-demographic characteristics, 2020.

	Those who ever											
	heard of tuberculosis						did fluorography		passed the screening		did sputum test	
	N	know where an X-ray or sputum analysis can be done to diagnose tuberculosis, %	have ever been tested for tuberculosis, %	ever had a fluoroscopy, %	ever underwent screening (questionnaire by a doctor),%	ever had a sputum test done, %	N	know the result, %	N	know the result, %	N	know the result, %
Ukraine	**9868**	**73,5**	**91,8**	**90,9**	**8,8**	**7,3**	**8564**	**97,1**	**847**	**94,6**	**695**	**95,9**
GENDER												
men	3533	72,0	91,0	90,0	8,9	7,1	3004	97,4	313	94,4	239	96,3
women	6335	74,7	92,4	91,7	8,7	7,4	5560	96,8	534	94,8	456	95,6
AGE GROUP												
18–29 years old	1353	73,4	89,5	88,6	9,0	7,3	1162	97,4	112	97,5	106	97,4
30-44 years old	2688	76,4	91,8	91,0	9,5	6,9	2329	97,6	273	95,3	186	96,1
45–59 years old	2489	75,4	93,1	92,3	9,7	7,9	2214	97,3	236	94,9	176	95,8
60 years and older	3338	69,0	91,9	91,0	7,1	7,1	2859	96,1	226	91,3	227	94,8
PLACE OF RESIDENCE												
urban	6173	74,4	92,7	91,9	9,2	7,8	5424	97,4	588	94,6	496	96,3
rural	3695	71,4	89,5	88,6	7,9	6,0	3140	96,3	259	94,5	199	94,7
LEVEL OF EDUCATION												
Primary, general secondary	2267	70,9	90,4	89,7	8,1	6,2	1917	96,2	161	95,6	126	96,3
Vocational and technical, secondary specialized	4882	72,3	92,0	91,2	7,6	6,1	4240	97,0	375	95,5	310	94,3
higher education, scientific degree	2719	77,3	92,4	91,4	11,2	10,0	2407	97,7	311	93,1	259	97,4
HOUSEHOLD INCOME PER PERSON												
up to 1000 UAH	976	73,2	87,3	86,1	7,0	7,8	804	95,2	63	95,2	60	91,4
1001–1500 UAH	901	71,2	91,2	90,6	6,4	6,7	765	95,8	58	93,3	57	96,0
1501–2000 UAH	1214	69,2	91,8	91,2	7,9	6,5	1064	95,8	93	92,5	75	96,2
2001–2500 UAH	1311	71,8	92,0	91,6	8,2	6,1	1148	96,6	110	94,9	84	93,9
over 2500 UAH	3166	75,7	92,0	91,2	10,0	7,3	2775	97,7	317	94,1	254	96,3

The absolute majority (91.8%) of those who heard about this disease had been tested for tuberculosis. The coverage rate of tuberculosis testing is high in all socio-demographic categories but is slightly higher in cities (92.7% have ever been tested for tuberculosis) than in rural areas (89.5%), and among people with medium or high income (more than UAH 1,000 per household member, 91.9%) than among people with the lowest income (up to UAH 1,000 per household member, 87.3%).

Fluorography is the most common method of diagnosing tuberculosis: 90.9% of the respondents have done it. A significantly smaller number of people underwent other types of tuberculosis testing: 8.8% had undergone screening (questionnaire by a doctor) for tuberculosis, 7.3% of respondents had sputum test (**Fig. 6.8**).

Among those who have ever undergone fluorography, 97.1% know their result, among those who have undergone tuberculosis screening, 94.6% know their result, among those who had sputum examination, 95.9% know their result, without significant differences by socio-demographic characteristics (**table 6.8**).

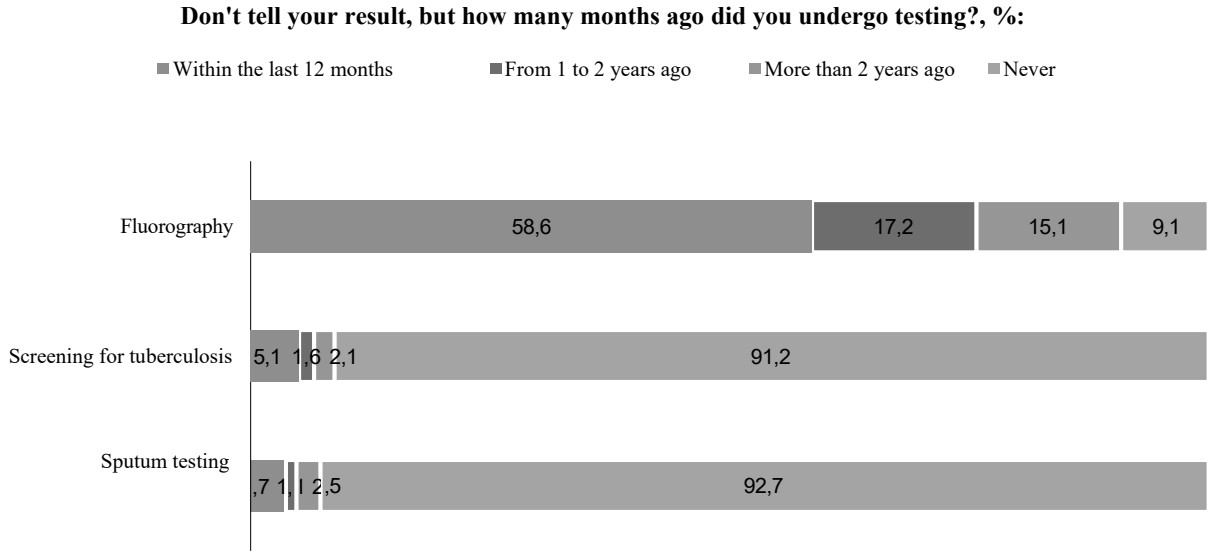

Fig. 6.8. Testing for tuberculosis among the population

During the last two years, 77.1% were tested for tuberculosis. The absolute majority of those who were tested for tuberculosis in the last two years were examined in a communal/departmental polyclinic (75.4%) or in a general hospital (20.7%). A much smaller percentage of people were tested for tuberculosis in other institutions, in particular, 1.7% were tested in a private laboratory, 1.3% each – in an obstetrics and gynecology service and in a private clinic.

The absolute majority of those who did not undergo tuberculosis testing at all or during the last two years indicated that they did not see the need for it and did not consider themselves to be at risk (83.4%). About a tenth (12.5%) did not undergo a tuberculosis testing due to the fact that they did not know where to go or do not have free time (10.1%). Other reasons were mentioned less often by the interviewees, in particular 7.6% indicated that they did not have funds for tests or transportation costs; 6.2% did not have an institution nearby where they could undergo diagnostics; 6.0% believe that such diagnostics are expensive; 3.2% do not know where the institution where the test can be taken is located; 2.8% did not undergo diagnostics due to fear that the results would become known to others; 2.8% – due to the inconvenient location of the institution where they can undergo diagnostics; 2.2% – due to the inconvenient work schedule of the institution; 1.9% are afraid to find out their result (**Fig. 6.9**).

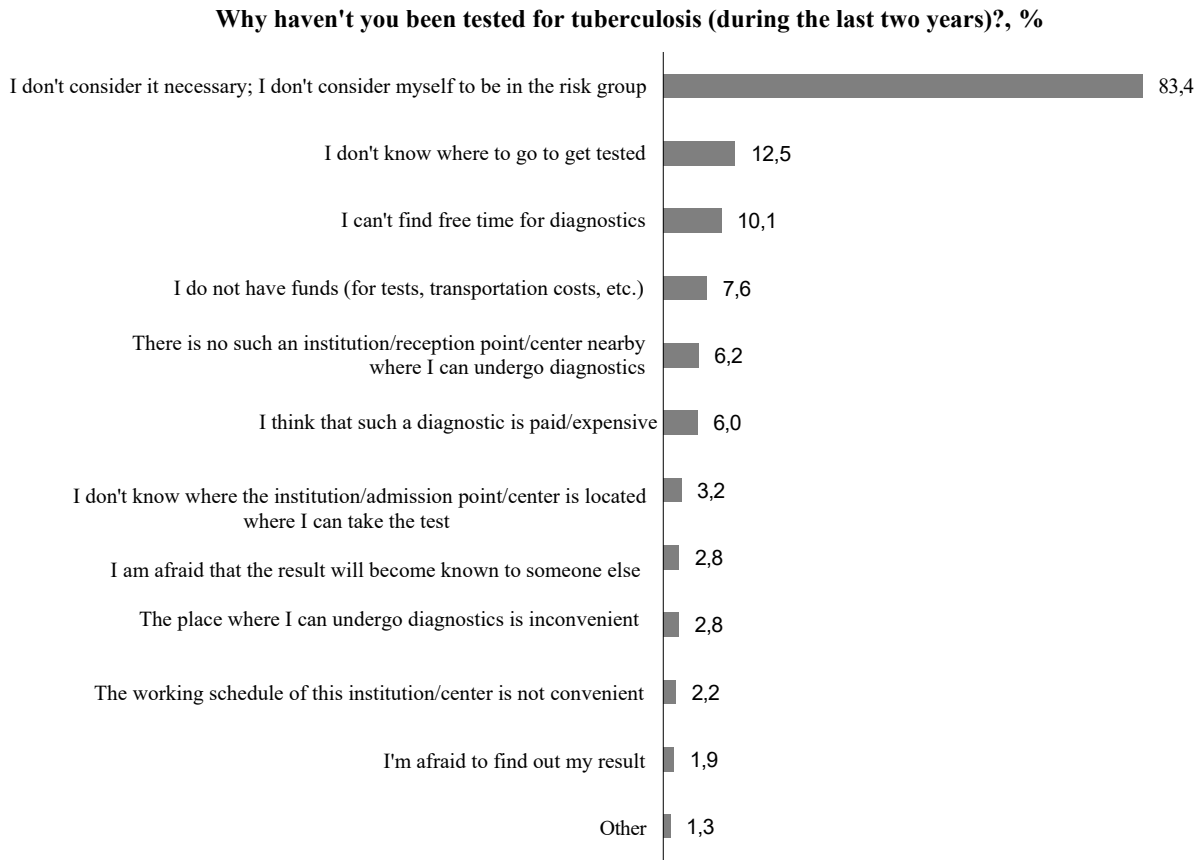

Figure 6.9. Reasons for failure to pass tuberculosis testing

When asked why other people may not undergo TB diagnostics, as in the previous question, the majority (81.2%) indicated that people do not consider it necessary because they do not consider themselves to be at risk. Also, quite a lot of people believe that the reasons why others do not undergo a tuberculosis testing are that people cannot find free time (16.5%), do not know exactly where to undergo diagnostic (12.7%), think that such diagnostic is expensive (11.5%), or do not have funds for examination or transport costs (10.5%) (**Fig. 6.10**).

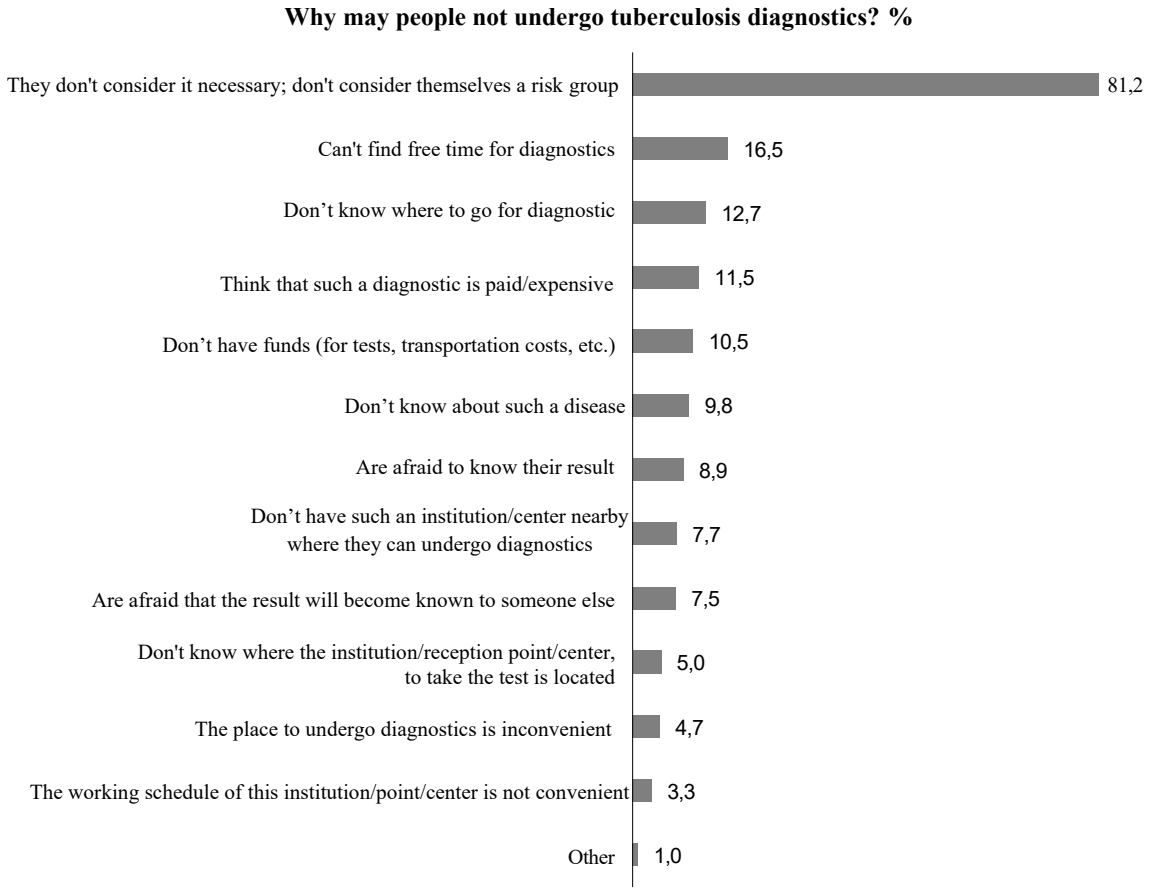

Figure 6.10. Reasons why, according to respondents, other people may not be tested for tuberculosis.

6.6. Perceptions and ideas about tuberculosis

Quite a lot of people in Ukraine do not know that tuberculosis is curable. According to the survey, 42.6% of the population knows that tuberculosis can be completely cured. Approximately the same number (39.8%) believe that tuberculosis cannot be cured completely, but it is possible to maintain a satisfactory state of health, and 3.7% believe that this disease is incurable and it is impossible even to improve the quality of life of the infected person. Quite a lot of people (13.9%) answered that they do not know whether tuberculosis can be completely cured or not (**Fig. 6.11**).

The percentage of those who know that TB is curable is about the same among men and women, and is independent of age, education level, or place of residence, but is slightly lower among people with the lowest income (34.3% in the income category up to 1,000 UAH per household member) than with medium or high income (43.9%).

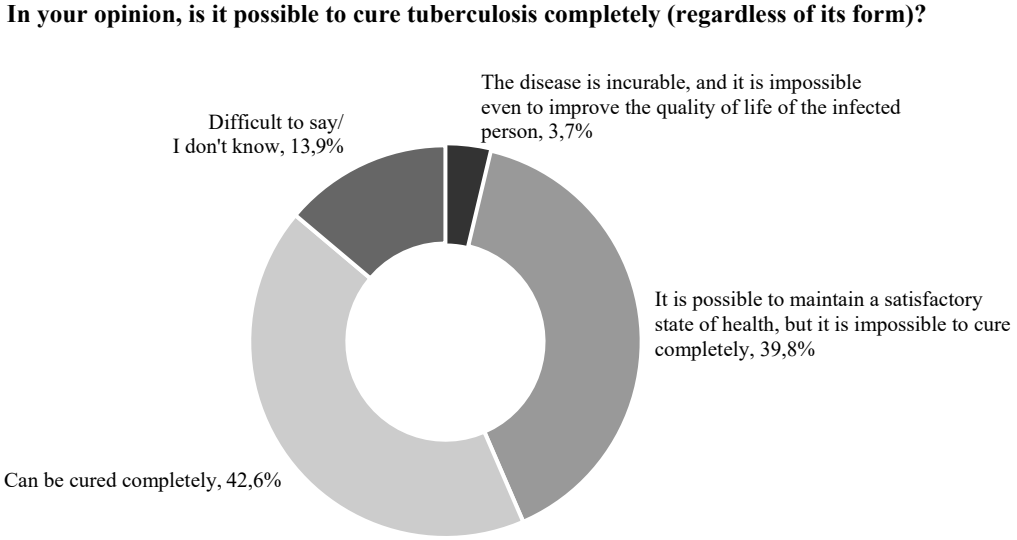

Figure 6.11. Public perception of whether tuberculosis can be completely cured

Residents of Ukraine do not know exactly how tuberculosis treatment is paid for in Ukraine: 36.1% of respondents answered "it's difficult to say" to this question. Among those who chose a certain answer option, the majority tend to believe that tuberculosis treatment is not free: 40.8% believe that the patient pays all or most of the costs themselves, another 13.7% that the patient pays some costs, and only 9.4% believe that all medicines for tuberculosis treatment are provided by the state free of charge (**Fig. 6.12**).

Awareness of how tuberculosis treatment is paid in Ukraine is low among all categories of the population: in all socio-demographic categories that were included in the analysis, the largest share is those who answered that they do not know exactly how tuberculosis treatment is paid, and among of those who decided on the answer, the majority is of the opinion that the treatment of tuberculosis is fully or partially paid for by the patients.

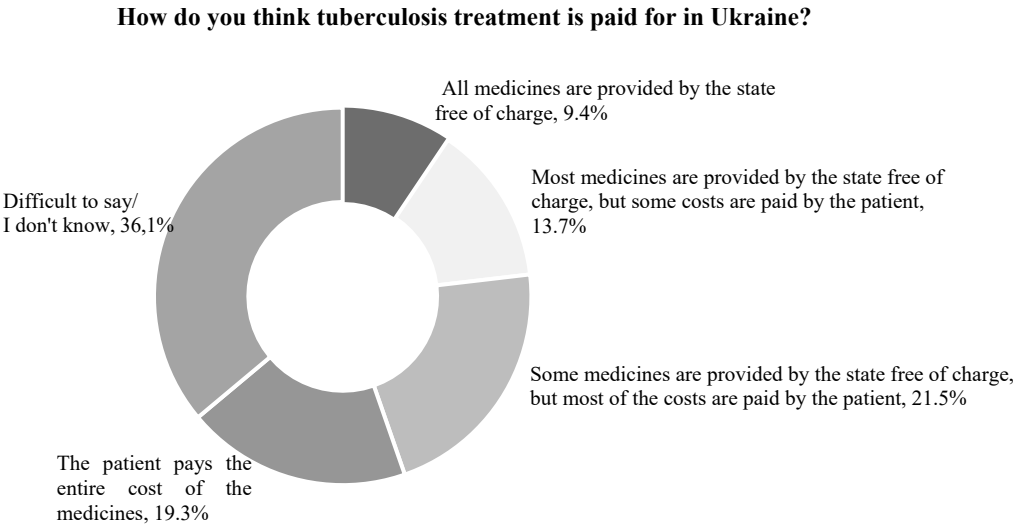

Figure 6.12. The population's perception of how tuberculosis treatment is paid for in Ukraine

A significant part of the population tends to consider people with tuberculosis dangerous for society. According to the survey, only 5.6% answered that they would buy fresh vegetables from a shop owner or seller if they knew that this person had tuberculosis, 94.4% would not. An even smaller percentage (3.7%) believes that if a schoolteacher is a carrier of tuberculosis, they should be allowed to continue teaching at school, 96.3% - don't think so. About the same number (3.4%) would allow their child to attend kindergarten, school, or classes together with children infected with tuberculosis, 96.6% would not. Only a third (30.3%) answered that it is not possible to get infected with tuberculosis if you eat food prepared or served by a person infected with tuberculosis, 69.7% - that it is possible. Such views are characteristic of the absolute majority of the population, regardless of gender, age, place of residence, or other characteristics (**Table 6.9**).

Two-thirds of the respondents (67.1%) indicated that if they had learned that a member of their family had contracted tuberculosis, they would be ready to take care of them at home, 32.9% would not. At the same

time, most respondents (60.0%) would try to keep it a secret if a member of their family was infected with tuberculosis, 40.0% would not.

Therefore, the population mainly shows a prejudiced attitude towards people with tuberculosis, which may be related to insufficient awareness that tuberculosis cannot be contracted in the process of ordinary household interaction, for example through shared things, household items, utensils, hygiene items, food, etc.

Table 6.9
People's perception and attitude towards people with tuberculosis, 2020.

		Affirmative responses among those who have ever heard of tuberculosis					
	N	would buy fresh vegetables from a shop owner or seller if they knew that this person had tuberculosis, %	would allow their child to attend kindergarten, school or classes together with children infected with tuberculosis, %	believe that if a school teacher is a carrier of tuberculosis, they should be allowed to continue teaching at school, %	if they found out that a member of their family was sick with tuberculosis, they would be ready to take care of him/her at home, %	if a member of their family was infected with tuberculosis, they would not try to keep it a secret, %	know that you cannot get infected with tuberculosis if you eat food prepared or served by a person infected with tuberculosis, %
Ukraine	**9247**	**5,6**	**3,4**	**3,7**	**67,1**	**40,0**	**30,3**
GENDER							
men	3301	6,1	3,9	4,3	66,5	42,3	31,9
women	5946	5,2	3,1	3,2	67,5	38,1	28,9
AGE GROUP							
18–29 years old	1264	6,5	3,6	4,2	64,2	40,1	30,6
30-44 years old	2535	5,9	2,7	3,1	64,7	40,9	29,1
45–59 years old	2324	5,8	4,2	4,0	69,4	40,9	30,7
60 and older	3124	4,8	3,4	3,6	68,8	38,2	30,9
PLACE OF RESIDENCE							
urban	5790	5,7	3,3	3,6	66,2	37,7	30,3
rural	3457	5,4	3,7	3,7	69,2	45,5	30,1
LEVEL OF EDUCATION							
Primary, general secondary	2092	3,3	2,2	2,2	71,4	41,2	25,0
Vocational and technical/secondary specialized	4578	6,1	3,8	4,0	64,3	39,0	31,6
Higher education, scientific degree	2577	6,4	3,7	4,1	68,6	40,9	31,8
HOUSEHOLD INCOME PER PERSON							
up to 1000 UAH	907	6,2	3,4	5,0	59,2	40,1	34,9
1001–1500 UAH	855	7,2	5,1	5,7	65,0	43,4	31,8
1501–2000 UAH	1134	4,6	2,8	3,0	67,1	43,0	27,1
2001–2500 UAH	1246	4,9	4,0	3,5	66,7	39,3	28,1
over 2500 UAH	3011	5,5	3,1	3,4	68,5	38,7	30,0

6.7. Knowledge about hepatitis C, its symptoms, and ways of transmission

According to the survey, the percentage of residents who have never heard of hepatitis C is significantly higher compared to the infections discussed above: among all respondents, 83.6% have heard of hepatitis C, and 16.4% have never heard of it. The percentage of those who have heard about hepatitis C is slightly higher among women (85.3%) than among men (81.4%), in the middle age categories (87.4% among people aged 30-44 years old, 85,8% - aged 45–59 years old), than among the younger population (80.0%) or people aged 60 and older (79.7%), among urban residents (86.1%), than in rural areas (77.4%), as well as among people with higher education (89.4%) than those without higher education (75.9% among people with primary or general secondary education, 83.3% with special secondary education) (**Table 6.10**). In part, this situation is related to insufficient awareness of the existence of different types of hepatitis, which indirectly confirms further findings.

All follow-up questions about hepatitis C were only asked of those who had ever heard of the infection. Quite a lot of people do not know exactly how you can get infected with hepatitis C. Most (62.7%) know that you can get infected with hepatitis C during a blood transfusion. Relatively fewer respondents know that it is possible to become infected with hepatitis C due to the use of non-sterile instruments during dental procedures, ear piercing, manicure, tattooing, etc. (39.8%), due to the use of some hygiene items (shared blades, manicure scissors) with an infected person (37.3%), due to the use of injection drugs (34.1%). Only about 16.8% answered that hepatitis C can be transmitted during unprotected sexual contact; the same number (16.7%) know that hepatitis C can be transmitted from mother to child during pregnancy or childbirth. The least (3.3%) indicated that it is possible to become infected with hepatitis C during the use of drugs through inhalation through the nose.

Part of the population has misconceptions about the ways of infection with hepatitis C, in particular, 13.6% answered that it is possible to become infected with hepatitis C through the use of shared utensils, 12.0% – through saliva (kissing with an infected person when the patient spits, coughs), 8,6% – during exposure of infected biological material to undamaged skin, 8.3% – through airborne droplets, 8.0% – as a result of using shared nozzles while smoking hookah, 6.2% – during stay in unsanitary conditions (for example, in dirty rooms or streets, etc.), 6.1% – during breastfeeding, 5.0% – through the handrails in public transport, 2.5% – while swimming in a reservoir or pool. The answers to this question give grounds for the conclusion that part of the population does not clearly distinguish between individual types of viral hepatitis and even types of hepatitis.

About 16.6% of those who have heard of hepatitis C admit that they have no idea how to get infected with it.

People of a younger age (18–29 years old) and 60 years and older, residents of rural areas, people with a lower level of education (primary, general secondary) and lower income are a little worse informed about the ways of transmission of hepatitis C: these categories have a slightly higher percentage of those who said they don't know the symptoms and a slightly lower percentage of those who know the correct routes of hepatitis C transmission.

Based on the survey, many residents of the country do not know the symptoms of hepatitis C or are only partially aware of them. Among the symptoms of hepatitis C, the interviewees most often mentioned jaundice (60.8% of those who had ever heard of the existence of this disease). A much smaller percentage know such symptoms as darkening of urine or light stool (17.5%), increased fatigue (17.2%), aches and pains in joints and muscles (5.1%). Only 7.0% of respondents know that the patient may not have symptoms. About a quarter (24.1%) of those who have heard of hepatitis C are aware that they do not know the symptoms of this disease (**table 6.11**).

As in the question about the ways of transmission of hepatitis C, representatives of the younger (18–29 years old) and older (60 years and older) age groups, residents of rural areas, people with primary/general secondary education, and lower income are a little less aware of the symptoms of this disease, but also in other categories, knowledge of the symptoms of hepatitis C is only partial.

Table 6.10
Awareness of hepatitis C and ways of transmission by socio-demographic characteristics, 2020.

	All interviewed		knowledge of the correct ways of hepatitis C transmission								misconceptions about the ways of hepatitis C transmission, %									
	N	who has ever heard of hepatitis C, %	*N*	during blood transfusion, %	due to the use of non-sterile tools during dental procedures, ear piercing, manicure, %	due to the use of some hygiene items (shared blades, manicure scissors) with an infected person, %	while using injection drugs,	during unprotected sexual contact, %	from mother to child during pregnancy or childbirth, %	during drug use through nasal inhalation, %	through sharing utensils with an infected person	through saliva - kisses with an infected person, when the patient spits, coughs	during exposure of infected biological material to undamaged skin	by airborne droplets	due to the use of joint nozzles during hookah smoking	while in unsanitary conditions (for example, dirty rooms or streets, etc.)	during breastfeeding (if the mother in labor is infected)	through handrails in public transport	while swimming in a reservoir or pool	
Ukraine	**9455**	**83,6**	**7730**	**62,7**	**39,8**	**37,3**	**34,1**	**16,8**	**16,7**	**3,3**	**13,6**	**12,0**	**8,6**	**8,3**	**8,0**	**6,2**	**6,1**	**5,0**	**2,5**	
GENDER																				
men	3327	81,4	2631	62,7	37,9	35,8	33,8	18,8	16,5	3,9	13,8	11,8	9,2	8,0	8,6	6,2	5,9	5,2	2,9	
women	6128	85,3	5099	62,8	41,3	38,5	34,3	15,3	16,9	2,9	13,5	12,2	8,1	8,5	7,5	6,3	6,2	4,9	2,2	
AGE GROUP																				
18–29 years old	1311	80,0	1034	59,8	39,5	36,3	37,1	18,9	18,1	3,8	10,9	9,1	8,3	5,6	6,6	6,8	5,7	5,5	2,7	
30-44 years old	2581	87,4	2233	64,4	41,5	41,6	38,0	19,4	18,6	3,3	13,9	11,9	8,7	7,4	9,0	6,0	7,2	5,4	2,3	
45–59 years old	2363	85,8	2004	65,4	42,7	39,5	36,2	18,7	17,3	3,6	14,0	13,0	8,7	10,1	8,1	6,3	6,3	4,4	2,7	
60 years and older	3200	79,7	2459	60,0	35,5	31,2	26,2	11,2	13,4	2,8	14,5	12,9	8,4	9,1	7,5	6,1	4,8	4,9	2,4	
PLACE OF RESIDENCE																				
urban	5978	86,1	5071	65,1	41,6	39,3	35,7	17,8	17,9	3,4	14,5	12,4	9,0	8,5	8,5	6,0	6,4	5,2	2,7	
rural	3477	77,4	2659	56,3	35,2	32,0	29,7	14,1	13,5	3,2	11,2	11,1	7,4	7,9	6,7	6,9	5,4	4,5	2,1	
LEVEL OF EDUCATION																				
primary, general secondary	2138	75,9	1561	58,2	35,4	30,7	27,8	12,0	12,3	2,4	10,1	9,0	6,8	6,6	4,7	6,2	4,3	4,6	2,5	
vocational and technical, secondary specialized	4661	83,3	3804	62,2	40,4	38,0	33,2	17,1	17,1	3,0	14,4	14,0	8,3	9,5	8,8	6,4	5,8	4,8	2,1	
higher education, scientific degree	2656	89,4	2365	66,1	41,4	40,2	39,3	19,2	18,7	4,4	14,6	10,8	10,1	7,5	8,6	5,9	7,6	5,5	3,1	12,4
HOUSEHOLD INCOME PER PERSON																				
up to 1000 UAH	946	77,5	717	52,7	32,9	33,3	26,7	13,5	12,0	4,0	13,6	8,5	8,5	6,3	5,9	4,8	4,4	3,0	3,3	
1001–1500 UAH	843	83,3	701	57,5	38,0	35,2	31,6	19,2	16,0	2,9	11,8	9,5	10,1	6,5	6,4	5,6	6,4	4,8	3,0	
1501–2000 UAH	1153	78,2	882	59,9	40,6	34,0	32,1	18,0	16,8	2,3	17,3	13,3	6,9	8,9	6,6	5,4	6,2	5,2	2,0	
2001–2500 UAH	1262	81,1	999	60,5	40,3	36,8	30,9	13,8	15,1	3,8	15,3	17,3	10,0	12,0	10,0	8,4	6,2	7,4	2,3	
over 2500 UAH	3066	86,1	2575	67,8	45,1	42,3	38,3	17,3	19,4	3,4	13,5	12,5	8,6	9,4	9,5	6,3	7,1	4,7	2,1	

Table 6.11
Awareness of hepatitis C symptoms by socio-demographic characteristics, 2020.

	Those who have ever heard of hepatitis C															
	knowledge of the correct hepatitis C symptoms						misconceptions about hepatitis C symptoms, %									
	N	Jaundice (yellowing of the skin and mucous membranes), %	darkening of urine or light stool, %	increased fatigue and weakness, %	the patient may not have symptoms, %	aches and pains in joints and muscles,	nausea	unexplained increase in body temperature or fever	loss of appetite	increased lymph nodes	unexplained weight loss	increased sweating	a cough lasting more than two weeks	chest pain	coughing up blood (hemoptysis)	It is difficult to say/I do
Ukraine	**7733**	**60,8**	**17,5**	**17,2**	**7,0**	**5,1**	**13,1**	**12,1**	**11,3**	**7,5**	**7,5**	**6,2**	**2,3**	**1,8**	**1,5**	**24,1**
GENDER																
men	2631	58,3	15,8	15,7	8,2	5,0	11,8	12,9	10,8	7,6	6,8	6,1	2,7	1,9	1,7	24,7
women	5102	62,7	18,9	18,3	6,1	5,1	14,0	11,6	11,7	7,5	8,1	6,3	2,1	1,8	1,3	23,6
AGE GROUP																
18–29 years old	1034	56,8	14,9	15,8	8,5	6,4	12,2	9,8	10,7	7,2	7,4	6,3	1,4	1,2	1,2	27,7
30-44 years old	2235	59,9	19,2	16,0	8,0	5,5	14,0	13,1	11,3	8,6	8,2	5,5	2,3	1,8	1,5	23,8
45–59 years old	2004	63,5	19,4	21,5	7,8	5,4	14,5	14,6	13,7	8,4	8,3	8,5	2,7	1,9	1,7	21,1
60 years and older	2460	61,4	15,4	15,3	4,3	3,5	11,3	10,0	9,5	5,8	6,1	4,8	2,6	2,1	1,4	25,3
PLACE OF RESIDENCE																
urban	5074	62,1	19,3	17,5	7,0	5,5	13,6	12,7	11,8	7,9	8,2	6,5	2,6	1,9	1,5	22,6
rural	2659	57,2	12,7	16,4	7,0	3,9	11,8	10,6	10,1	6,5	5,8	5,6	1,6	1,7	1,4	28,2
LEVEL OF EDUCATION																
primary, general secondary	1561	56,0	12,0	14,8	5,4	3,0	8,7	12,5	8,5	4,8	5,7	5,4	1,7	1,1	0,8	31,5
Vocational and technical, secondary special	3805	61,3	17,8	16,7	7,1	4,7	13,3	11,7	10,4	7,1	6,8	5,8	2,5	1,8	1,4	23,4
higher, scientific degree	2367	62,8	20,3	19,4	7,7	6,8	15,4	12,7	14,5	9,9	9,8	7,3	2,5	2,3	2,0	20,8
HOUSEHOLD INCOME PER PERSON																
up to 1000 UAH	719	56,2	10,0	12,1	3,4	5,5	10,8	8,4	11,5	8,1	4,6	5,8	3,5	2,1	2,3	30,2
1001–1500 UAH	702	55,6	15,5	14,1	7,8	5,1	10,2	9,9	9,8	9,0	9,0	5,5	1,7	0,8	1,4	28,8
1501–2000 UAH	882	56,7	15,6	13,7	6,9	3,4	11,4	11,0	6,9	5,5	7,4	4,2	2,5	0,7	0,5	28,1
2001–2500 UAH	999	60,5	18,5	16,2	6,0	3,4	14,2	13,2	11,3	5,3	5,1	5,1	1,6	2,5	1,4	24,0
over 2500 UAH	2574	66,2	20,5	21,9	6,7	6,2	15,3	14,7	13,6	7,3	8,6	8,5	2,4	2,1	1,7	19,0

6.8. Diagnosis of hepatitis C

Almost half of those who have ever heard of hepatitis C rate their risk of contracting it as probable or quite real: 46.9% of respondents rated their risk of contracting hepatitis C as "absolutely real", "relatively real" or "fifty-fifty", 39.7% consider the possibility of getting infected with hepatitis C unlikely, and 13.3% answered that, in their opinion, they are absolutely not at risk (**Fig. 6.13**).

Younger and middle-aged people rate their risk of hepatitis C infection a little higher (assume that the risk of hepatitis C infection is probable or quite real, 48.0% of respondents aged 18–29, 49.0% aged 30–44, and 52.0% aged 45–59), than people aged 60 and older (39.2%). In addition, people with higher education (51.7%) rate their risk of hepatitis C infection somewhat higher than those without higher education (44.7%), and people from categories with low (49.1% with household income up to UAH 1,500 per person) or high income (49.1% with household income over UAH 2,500 per person) than in the middle-income category (42.4% with household income 1,501–2,500 UAH per person). There is no significant difference in the perception of one's own risks of hepatitis C infection by gender and type of locality.

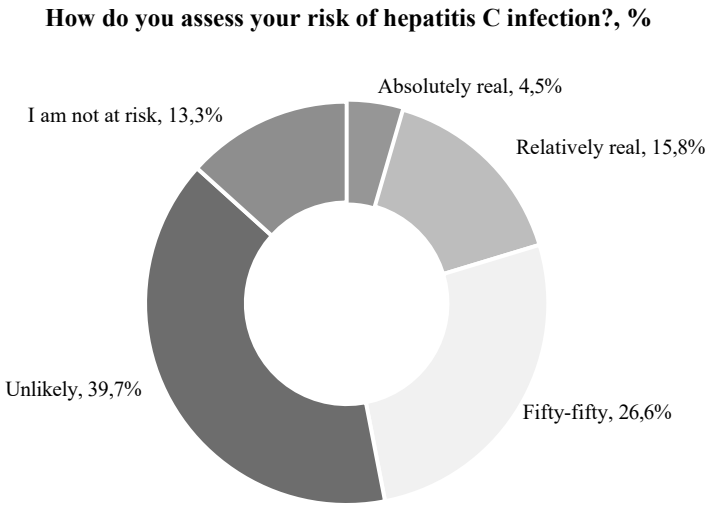

Figure 6.13. The population's assessment of their risk of hepatitis infection

A little less than half (46.8%) of those who have heard of this disease know where to get a quick or laboratory blood test for hepatitis C. Somewhat less knowledgeable about this issue are people over 60 (37.5% know where to get a quick or laboratory blood test for hepatitis C), people with a lower level of education (39.4% among those with primary or general secondary education, 44.9% - secondary special) and residents of rural areas (42.6%) (**Table 6.12**).

Table 6.12
Undergoing hepatitis C diagnostics by socio-demographic characteristics, 2020.

	Those who have ever heard of hepatitis C				Those who have ever had a hepatitis C test	
	N	know where to do a quick or laboratory blood test for hepatitis C, %	have ever been tested for hepatitis C,%	have been tested for hepatitis C within the past two years,%	N	know the result, %
Ukraine	**7743**	**46,8**	**19,7**	**11,7**	**1502**	**98,0**
GENDER						
men	2638	46,1	18,1	11,7	475	97,2
women	5105	47,4	21,0	11,6	1027	98,5
AGE GROUP						
18–29 years old	1035	49,2	21,5	15,6	232	97,5
30-44 years old	2239	51,9	23,0	14,1	511	97,5
45–59 years old	2005	49,4	20,2	11,4	420	98,5
60 years and older	2464	37,5	14,7	7,0	339	98,6
PLACE OF RESIDENCE						
urban	5083	48,4	20,4	12,3	1033	98,3
rural	2660	42,6	18,1	9,9	469	97,0
LEVEL OF EDUCATION						
Primary, general secondary	1562	39,4	11,7	7,1	169	99,2
Vocational and technical/secondary specialized	3810	44,9	18,1	10,0	707	97,6
higher education, scientific degree	2371	54,2	27,2	17,0	626	98,1
HOUSEHOLD INCOME PER PERSON						
up to 1000 UAH	719	39,9	11,6	7,0	90	94,9
1001–1500 UAH	702	46,7	20,5	12,4	148	98,8
1501–2000 UAH	883	43,8	19,3	10,7	165	98,2
2001–2500 UAH	999	45,3	17,8	9,8	162	99,6
over 2500 UAH	2576	47,8	19,0	11,1	501	97,9

Among the entire adult population, 19.7% have been tested for hepatitis C, including 11.7% in the last two years (**Fig. 6.14**).

The percentage of those who have ever had a hepatitis C test is slightly higher among women (21.0%) than among men (18.1%), younger and middle-aged people (21.5% in the age group 18–29 years old, 23.0% – 30-44 years old, 20.2% – 45–59 years old), than over 60 years old (14.7%), urban residents (20.4%) than rural areas (18.1%), as well as people with higher education (27.2%) than those without higher education (11.7% among people with primary or general secondary education, 18.1% with secondary special), and people with an average or high income (over UAH 1,000 per household member, 19.0%) than among people with the lowest income (under UAH 1,000 per household member, 11.6%).

Among those who have ever taken a hepatitis C test, 98.0% know their result, without significant differences by socio-demographic characteristics.

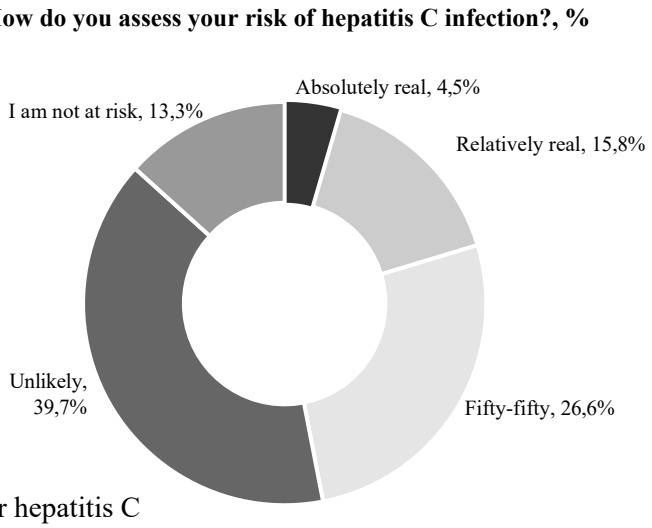

Figure 6.14. Getting tested for hepatitis C

Most of those who took a hepatitis C test during the last two years underwent this diagnostic in a communal/departmental polyclinic (54.2%), about a fifth (20.7%) - in a general hospital. A little less than a tenth (8.8%) were diagnosed for hepatitis C in a private laboratory, 6.0% - in an obstetrics and gynecology service.

About half (47.4%) of those who were diagnosed with hepatitis C in the last two years paid for the diagnosis in full or in part, and 52.6% received it for free.

The absolute majority of those who have not been tested for hepatitis C at all or in the last two years indicated that they did not see the need for it and did not consider themselves to be at risk (84.7%), and almost a fifth do not know where to go (18.3%). Respondents cited other reasons for refusing to undergo diagnostics much less frequently. In particular, 5.5% do not have an institution/center nearby to undergo diagnostics, 5.0% cannot find free time for diagnostics, 3.9% believe that such diagnostics are paid or expensive, 3.2% do not have funds for tests, transportation costs, 2.8% do not know where the institution for testing is located, 1.5% did not undergo a hepatitis C diagnostic due to the inconvenient work schedule of the institution, 1.2% - due to the inconvenient location of the institution, 1.1% are afraid to find out their result, 1.0% - are afraid that the result will become known to someone else, and 0.9% provided other reasons (**Fig. 6.15**). The absence of symptoms, as well as the lack of a doctor's appointment are among the other reasons mentioned by the interviewees. At the same time, some respondents indicated that they did not consider it necessary to undergo a diagnosis for hepatitis C, because they already had hepatitis (Botkin's disease or hepatitis A) or had been vaccinated, which again proves insufficient awareness of the difference between types of hepatitis.

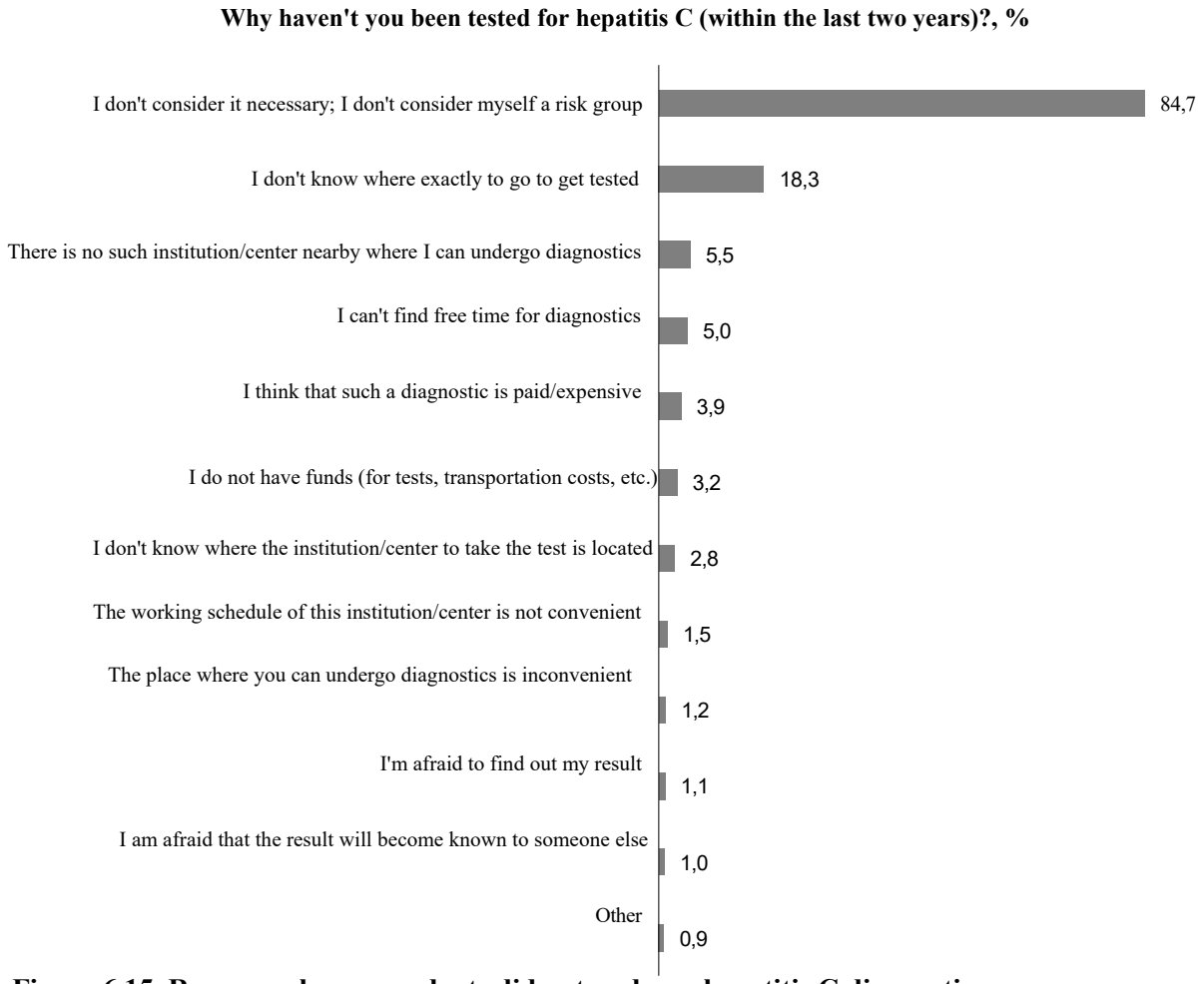

Figure 6.15. Reasons why respondents did not undergo hepatitis C diagnostics

When asked why other people might not be tested for hepatitis C, the majority, as in the question about their own behavior, indicated that the reason is that people do not consider it necessary because they do not consider themselves to be at risk (81,3%). Also, quite a lot of people believe that the reasons why others do not undergo hepatitis C testing are that people do not know about this disease (24.8%) or do not know where to go (20.4%) (**Fig. 6.16**).

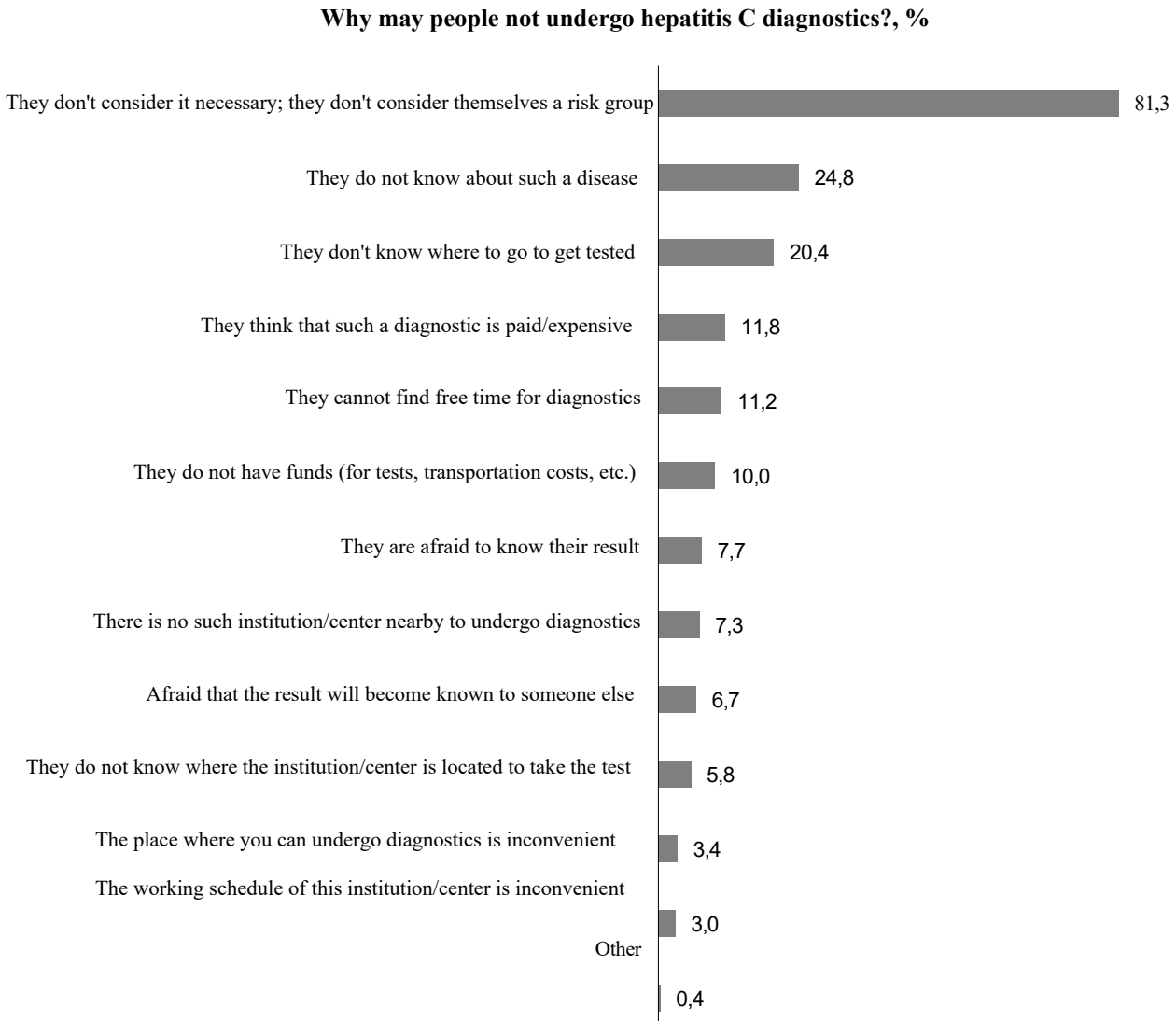

Figure 6.16. Reasons why respondents believe other people may not be tested for hepatitis C

6.9. Perception and attitudes towards hepatitis C

Residents of Ukraine are poorly informed that hepatitis C is curable. According to the survey, only 19.3% of the population know that hepatitis C can be completely cured. The majority (44.8%) believe that hepatitis C cannot be cured completely, but it is possible to maintain a satisfactory state of health, and 7.1% believe that this disease is incurable and it is impossible even to improve the quality of life of the infected person. More than a quarter (28.8%) answered that they do not know at all whether hepatitis C can be completely cured (**Fig. 6.17**).

The level of awareness that hepatitis C is curable does not depend on gender, age, education, income, or place of residence, and is equally low in all socio-demographic categories.

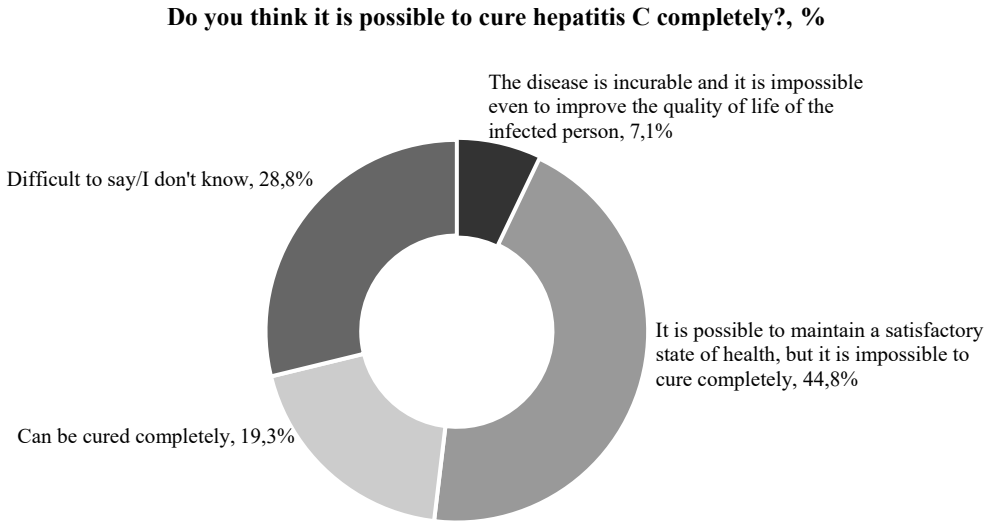

Figure 6.17. Public perception of whether hepatitis C can be completely cured

Also, the population is poorly informed about exactly how hepatitis C treatment is paid for in Ukraine: 43.5% answered "it's difficult to say" to this question. Among the rest, the majority tend to believe that hepatitis C treatment is not free: 46.0% of all respondents believe that the patient pays all or most of the costs, about 8.2% believe that the patient pays some costs, and only 2,4% answered that all medicines for the treatment of hepatitis C are provided by the state free of charge (**Fig. 6.18**).

Awareness of how hepatitis C treatment is paid in Ukraine is low among all categories of the population: in all socio-demographic categories that were included in the analysis, the vast majority answered that they do not know how hepatitis C treatment is paid, and among of those who responded, the majority believed that hepatitis C treatment was fully or partially paid for by the patients.

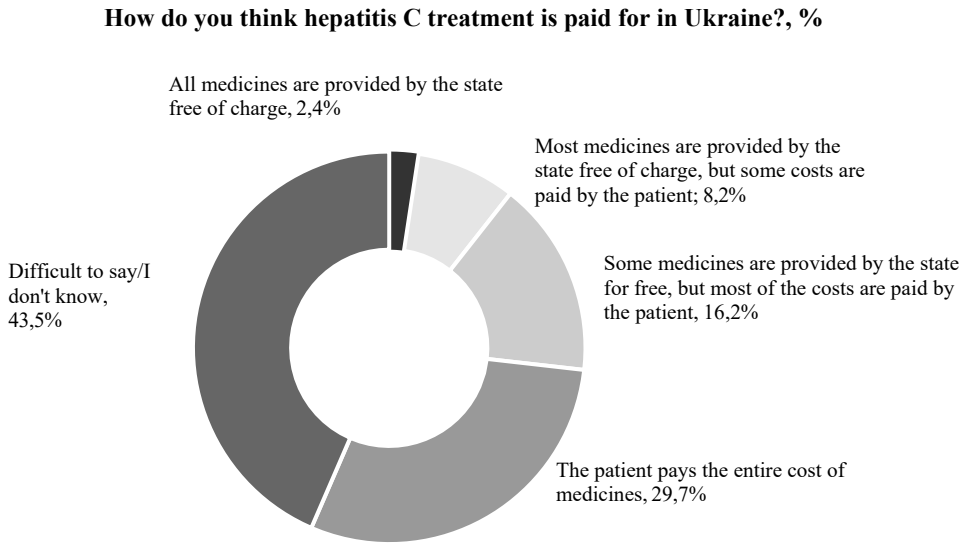

Figure 6.18. The population's perception of how hepatitis C treatment is paid for in Ukraine.

A significant part of the population shows a prejudiced attitude towards people with hepatitis C. Thus, only a quarter (24.1%) of the respondents answered that they would buy fresh vegetables from the seller if they knew that this person had hepatitis C, 75.9% would not. Only 16.5% agree that if a schoolteacher is a carrier of hepatitis C, they should be allowed to continue teaching at school, 83.5% disagree. About the same number (15.7%) would allow their child to attend kindergarten, school, or classes with children infected with hepatitis C, 84.3% would not. Although about two-thirds (62.2%) answered that it is not possible to become infected with hepatitis C if you eat food prepared or served by a person with hepatitis C, a third (37.8%) believe that it is possible.

In case of illness of a loved one, most respondents would be ready to provide support to such a member of their family: about 79.3% indicated that if they found out that a member of their family had contracted hepatitis C, they would be ready to take care of them at home, 20.7% would not. At the same time, most respondents (61.3%) would try to keep it a secret if a member of their family was infected with hepatitis C, 38.7% would not. According to the survey, younger people and people with higher education answered slightly more often that they do not see a threat in social interaction with people suffering from hepatitis C, but, despite this, the majority in all categories perceive hepatitis C patients with fear (**table 6.13**).

Table 6.13
Perceptions and attitudes toward people with hepatitis C, 2020.

		Affirmative responses among those who have ever heard of hepatitis C					
	N	would buy fresh vegetables from a store owner or seller if they knew that this person had hepatitis C, %	would allow their child to attend kindergarten, school, or classes together with children infected with hepatitis C, %	believe that if a schoolteacher is a carrier of hepatitis C, they should be allowed to continue teaching at school, %	if they found out that a member of their family got hepatitis C, they would be ready to take care of them at home, %	if a member of their family was infected with hepatitis C, they would not try to keep it a secret, %	know that you cannot get infected with hepatitis C if you eat food prepared or served by someone infected with hepatitis C, %
Ukraine	**6500**	**24,1**	**15,7**	**16,5**	**79,3**	**38,7**	**62,**
GENDER							
men	2214	25,6	17,3	18,3	79,1	42,4	63,
women	4286	22,9	14,4	15,2	79,4	36,0	61,
AGE GROUP							
18–29 years old	846	29,0	18,1	19,2	77,3	40,7	59,
30-44 years old	1892	27,4	17,9	20,1	79,8	38,9	64,
45–59 years old	1696	23,5	15,9	15,4	80,7	39,3	62,
60 years and older	2066	18,4	11,8	12,3	78,4	36,9	61,
PLACE OF RESIDENCE							
urban	4218	24,8	15,9	17,0	80,7	36,3	62,
rural	2282	22,3	15,0	15,4	75,7	45,2	60,
LEVEL OF EDUCATION							
primary, general secondary	1285	19,3	12,3	12,5	78,5	39,2	56,
vocational, secondary special	3227	22,9	15,1	16,0	77,5	38,0	64
higher, scientific degree	1988	28,8	18,6	19,9	82,3	39,6	62,
HOUSEHOLD INCOME PER PERSON							
up to 1000 UAH	613	22,4	13,9	14,8	71,6	43,8	52,
1001–1500 UAH	589	20,7	13,3	11,5	75,6	44,9	57,
1501–2000 UAH	750	21,5	15,7	16,5	81,2	40,8	61,
2001–2500 UAH	865	20,4	12,8	12,1	76,0	35,4	58,
over 2500 UAH	2175	28,2	18,8	20,2	82,3	37,5	67,

Thus, a significant part of the population shows a prejudiced attitude towards people suffering from hepatitis C, which may be related to insufficient awareness of this disease, the ways of its transmission and how exactly you can protect yourself.

The conducted survey on HIV/AIDS, tuberculosis, and hepatitis C makes it possible to assess the current

level of awareness of the adult population about these diseases and to identify possible problems or gaps in perception, ideas, or attitudes, which is important for increasing the effectiveness of combating these diseases in Ukraine.

Regarding HIV, the obtained results are generally consistent with previous studies. The current survey confirms the high awareness of the adult population about the existence of the disease, the ways of transmission (especially sexual) and how to protect yourself from sexual infection. At the same time, awareness about HIV remains incomplete, and some people continue to believe in false stereotypes about HIV transmission, in particular, that one can become infected with HIV through a mosquito bite or through food prepared or served by an HIV-infected person. Stigmatization and discrimination of people living with HIV is also an urgent problem: according to the current survey, the attitude of the country's residents towards people living with HIV remains mostly negative, and most of the country's residents perceive people with HIV with fear and tend to avoid social contacts with them. Prejudiced society's perception of people with HIV not only negatively affects the quality of life of these people, but also leads to a decrease in motivation to undergo diagnosis, denial or concealment of the disease, refusal of medical supervision and treatment, etc. That is, overcoming the stigma of people living with HIV remains an important aspect of combating HIV in Ukraine.

In addition, the survey found that HIV testing coverage remains uneven across the population, with the percentage of those who have ever taken an HIV test lower among men, people over 45, rural residents, and people with lower levels of education and income. The main reason why people do not get tested is that they do not feel the need for it and do not think they are in the risk group. This indicates the need to increase motivation, awareness of the importance of voluntary HIV testing among the population, and to expand the availability of such services, particularly in rural areas.

In matters related to tuberculosis, the survey confirms the high awareness of the population about the existence of this disease. At the same time, the survey shows that a large part of residents have inaccurate ideas about the possibility of infection, in particular, they are not sufficiently aware that tuberculosis cannot be contracted in the course of ordinary household interaction, through shared things, household items, utensils, hygiene items, food, etc., as a result of which residents of the country tend to exaggerate the risks of infection and the danger of tuberculosis patients to the environment.

Also, the survey shows that quite a lot of people in Ukraine do not know that tuberculosis is curable, and most tend to believe that the treatment of tuberculosis is fully or partially paid for by the patients. This can have a negative impact on the motivation to see a doctor in a timely manner and comply with treatment in the event of an illness; accordingly, it is important to raise public awareness of the curability of tuberculosis and government programs that make such treatment free of charge.

The survey revealed that the level of awareness of the adult population about hepatitis C is quite low: a significant part of the population has never heard of the existence of this disease, and among those who have heard of hepatitis C, quite a lot of people do not know the ways of its transmission and symptoms; the most important thing is that hepatitis C can be asymptomatic. Also, the population is poorly informed about the curability of hepatitis C and how the treatment of this disease is paid for in Ukraine. Although residents of the country perceive their own risk of hepatitis C infection to be quite high, most have never been tested for hepatitis C, which is primarily due to a lack of awareness of the need for this, as well as insufficient awareness of the disease and where to undergo such a testing. This indicates the need for information campaigns aimed at increasing public awareness of hepatitis C, as well as the importance of timely diagnosis for the treatment of this disease. It is also important to disseminate information about the differences between the different types of hepatitis in terms of transmission, prevention, treatment options, and public health implications.