HEALTH INDEX. UKRAINE - 2019

RESULTS OF NATIONAL SURVEY

KYIV - 2020

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СПІЛЬНИЙ ЗІ СВІТОВИМ БАНКОМ ПРОЕКТ МОЗ УКРАЇНИ
ПОЛІПШЕННЯ ОХОРОНИ ЗДОРОВ'Я НА СЛУЖБІ У ЛЮДЕЙ

Serving People, Improving Health: joint project of World Bank and Ministry of Health of Ukraine

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УДК

This Report is based on the results of the fourth round of "Health Index. Ukraine" survey that was organized and conducted by the International Renaissance Foundation. The data are collected by the International Institute of Sociology in cooperation with Social Indicators Center during June – August 2019. For comparison, data of previous survey rounds of 2016-2018 were used. This Report is prepared by the research team of contributors. It shows the results of all-national representative sociological survey of people's health, related behaviors and health care seeking practices in Ukraine.

This Report is for the general public.

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CONTENT

INTRODUCTION

In 2018, in Ukraine full-fledged health care reform has finally started to roll out starting from the primary health care level. It has been over a year since fundamental changes has been introduced to health care system functioning. Today, a patient has the right to choose his/her care-giver and his/her health care facility, and the state funds per service provided. Results of this year survey provide information how that influenced healthcare users' behaviors and satisfaction level. At the same time, reforms in secondary and tertiary level of health care are just starting. Under these conditions, patient's experience, his/her satisfaction with care becomes critically important for choosing a provider or a health care facility that also determines the future of each health care facility in Ukraine. To put it in more simple words, state funding to be received by the health care facility will directly depend on the number of patients treated.

For the fourth year "Health Index. Ukraine" survey serves as a unique source of data about how attitudes, experience and behaviors of health care users and those not using it change with time and region. These data not only depict how health care reform implementation in different Oblasts impact medical services users, but also help all those involved in health care policy making on a national and local levels in informed decision-making.

We hope this survey will continue to inform public officials, health care managers, social opinion leaders and other stakeholders involved in transformation of health care of Ukraine in the interest of its citizens.

Victoriya Tymoshevska

Director of the Public Health Program Initiative

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ABOUT THE SURVEY

"Health Index. Ukraine" is a series of surveys to study satisfaction with health services, perception about health reform, healthy behaviors, and experience of seeking care and expenditures for care in Ukraine. Thanks to the financial support of the Renaissance Foundation, in 2016 the first large-scale survey of Ukrainian population was conducted, it was representative of the country in general and of each region in particular (all Oblasts and the city of Kyiv).

Data collection for all four survey rounds 2016-2019 was done by the Kyiv International Institute of Sociology (KIIS) in cooperation with the "Social Indicators" Center. Each year data were collected in May-July, and total sample was over 10,000 respondents (approximately 400 in each region).

The goal of the study is to learn how people perceive health services, level of their satisfaction with these services and other health-related aspects. In particular, the following issues are being studied:

- self-assessment of own health by adult population of Ukraine, and disease experience;
- barriers in seeking inpatient or outpatient care that household representatives were faced with;
- availability of medicines;
- satisfaction with health services and perception of health reform;
- preventative measures applied in Ukraine.

"Health Index. Ukraine" study bears several features making it stand out among many other studies looking at the same issues.

First, it is a large sample size (over 10,000 respondents were surveyed) that makes it possible to study not only population's perceptions of health care system but experience of seeking care at different levels.

Second, it is a special sampling feature making samples representative of each Oblast. Study sample is designed in such a way that allows to analyze data collected not only for Ukraine in general, but on a level of each specific region (Oblast, city of Kyiv).

Third, the study is longitudinal (repeated) and uses identical methodology and instruments that allow to track changes in perceptions and experience with time. In other words, we have the opportunity to see the dynamics of health behavior and other studied processes because four rounds of data collection have occurred by now.

When developing study methodology, the authors used the experience of Euro Health Consumer Index [1], which for a long time (since 2006) allows comparing development of health care systems of European Union countries, and identifying the most optimal way for further development, as well as a Canadian experience conducting a similar study[2].

1 Euro Health Consumer Index [Electronic resource]. – Access to the resource: http://www.healthpowerhouse.com/en/news/euro-health-consumer-index-2015/

2 Healthy Canadians: A Federal Report on Comparable Health Indicators 2012 [Electronic resource]. – Access to the resource: http://www.healthycanadians.gc.ca/index-eng.php.

Study Methodology

The field phase of the fourth round of survey lasted from June 11 through August 1, 2019.

Overall characteristics of study sample

Study sample is representative of adult population (18 and older) of Ukraine in general, as well as of each Oblast of Ukraine and city of Kyiv. The study used multi-stage sample, random at each stage. At the first stage of sample development in each Oblast, inhabited locations were randomly chosen proportionally to their population size. The second stage involved random selection of electoral districts (based on the complete list of electoral districts at the website of the Central Election Commission) on the territory of chosen inhabited locations. On the territory of each chosen area, streets, buildings, and apartments were randomly selected. The last stage included choosing a respondent within a household and actual interview. The data obtained were matched to estimates of State Statistics Service in terms of share of individual sex-age groups within population of Ukraine (as of January 01, 2018).

Overall, 10,222 respondents were surveyed. Theoretical sampling error for the whole data pool is 1.0%.

Field activities covered 476 inhabited locations in Ukraine (on territories controlled by the Ukrainian government). Survey was performed using tablets. In 2019, overall share of those who have agreed to participate in the survey out of those who were approached (response rate) was 45.2%.

It is important to note that a sample unit is a household representative, not a patient, because only household survey makes it possible to identify key barriers to care or find out alternative ways to getting well, including among those who do not seek medical care. Moreover, for industry reforms it is critically important to consider opinions of many different people, not only of patients with large experience seeking care (those who already know how to overcome existing barriers). So, the methodology used in this study allows to study attitudes and experience of those people who due to various reasons do not seek medical care.

The study questionnaire was approved by the Project International Academic Council. In 2019, it was abridged compared to the previous years' rounds, with practically no new questions added. This Report presents results regarding questions covered just by 2019 study.

Data collection method and survey instrument

Survey of household representatives was performed with the help of personal interview.

Depending on their personal experience, respondents were asked up to 130 questions about assessing problems in healthcare system, importance of different aspects of medical care for them personally; satisfaction with performance of different levels of care; behaviors in case of illness, and experience seeking outpatient and in-patient care, as well as assessing own health. The questionnaire mostly included closed-ended questions.

238 interviewers were involved in the project field phase. People were interviewed at the place they lived in Ukrainian or Russian according to respondent's preference.

Demographic characteristics of people surveyed

Distribution of study respondents by key demographic characteristics correlates with official population composition according to statistical data[3] . Among all interviewed 54.8% were women, 45.2% — men (Table 1). Over the quarter of the respondents (28.6%) were 60 and older.

One third (30.3%) of respondents lived in villages, the rest (69.7%) — in towns or urban-type settlements. These numbers correlate with the demographic sample characteristics of the previous survey rounds of 2016-2018.

51.6% of all respondents were employed, out of them 4.0% were self-employed, 2,2% - employed pensioners. Unemployed category (total almost half of population) included pensioners (27.5%), unemployed (6.2%), housewives and other out-of-the-labor force (9.4%), students (2.5%), and incapacitated people (2.8%).

3 State Statistics Service of Ukraine: http://www.ukrstat.gov.ua/

Average respondents' household size was three persons.

Table 1. Breakdown of respondents by key demographic characteristics (N = 10,222)

		Health Index Surveyed (weighted data)		National Data (Statistics)	
		N	**%**	***N***	**%**
Age groups	18–29	1 397	16,9	6 131,3	17,7
	30–44	2 643	29,0	9 932,5	28,7
	45–59	2 680	25,5	8 863,9	25,6
	60 and older	3 502	28,6	9 679,7	28,0
The network respondents	women	6 725	54,8	18 967,1	54,8
	men	3 497	45,2	15 640,3	45,2
Type of locality	urban[4]	6 161	69,7	29 132,0	69,0
	rural	4 061	30,3	13 084,0	31,0
Education	primary / lower secondary	367	2,9	–	–
	complete secondary	2 196	19,1	–	–
	vocational	1 994	19,6	–	–
	basic college/ incomplete higher	2 852	27,8	–	–
	basic higher	584	6,1	–	–
	complete higher	2 229	24,4	–	–
Average household size		10 222	2,9	–	2,58[5]

SECTION 1. ASSESSING OWN HEALTH, AND EARLY DISEASE IDENTIFICATION

Key results:

- Half of adult population of Ukraine consider their health to be good (1 of 10 reported it to be very good). Another 37.9% consider it average, and 12.1% - bad or very bad.
- Height and weight reported in the survey allow to conclude that one in every two adult Ukrainians (53.7%) is overweight. Average body mass index (BMI) in 2019 in Ukraine is 26 (excessive weight category according to WHO classification), and it has not changed over the four survey years.
- On average, Ukrainians can name two out of five symptoms of stroke on the spur of the moment. The best awareness is demonstrated by people from Luhansk, Zaporizzhya, Chernihiv, and

4 Urban localities are cities, towns and urban-type settlements.

5 Statistical Collection "Socio-demographic characteristics of Ukrainian households in 2019" (based on a sample survey of households' living conditions). State Statistics Service of Ukraine. – Access to the resource: http://www.ukrstat.gov.ua/druk/publicat/Arhiv_u/17/Arch_cdhd_zb.htm.

Volyn Oblasts, the worst – Ternopil, Khmelnitsky, and Ivano-Frankivsk Oblasts.

- According to this year survey, coverage of population with basic health check-ups mainly increases. There is increase in visits for fluoroscopy (from 55.00% in 2018 to 57.3% in 2019), and cardiogram (from 42.2% in 2018 to 44.4% in 2019). Fluoroscopy remains the most prevalent type of health check-up; more than a half of adult population has done it over the last year.
- More than half of surveyed women (52.0%) visited gynecologist for prevention in the previous 12 months, 40.0% of surveyed women did Pap smear, and 22.2% did mammography. These indicators demonstrate a bit higher scores in 2019 compared to those of 2017-2018. Men visit urologist for prevention twice less frequently (23.7%) than women visit gynecologist, and this score is a little higher than in 2018 (20,5%). Both sexes tend to have fewer such visits with age.
- Over 80% of respondents who have children under 18 in their households and aware of their health have positive attitude towards vaccination. Besides, survey data show positive dynamics in population perceptions of vaccination: supported vaccination: 70.9% in 2016, 73.4% in 2017, 74.5% in 2018, and 80.4% in 2019.
- 45.4% of the surveyed adults do self-treatment in case of disease (31.7% take medications, another 13.7% take folk remedies). For more than one third of population (37.4%) visiting a health care worker is a typical disease behavior: 27.0% are used to visit a family doctor/GP, 3.7% visit directly sub-specialist, 2.6% approach their relative or friend who happen to be a health care worker, 2.9% call ambulance, and 1.2% go directly to a hospital.
- Although the overall proportion of self-treatment fans stays practically unchanged (about 45–47%), compared to previous survey outcomes there is gradual increase of those seeking medical care in case of disease (from 29.0% in 2017 to 33.8% in 2018, and 37.4% in 2019) mostly due to increased number of visits to a family doctor/GP (18.6% in 2017, 23.1% in 2018, and 27.0% in 2019).
- Key reason to non-seeking medical care in case of disease according to respondents is having own experience treating similar symptoms (47.7%). Although this reason continues to be the most prevalent its proportion has significantly decreased over the last four years (by 10 percentage points[6]): symptoms awareness and experience of previous treatment was reported in 2016 by 57.5%, 2017 – 55.5%, 2018 – 54.8%, and in 2019 – 47.7% of respondents.
- Other barriers to getting care is expectation that a disease will subside by itself (29.3%), fear of high cost of treatment (17.7%), and long waiting lines (18.0%). In 2019, lack of trust to physicians as a reason to non-seeking medical care has significantly increased (17.5%), whereas in previous years it stayed almost on the same level (11.2% in 2017, and 10.0% in 2018).

Today, over 80% *of all deaths in Ukraine are due to cardio-vascular diseases, diabetes mellitus, cancer, chronic obstructive pulmonary disease, and mental disorders*[7]*. That is why prevention and early disease identification is one of the key aspects in transformation of the health care system in Ukraine*[8]. Ministry of Health Ukraine has begun to implement measures to prevent non-communicable diseases that are caused not by infections but by lifestyle and environment (tobacco smoking, alcohol use, unhealthy diet, lack of physical activity etc.) Thus, strengthening of prevention approach is one of the most promising aspects of health care reform Program.

Beside structural and functional transformations of care provision an important element of the reform is building up a responsible attitude of Ukrainians towards own health as it greatly

6 Percentage points (abbreviated as p.p.) show difference between percentage of the same value measured at different time points or in different groups.

7 https://moz.gov.ua/article/news/scho-robit-ukraina-dlja-podolannja-neinfekcijnih-hvorob

8 https://moz.gov.ua/article/news/investicii-v-profilaktiku---prioritet-transformacii-sistemi-ohoroni-zdorovja-z-2016-roku

depends on own behaviors: switching on to healthy diet, abandoning bad habits, timely seeking medical care and adherence to doctor' advice instead of self-treatment, undergoing healthy check-ups, vaccination etc. Improved disease prevention, early identification and treatment will promote better quality of life and health of Ukrainians.

1.1. Self-Assessment of Health Status

Half of adult population of Ukraine assess their health positively: 9.8% reported it to be very good, and 40.2% – rather good. Another 37.9% consider it average, and 12.1% - bad or very bad (Table 1.1).

The most pessimistic assessment was reported by Zaporizzhya (only 33.7% of positive responses, and 19.3% of negative). On the other hand, about 2/3 of people living in Luhansk, Rivne, Khmelnitsky, and Transkarpathian Oblasts consider their health good.

Table 1.1.

Breakdown of respondents by health self-assessment by regions

Region	*N*	Very poor, %	Poor, %	Average, %	Good, %	Very good, %
Ukraine	**10 148**	**2,0**	**10,1**	**37,9**	**40,2**	**9,8**
Vinnitsia	411	2,9	11,7	36,2	34,3	14,9
Volyn	409	0,8	6,4	33,7	39,7	19,4
Dnipropetrovsk	403	4,8	11,1	41,2	35,7	7,1
Donetsk	400	1,2	6,3	54,9	31,6	6,0
Zhytomyr	408	0,2	15,7	36,8	38,8	8,5
Transkarpathian	405	0,0	7,0	30,8	55,2	7,0
Zaporizzhya	405	3,4	15,9	46,9	27,3	6,4
Ivano-Frankivsk	402	1,8	5,0	47,6	37,0	8,6
Kyiv	399	2,5	12,7	33,6	43,6	7,7
Kirovograd	408	0,4	13,6	36,9	44,5	4,6
Luhansk	405	0,2	6,8	27,4	52,8	12,8
Lviv	408	1,6	10,1	32,4	50,8	5,1
Mykolayiv	404	4,9	14,7	39,0	33,3	8,1
Odessa	406	2,6	8,7	30,1	46,3	12,2
Poltava	410	3,2	7,7	35,8	41,6	11,8
Rivne	408	1,0	8,9	26,4	45,3	18,4
Sumy	408	1,4	12,0	32,7	44,8	9,1
Ternopil	405	3,0	12,2	35,4	33,9	15,5
Kharkiv	408	2,3	11,4	39,3	37,8	9,2
Kherson	406	2,3	13,6	37,5	32,1	14,6
Khmelnitsky	412	1,0	5,4	30,7	43,7	19,1
Cherkassy	402	3,9	12,7	42,6	30,0	10,8
Chernivtsi	409	1,4	7,0	40,7	46,2	4,7
Chernihiv	406	2,6	16,4	35,9	39,1	6,1
City of Kyiv	401	0,2	8,7	34,6	44,8	11,8

Traditionally, men assess their health somewhat higher – 58.1% of positive responses compared to 43.3% for women. At the same time, women more often tend to perceive their health as average (42.1% vs 32.8% for men) or bad (14.5% vs 9.1% for men).

Expectedly, health assessment is related to age: positive assessment was provided by 82.9% of people aged 18–29, 69.5 – aged 30–44, 42.7 – aged 45–59, and 16.9% – aged 60 and older. On

the contrary, health was assessed as bad by 28.8% of people in the oldest group 60+, 10.3% – of those aged 45–59, 3.5% – aged 30–44, and 1.3% – in the group under 30.

In health self-assessment one group of respondents stands out the most – those least educated, who haven't completed high school: 36.2% of them reported having poor health, and only 15.4% – good health, whereas in other education groups negative assessment scores does not exceed 16%, and positive scores are no less than 41%. However, this group is represented mostly by oldest respondents.

Health self-assessment also correlates with income. Those better off (with household income per person over 2,500 UAH) most often reported their health as good (56.1% vs 37.1% in income group 1001–1500 UAH or 39.0% in income group 1501–2000 UAH). This group also has the lowest proportion of people perceiving their health as bad (8.9% vs 19.8% for people with income 1001–1500 UAH per each household member).

Significant difference between urban and rural citizens in their health perceptions were not seen.

In general, with time health perceptions have improved in Ukraine. Compared to previous years proportions of those who perceive their health as good or very good slightly increased up to 50.0% vs 48.4% in 2018, and 46.6% in 2017. Besides, mean value of this assessment on a scale from 1 to 5 increases – from 3.34 in 2016 to 3.37 in 2017, 3.41 in 2018, and 3.46 in 2019.

Region-wise, this year there is less discrepancy between the lowest and the highest scores of positive self-assessment: last year those were Sumy Oblast (28.2%) and city of Kyiv (74.6%), this year they are Zaporizzhya (33.7%), and Luhansk (65.6%) Oblasts, respectively. Last year Zaporizzhya Oblast also was number top two among worst assessments (29.1%), and in previous years it scored lower than average for Ukraine. Whereas Sumy Oblast demonstrated the best progress over the last year together with Khmelnitsky Oblast, but Mykolayiv Oblast and city of Kyiv had their scores significantly drop.

Trends in heath self-assessment in key social and demographic groups (by sex, age, education and income) do not change during all survey years.

1.2. Body Mass Index (BMI)

Body mass index is one of the health risk assessment indicators: normal BMI means low risk of cardio-vascular disease and diabetes[9]. Body mass index is calculated as ratio between body mass of a person (in kilograms) to one's height (in meters) squared. According to WHO[10] classification, , weight is considered insufficient if BMI is less than 18.5, normal – 18.5 – 24.9, excessive – 25 – 29.9, and obesity – 30 and more.

Height and weight values used in the survey were those reported by the respondents; they were reported by 86.3% of the survey participants. According to 2019 survey results, 2.7% of adult population are underweight, 43.6% – normal, 35.2% – have excessive weight, and 18.5% – obesity. In other words, every other adult Ukrainian (53.7%) has excessive weight (Fig. 1.1, Table 1.2). The biggest proportion of people with excessive weight is in Zaporizzhya (63.4%), and Donetsk (59.8%) Oblast, and the smallest – in Luhansk Oblast (48.8%), and city of Kyiv (46.5%).

Mean BMI in 2019 in Ukraine is 26 which is within the excessive weight category. Region-wise mean BMI is from 25.4 (Kharkiv Oblast) to 26.9 (Donetsk Oblast). In conclusion, none of the Oblasts of Ukraine has its mean BMI values within the normal range.

9 https://moz.gov.ua/article/health/jak-viznachti-optimalnu-vagu-formula-indeksu-masi-tila

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

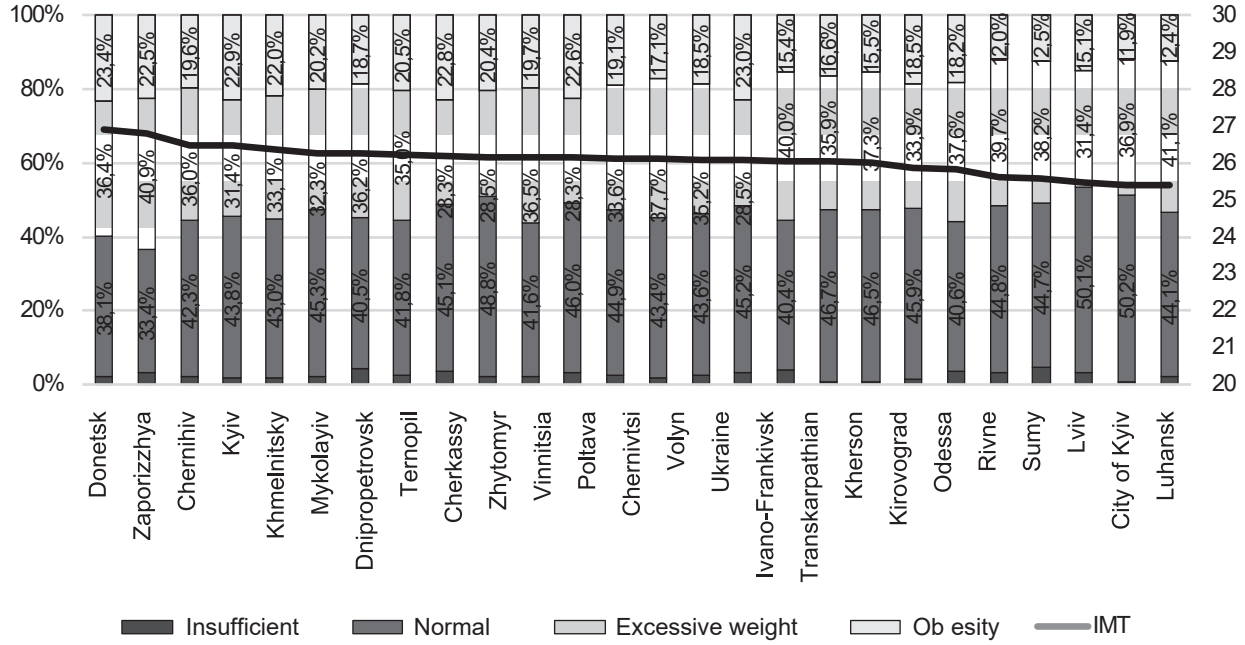

Fig. 1.1. Breakdown of respondents by body mass index categories by regions (N = 8734)

Table 1.2.

Breakdown of respondents by body mass index categories by regions

Region	***N***	Underweight, %	Normal weight, %	Excessive weight, %	Obesity, %	BMI
Ukraine	**8 734**	2,7	43,6	35,2	18,5	26,1
Vinnitsia	366	2,2	41,6	36,5	19,7	26,2
Volyn	379	1,9	43,4	37,7	17,1	26,1
Dnipropetrovsk	364	4,5	40,5	36,2	18,7	26,2
Donetsk	346	2,1	38,1	36,4	23,4	26,9
Zhytomyr	393	2,3	48,8	28,5	20,4	26,2
Transkarpathian	391	4,2	40,4	40,0	15,4	26,1
Zaporizzhya	351	3,1	33,4	40,9	22,5	26,8
Ivano-Frankivsk	354	3,3	45,2	28,5	23,0	26,1
Kyiv	334	0,7	46,5	37,3	15,5	26,0
Kirovograd	343	1,9	43,8	31,4	22,9	26,5
Luhansk	323	0,9	50,2	36,9	11,9	25,4
Lviv	371	4,6	44,7	38,2	12,5	25,6
Mykolayiv	361	2,2	45,3	32,3	20,2	26,3
Odessa	375	1,7	45,9	33,9	18,5	25,9
Poltava	327	3,1	46,0	28,3	22,6	26,1
Rivne	363	3,7	40,6	37,6	18,2	25,8
Sumy	349	3,5	44,8	39,7	12,0	25,6
Ternopil	349	2,6	41,8	35,0	20,5	26,2
Kharkiv	247	2,4	44,1	41,1	12,4	25,4

Region	*N*	Underweight, %	Normal weight, %	Excessive weight, %	Obesity, %	BMI
Kherson	296	0,8	46,7	35,9	16,6	26,0
Khmelnitsky	370	1,9	43,0	33,1	22,0	26,4
Cherkassy	368	3,8	45,1	28,3	22,8	26,2
Chernivtsi	372	2,4	44,9	33,6	19,1	26,1
Chernihiv	296	2,1	42,3	36,0	19,6	26,5
City of Kyiv	346	3,4	50,1	31,4	15,1	25,5

Women have a little higher BMI compared to men (26.3 vs 25.9), however, for both groups their BMI values are also outside the normal range. The only social-demographic group having its BMI within the normal range is the youngest group of respondents (23.2 for those aged 18–29); for all other age groups their BMI gradually increases – from 25.0 for 30–44-year-olds to 28.0 for people of 60 and older.

During five years of surveys in Ukraine mean BMI stays without change. Size of different BMI groups has not changed significantly as well. Regionally, the most sustainable positive values are characteristic of Luhansk Oblast – over the last years this Oblast's scores are among the lowest for people with excessive weight.

1.3. Awareness of Stroke Symptoms

As early acute stroke identification as possible ensures timely provision of care and increases treatment efficacy, that is why population awareness of stroke symptoms is critically important for mitigating consequences of this disease and improving health care outcomes in general.

Stroke symptoms awareness score was measured based on respondents' spontaneous answers (unprompted) with as many answers allowed for symptoms as possible. Interviewer registered when a respondent mentioned any of the five relevant symptoms or gave a wrong answer. Over 22% of respondents failed to name any of stroke symptoms, and answers of 5.5% of respondents were wrong. Three stroke symptoms most frequently mentioned by respondents were: sudden numbness or loss of movement of face, arm or leg, especially on one side of the body (48.4%); sudden onset of difficulty speaking or speech perception (37.5%); sudden onset of coordination difficulty, unsteady gait, dizziness, loss of consciousness (37.2%) **(Table 1.3).**

Table 1.3.

Breakdown of respondents by spontaneously reported stroke symptoms by regions (several answers cold be provided)

Region	*N*	Sudden numbness or loss of movement of face, arm or leg, especially on one side, %	Sudden onset of speaking difficulty or understanding speech or text, %	Sudden loss of coordination, unsteady gait, dizziness, loss of consciousness, %	Sudden, severe headache with unknown cause, %	Sudden decreased vision in one or both eyes, %
Ukraine	**10 222**	**48,4**	**37,5**	**37,2**	**18,4**	**14,9**
Vinnitsia	412	55,8	45,5	24,8	19,0	8,9
Volyn	409	57,6	52,6	60,9	22,8	24,4
Dnipropetrovsk	408	62,1	42,8	35,1	8,0	18,8

Region	*N*	Sudden numbness or loss of movement of face, arm or leg, especially on one side, %	Sudden onset of speaking difficulty or understanding speech or text, %	Sudden loss of coordination, unsteady gait, dizziness, loss of consciousness, %	Sudden, severe headache with unknown cause, %	Sudden decreased vision in one or both eyes, %
Donetsk	408	31,9	29,5	30,4	23,3	14,1
Zhytomyr	408	47,5	41,9	31,1	8,5	6,4
Transkarpathian	408	41,8	40,0	31,7	10,0	8,2
Zaporizzhya	406	58,5	49,2	48,2	20,1	26,5
Ivano-Frankivsk	409	29,6	20,9	17,8	11,5	1,8
Kyiv	408	60,8	45,1	39,3	18,5	27,6
Kirovograd	408	18,8	28,9	37,6	12,0	11,5
Luhansk	409	50,7	35,2	40,0	37,9	17,6
Lviv	410	53,1	46,2	36,7	26,2	18,7
Mykolayiv	410	54,5	39,6	52,2	10,0	4,0
Odessa	410	62,5	38,3	48,7	22,8	23,0
Poltava	411	47,1	30,7	38,3	18,6	12,4
Rivne	408	60,4	39,4	41,2	16,6	18,3
Sumy	408	48,3	45,8	38,6	10,5	29,9
Ternopil	409	22,9	12,2	16,1	30,5	1,7
Kharkiv	408	41,2	38,0	58,9	10,2	10,1
Kherson	407	57,1	43,2	41,4	15,9	18,4
Khmelnitsky	414	72,8	28,8	28,5	15,8	16,0
Cherkassy	408	22,3	20,4	32,8	11,8	2,6
Chernivtsi	410	52,5	26,7	46,8	44,0	6,5
Chernihiv	408	40,5	36,1	30,1	38,1	12,3
City of Kyiv	408	50,9	43,8	25,7	7,7	14,1

On average, an adult Ukrainian can name only two stroke symptoms; average of three symptoms were reported only by people living in Chernihiv Oblast (Fig. 1.2). Share of those aware of at least two symptoms is 68.2% for adults in Ukraine (in 2018 it was 54.3%).

Leaders in stroke symptom awareness are Luhansk, Zaporizzhya, Chernihiv, and Volyn Oblast: the highest score in 2018 was demonstrated by Zaporizzhya Oblast (78.4%). Share of people correctly reporting at least two stroke symptoms appeared to be the lowest in Ternopil, Khmelnitsky, and Ivano-Frankivsk Oblasts, and in 2018 the same Oblast also demonstrated the lowest awareness.

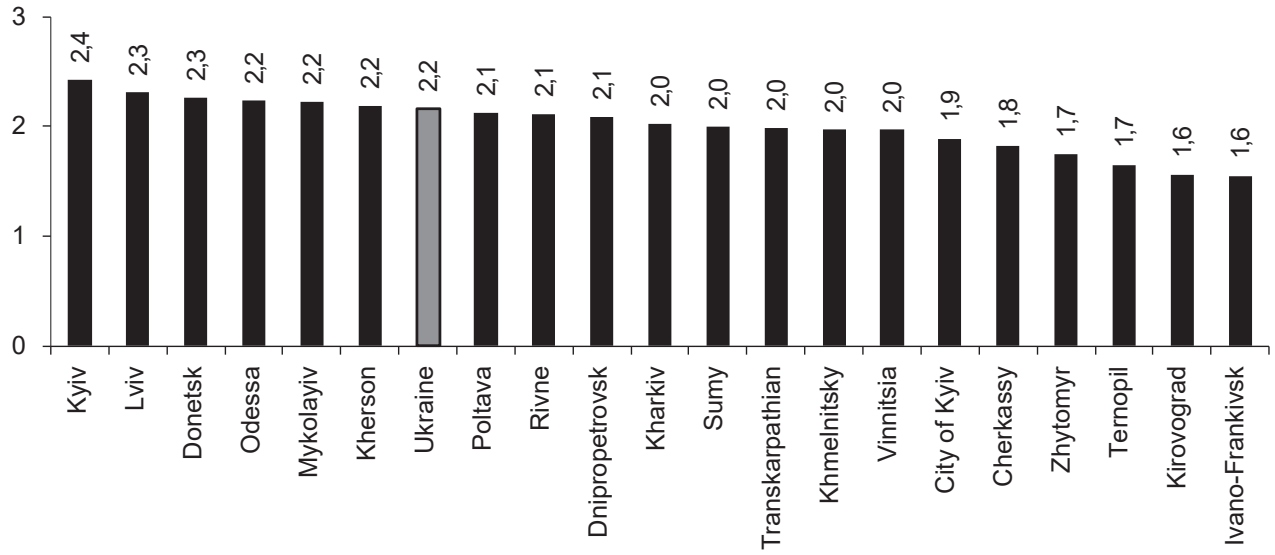

Fig. 1.2. Average number of correctly reported stroke symptoms: breakdown by Oblasts (N = 7404)

1.4. Medical Examination – Early Disease Detection

In order to assess coverage of adult population with healthy check-ups respondents were asked about undergoing seven types of medical examinations (scheduled check-ups) within the previous 12 months. Some of these check-ups are relevant for all respondents (fluoroscopy, cardiogram and dentist check-up), the rest are related to disease prevention in the area of reproductive health, that is why some questions were specifically put to women (gynecological exam and breast examination, Pap smear, and mammography), and specifically to men (urologist's exam).

So, the most commonly used type of preventative check-up out of the above-mentioned in 2019 is fluoroscopy, reported by 57.3% of respondents. Electrocardiogram (ECG) was done by 44.4% of adults. Dentist's preventative exam was undergone by 41.0% of respondents over the previous year. According to this year survey, coverage of population with basic healthy check-ups mainly demonstrates positive changes: there is increase in visits for fluoroscopy (from 55.00% in 2018 to 57.3% in 2019), and cardiogram (from 42.2% in 2018 to 44.4% in 2019).

Survey results show the lowest score for different types of healthy check-ups in Kirovograd and Transkarpathian Oblasts, they also had the lowest scores in 2017-2018. Only 14-15% of people of full age in Kirovograd Oblast did fluoroscopy or cardiogram over the last year. The highest scores for undergoing fluoroscopy or cardiogram are reported for Kherson, Dnipropetrovsk, Chernihiv, and Vinnitsa (except fluoroscopy) Oblasts **(Table 1.4).**

Table 1.4.

Breakdown of surveyed people (men and women) with experience undergoing certain types of medical preventative check-ups in the previous 12 months by regions.

Region	**Undergone medical check-up or examination in the previous 12 months**						
	fluoroscopy, %			**cardiogram, %**			**dental check-up, %**
	2017	**2018**	**2019**	**2017**	**2018**	**2019**	**2019**
Ukraine	**56,0**	**55,0**	**57,3**	**44,0**	**42,2**	**44,4**	**41,0**
Vinnitsia	55,7	48,4	56,6	44,7	43,9	57,2	47,9
Volyn	14,1	31,0	44,6	17,8	31,7	42,9	39,6
Dnipropetrovsk	72,7	56,6	76,4	55,5	38,5	56,0	50,9

Donetsk	48,8	62,8	62,0	41,7	50,0	47,0	37,0
Zhytomyr	61,6	68,0	75,3	42,9	59,6	52,1	29,4
Transkarpathian	45,9	39,6	35,7	36,1	37,9	27,4	22,7
Zaporizzhya	48,3	61,3	63,8	40,3	45,9	43,8	30,9
Ivano-Frankivsk	65,1	55,5	54,9	54,9	51,1	50,9	51,7
Kyiv	59,9	47,1	46,7	54,1	44,7	44,0	34,6
Kirovograd	17,5	19,1	14,9	19,9	21,1	14,3	7,7
Luhansk	69,6	79,7	68,5	52,7	48,2	51,2	41,7
Lviv	49,8	43,5	52,2	48,6	39,5	47,2	43,8
Mykolayiv	70,0	72,3	50,8	51,4	45,1	29,1	18,9
Odessa	50,3	48,6	42,4	41,4	32,2	38,0	39,2
Poltava	64,4	70,5	66,9	42,9	65,3	47,3	52,8
Rivne	57,4	52,9	42,4	53,6	49,4	41,9	46,9
Sumy	69,3	62,0	49,3	38,7	52,2	32,7	45,9
Ternopil	66,8	51,4	60,5	62,5	42,8	48,3	44,4
Kharkiv	57,9	67,3	62,7	27,1	34,1	27,9	38,0
Kherson	72,7	75,6	79,7	48,3	49,6	54,1	31,2
Khmelnitsky	47,3	38,1	55,3	38,5	27,5	49,3	51,9
Cherkassy	66,2	58,4	61,6	59,6	36,9	53,4	47,1
Chernivtsi	72,3	67,2	55,3	55,5	49,5	48,3	48,8
Chernihiv	77,4	75,2	68,8	58,9	60,1	53,9	45,3
City of Kyiv	35,0	19,9	48,0	28,1	20,3	39,1	52,2

More than half of surveyed women (52.0%) visited gynecologist for prevention in the previous 12 months, 40.0% of surveyed women did Pap smear, and 22.2% did mammography. These indicators demonstrate a bit higher scores this year compared to those of 2017-2018. Men visit a urologist twice as rare (23.7%) than women see a gynecologist, and this score increased a little compared to 2018 (20.5%), but there is no difference from 2017 scores (24.0%).

Gynecologists and urologists are more often visited in Zhytomyr, Dnipropetrovsk, and Cherkassy Oblasts **(Table 1.5)**. There has been a significant increase in a share of women visiting a gynecologist in the city of Kyiv, Khmelnitsky and Volyn Oblasts, and significant decrease of this score is reported for Mykolayiv and Kirovograd Oblasts. Kirovograd Oblast scores the last in a share of population covered by these check-ups as only 19.5% of adult women visited a gynecologist last year, mammography was done only by 6.6%, urologist check-up was reported only by 4.5% of adult men.

Regarding difference between different social and demographic groups, overall, women do healthy check-ups more often than men, this is true for all types of check-ups covered by the survey. Older age groups do the above-mentioned check-ups more rarely (except cardiography) than younger ones although problems with health and risk related to age are inversely increasing.

Table 1.5.

Breakdown of same sex respondents having undergone medical urological/gynecological check-ups over the last year by regions and survey years.

Region	**Undergone medical check-up or examination in the previous 12 months**							
	urologist		**gynecologist**		**pap-smear**		**mammography**	
	men, %		**women, %**		**women, %**		**women, %**	
	2018	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**
Україна	**20,5**	**23,7**	**46,7**	**52,0**	**33,8**	**40,0**	**18,1**	**22,2**
Vinnitsia	19,5	20,7	44,3	50,4	37,7	47,5	18,1	25,8

Volyn	12,0	27,2	18,7	43,2	5,8	35,7	8,8	28,2
Dnipropetrovsk	20,1	33,8	55,0	64,1	32,9	55,4	18,8	26,2
Donetsk	20,8	17,7	43,7	47,7	24,7	28,9	16,1	20,5
Zhytomyr	55,7	34,6	63,1	68,8	55,4	51,4	7,4	20,3
Transkarpathian	22,8	23,6	41,4	38,9	32,6	33,3	16,9	5,9
Zaporizzhya	26,8	23,7	42,5	41,5	36,8	38,9	12,4	11,9
Ivano-Frankivsk	11,9	28,4	54,6	60,3	47,5	55,9	15,4	17,3
Kyiv	17,4	14,0	50,3	46,8	38,8	34,8	9,8	20,0
Kirovograd	10,1	4,5	25,0	19,5	9,1	5,5	10,1	6,6
Luhansk	23,5	32,2	53,4	53,7	29,1	41,0	21,6	25,4
Lviv	18,3	25,4	47,7	50,1	44,0	42,2	21,0	21,8
Mykolayiv	16,3	8,1	60,9	45,3	46,8	38,0	31,7	28,7
Odessa	15,4	18,9	33,8	39,5	24,7	32,5	15,5	22,8
Poltava	31,8	32,2	62,9	59,6	52,0	36,4	19,8	30,6
Rivne	16,7	18,6	48,3	48,1	34,2	36,0	22,8	23,1
Sumy	19,5	26,0	44,9	45,1	34,9	37,2	18,6	14,8
Ternopil	19,4	19,8	46,8	50,3	32,5	43,8	24,5	19,0
Kharkiv	12,8	18,3	47,6	57,4	27,2	29,6	25,0	20,5
Kherson	24,2	31,5	59,3	58,9	54,4	54,8	38,8	25,5
Khmelnitsky	21,2	28,3	32,1	56,6	30,5	39,9	13,8	23,2
Cherkassy	23,4	33,8	56,8	62,7	53,1	59,8	16,7	33,8
Chernivtsi	16,0	19,5	56,3	56,6	49,7	52,5	13,5	18,7
Chernihiv	40,7	26,1	60,2	56,4	55,5	50,0	37,8	30,7
City of Kyiv	13,2	22,9	29,7	60,2	8,3	39,6	8,4	26,6

Difference in visits by age groups are more complicated in men: men of 45–59 age group see urologist most often, men over 60 visit urologist much more infrequent (Fig. 1.3).

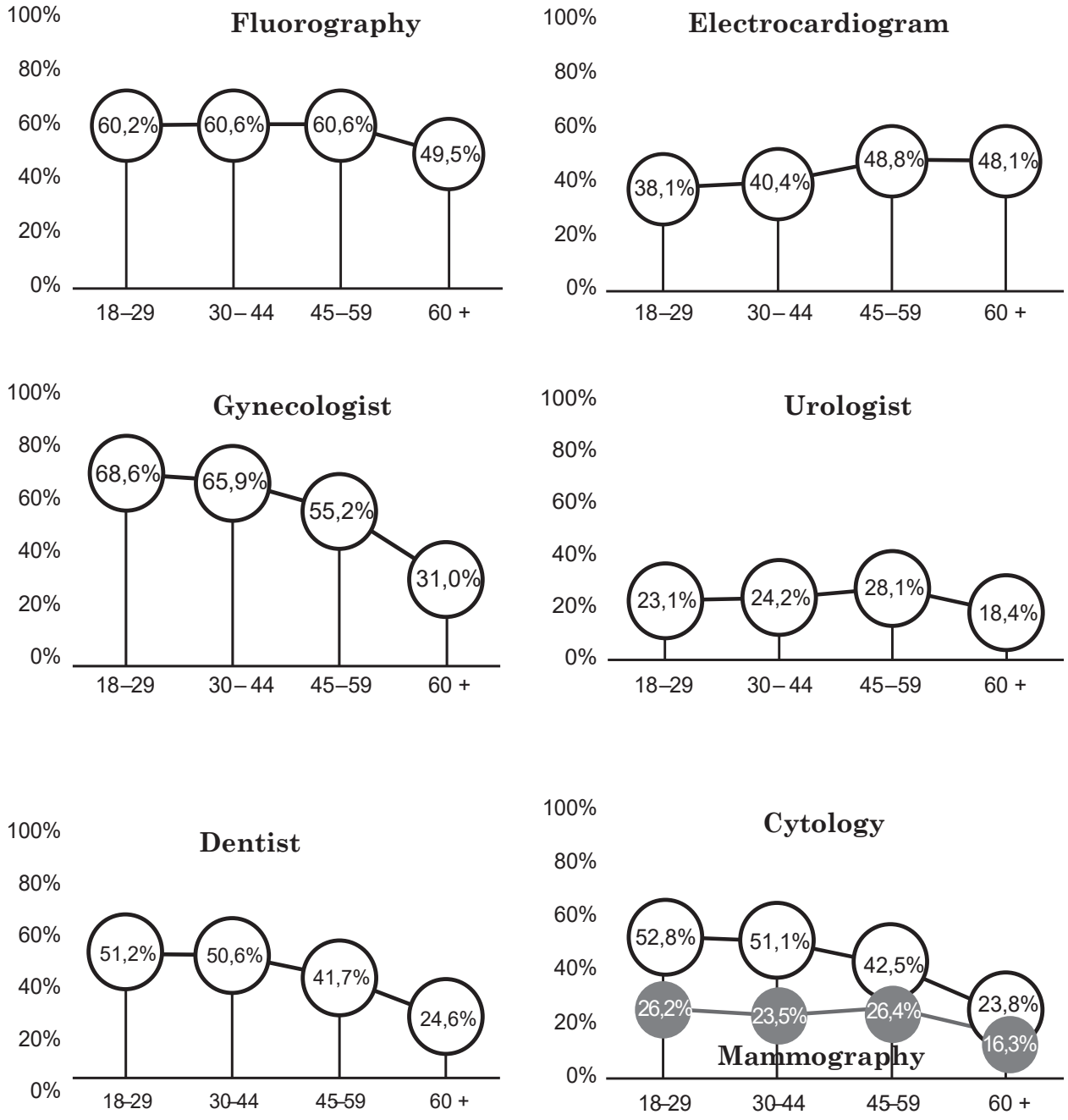

Fig. 1.3. Experience undergoing medical examinations in the previous 12 months (percentage of those reporting undergoing medical examination for health checkup), %

The survey revealed slight differences in health checkups depending on type of settlement: urban citizens visit dentists and gynecologists and undergo fluoroscopy a bit more often compared to rural citizens. urban citizens visit dentists and gynecologists and undergo fluoroscopy a bit more often compared to rural citizens.

1.5. Vaccination

Only respondents reporting having children under 18 in their households and knowing their health status and health services provided to them were asked questions about attitudes and behaviors related to vaccination. The share of these people was 34.8% (3507 persons).

Attitudes towards vaccination

People having children in their households mostly have positive attitude towards vaccination. Mean index for Ukraine is 4.1 out of 5. Over 80% reported their attitude to be positive (almost equal shares of those having positive and mostly positive attitude). Neutral attitude is reported by 11.8%. The rest of 7.7% have negative perceptions about vaccination: 4.6% – rather negative, and 3.1% – very negative **(Table 1.6).**

Regionally, the least positive attitudes towards vaccination are demonstrated by Ivano-Frankivsk, Transkarpathian, Chernivtsi Oblast, and city of Kyiv (no more than 73% of positive responses). The best attitudes are reported by Kirovograd Oblast (over 97% of positive responses).

Table 1.6.

Breakdown of respondents having children in their households by their attitudes to vaccination by regions.

Region	*N*	Mean score	Very positive, %	Rather positive, %	Neutral, %	Rather negative, %	Very negative, %
Ukraine	**3455**	**4,1**	**40,7**	**39,7**	**11,8**	**4,6**	**3,1**
Vinnitsia	163	4,0	38,1	39,7	10,8	5,9	5,7
Volyn	165	4,0	34,1	44,6	12,2	7,2	1,8
Dnipropetrovsk	161	4,3	57,6	28,7	8,0	1,1	4,6
Donetsk	89	4,1	47,9	33,7	5,6	5,9	6,8
Zhytomyr	158	4,1	21,4	64,4	13,6	0,6	0,0
Transkarpathian	153	3,8	25,3	40,4	24,4	7,3	2,7
Zaporizzhya	119	4,1	40,9	42,5	5,1	8,5	3,0
Ivano-Frankivsk	169	3,7	23,5	47,3	14,1	7,3	7,7
Kyiv	164	4,0	33,6	46,5	11,0	5,2	3,7
Kirovograd	117	4,5	51,6	45,4	0,6	2,5	0,0
Luhansk	117	4,4	56,4	28,8	12,3	1,0	1,5
Lviv	173	4,0	23,8	57,2	11,5	6,5	1,1
Mykolayiv	138	4,4	58,3	26,5	10,1	2,9	2,2
Odessa	131	4,1	45,8	28,4	18,7	4,7	2,4
Poltava	144	4,0	36,0	41,7	9,8	8,9	3,6
Rivne	180	4,3	42,7	44,9	8,5	3,1	0,8
Sumy	117	4,5	63,5	24,1	8,5	3,9	0,0
Ternopil	131	4,0	52,3	21,5	11,3	5,6	9,3
Kharkiv	102	3,9	21,9	54,9	19,9	2,2	1,1
Kherson	142	4,1	45,1	28,6	21,5	4,2	0,7
Khmelnitsky	160	4,5	61,2	26,5	11,1	1,2	0,0
Cherkassy	100	4,1	43,4	40,3	7,2	4,4	4,7
Chernivtsi	136	3,9	39,9	32,9	14,9	3,9	8,3
Chernihiv	99	4,4	50,6	39,1	7,4	2,9	0,0
City of Kyiv	127	3,8	24,5	48,0	17,9	7,0	2,7

Health Index survey registered positive changes in attitudes of population towards vaccination of children. During the survey years, the share of those with overall negative attitudes to vaccination has decreased from 14.0% in 2016 to 12.7% in 2017, to 9.6% in 2018, and to 7.7% in 2019. Whereas supported vaccination: 70.9% in 2016, 73.4% in 2017, 74.5% in 2018, and 80.4% in 2019 (Fig. 1.4). On average, vaccination support has increased from 3.8 points out of 5 in 2016 to 3.9 points in 2017 and 2018, and to 4.1 points in 2019. The list of Oblasts with predominantly negative attitude towards vaccination almost has not changed during

monitoring period.

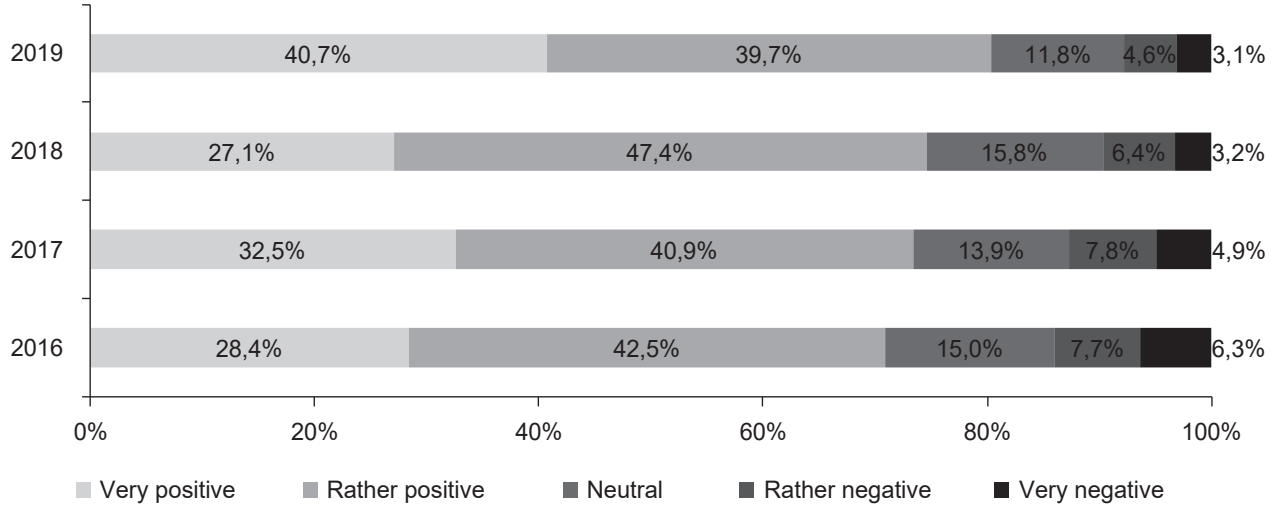

Fig. 1.4. Attitudes towards vaccination: breakdown by years of survey

Refusal from vaccination

In general, 18.3% of responders with children in care in their household reported ever having experience of refusing from vaccinations. The most difficult situation with attitudes of parents towards vaccination is in Ivano-Frankivsk and Lviv Oblasts (about 30% of responders had refusal experience). Whereas the highest commitment to vaccination was reported by parents from Luhansk, Sumy, and Kirovograd Oblasts – less than 5% of responders refused from vaccinations **(Fig. 1.5).**

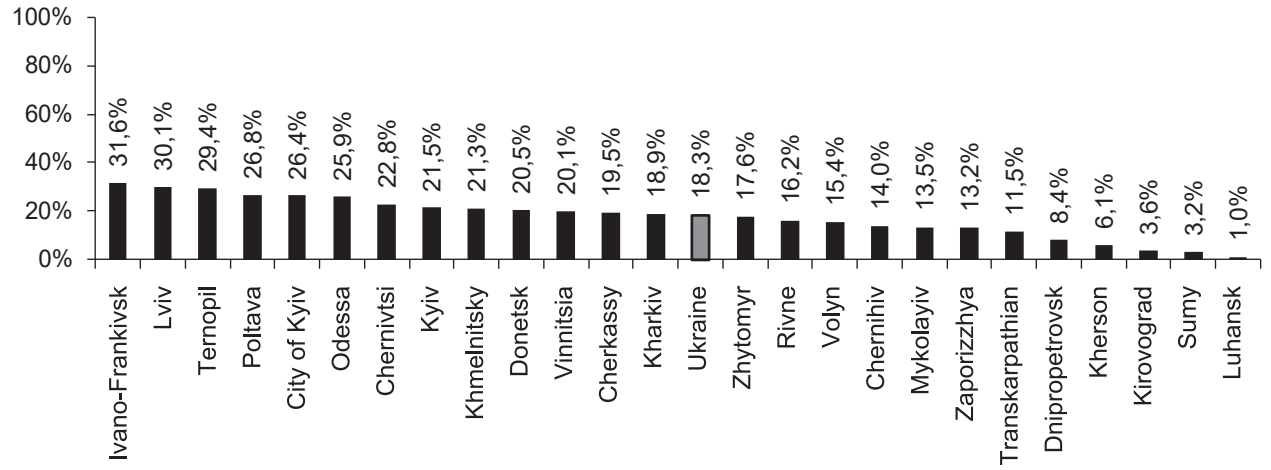

Fig. 1.5. Proportion of respondents having experience refusing to vaccinate their child (children): breakdown by regions (among those having children under 18 in their household and knowing their health status, N = 3433).

The most prevalent reasons to refuse from vaccination was fear of possible complications or adverse consequences (41.9%), and a child's health status at the time of scheduled vaccination (40.3%). Lack of trust towards vaccine producers stops a third of parents (33.1%). None of the rest of reasons got more than 15% **(Fig. 1.6).**

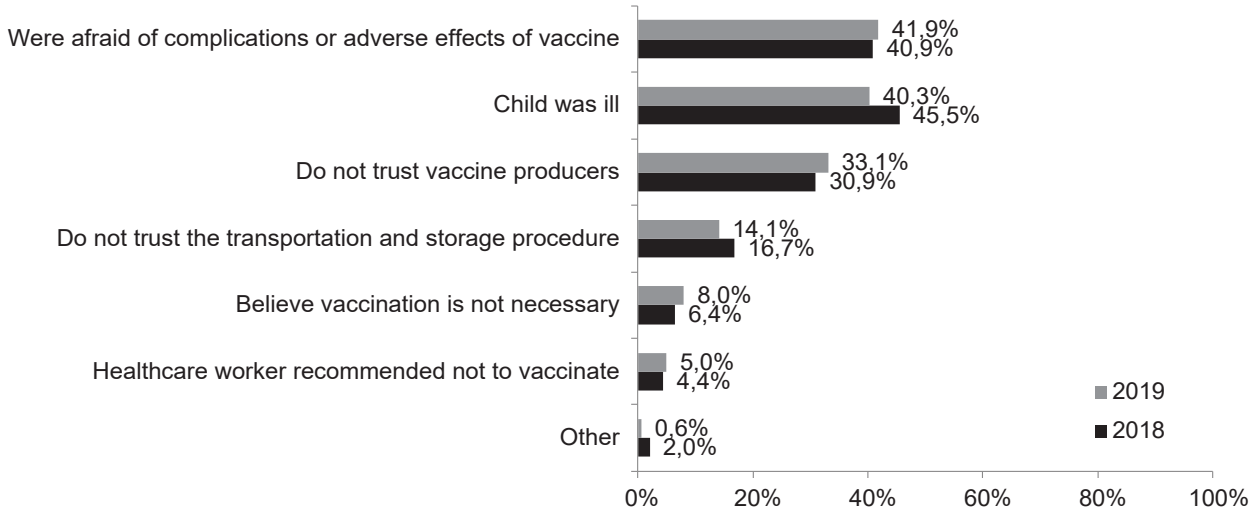

Fig. 1.6. Breakdown of respondents by reasons for non-vaccinating their children and survey years (among those ever refusing to vaccinate their children, N = 609)

In general, in Ukraine the share of respondents ever refusing to vaccinate children in their care has significantly decreased compared to 2018 (from 21.9% to 18.3%). Ivano-Frankivsk Oblast remains the leading one in non-vaccination although over the survey years there is some improvement of the situation here (31.6% in 2019, 45.1% in 2018). The same stability is demonstrated by current vaccination leaders – Luhansk, Sumy, and Kirovograd Oblasts – earlier, they demonstrated their high loyalty to pediatric vaccination too.

Hierarchy of reasons for non-vaccination of children has not changed a lot compared to 2018. It is worthwhile to note that adults report poor health status of a child as a reason to non-vaccinate more rarely.

1.6. Behavior in Case of Illness

To assess typical behaviors of adults in case of illness we asked the following question: "What do you usually do first thing when you get sick? Think of diseases that prevented you from working or doing your usual routine for at least seven days".

Survey results show that self-treatment is the most commonly used practice in case of illness, almost half of the surveyed people practice that (45.4%): 31.7% prefer self-prescribed pharmacological treatment, another 13.7% treat themselves with folk medicine (Table 1.7). For more than one third of population (37.4%) visiting a health care worker is a typical disease behavior: 27.0% visit a family doctor/GP, 3.7% visit directly sub-specialist, 2.6% approach their relative or friend who happen to be a health care worker, 2.9% call an ambulance, and 1.2% go directly to a hospital. Whereas 9.4% of respondents reported that their decision regarding subsequent treatment usually depends on symptoms.

Compared to the previous survey results, there is a gradual increase of proportion of people who seek professional medical help in case of illness (from 29.0% in 2017 to 33.8% in 2018, and 37.4% in 2019), although the total share of those preferring self-treatment has not significantly changed (around 45-47%).

At the same time, in the group of respondents preferring self-treatment the share of those who uses medications for their treatment hasn't changed over the year (31.6% in 2018 vs 31.7% in 2019), and the share of those preferring folk remedies continues to decrease (19.4% in 2017, 15.5% in 2018, and 13.7% in 2019).

We continue to see increasing number of visits to healthcare providers due to visits to family doctors/GPs that we started to see last year (18.6% in 2017, 23.1% in 2018, and 27.0% in 2019).

Not in all regions proportion of respondents self-treated with folk medicine or traditional

medicines is higher that proportion of those seeking professional medical care. In Ternopil, Dnipropetrovsk, Vinnitsia, Kirovograd, and Ivano-Frankivsk Oblasts the share of people seeking medical care is 1.4-1.8-fold higher than the share of those preferring self-treatment at home without getting advice from doctors. Absolutely opposite situation is seen in Odessa, Kyiv, Poltava, and Kharkiv Oblasts, there the total share of self-treatment proponents is 1.6–1.7-fold higher than the share of people seeking medical care, and in Chernihiv, Donetsk, Luhansk Oblasts it's twice as high **(Table 1.7).**

Regionally, over the last year the biggest change towards seeking medical care is reported by Volyn (+21.8 p.p.), Khmelnitsky (+20.2 p.p.), Sumy (+16.4 p.p.), and Dnipropetrovsk (+15.2 p.p.) Oblasts, whereas respondents from Luhansk (+13.1 p.p.), Cherkassy (+7.7 p.p.), and Donetsk (+6.0 p.p.) Oblasts, on the contrary, more often reported self-treatment.

Some differences were also found in behaviors in case of illness by social and demographic groups. Most prone to self-treatment are people aged 60 and older (49.7%), with education level lower than high school (49.7%), with complete high school education (49.0%), and vocational training (47.5%), as well as people with low income of 1000–2000 UAH per one person in a household (48–49%). Young people choose self-treatment not as often (40.2% in 18-29 age group) (Table 1.8).

Women report seeking medical care in case of disease notably more often (in 2017 – 31.0%, in 2018 – 36.8%, in 2019 – 40.1%), the same pertains to people with complete higher education. Whereas men seek official medical care much less (45.3% in 2017, 48.2% in 2018, 34.1% in 2019). Among positive changes it is worthwhile to note decrease in self-treatment of persons from the poorest families (51.9% in 2017, 56.4% in 2018, and 38.2% in 2019) and increase in seeking medical care mostly from family doctor or GP (proportion of such visits among the poorest in 2018 was 17.9%, and it increased to 31.7% within a year).

In light of strengthening role of a family doctor as a key health care provider it is important that 10 regions report statistically significant increase in visits to family doctors as a priority treatment strategy in case of disease compared to 2018 (biggest increase in Ternopil, Volyn, and Dnipropetrovsk Oblasts).

Table 1.7.

Behavior in case of illness: breakdown by regions

What do you usually do first thing when you get sick?	Ukraine		Vinnitsia	Volyn	Dnipropetrovsk	Donetsk	Zhytomyr	Transkarpathian	Zaporizzhya	Ivano-Frankivsk	Kyiv	Kirovograd	Luhansk	Lviv	Mykolayiv	Odessa	Poltava	Rivne	Sumy	Ternopil	Kharkiv	Kherson	Khmelnitsky	Cherkassy	Chernivtsi	Chernihiv	City of Kyiv
	%	*N*	%																								
Self-treatment with traditional medicinal means, no medications	**13,7**	**1329**	16,9	8,5	10,4	11,8	11,0	20,5	15,7	11,3	23,4	8,4	8,2	22,2	12,9	19,9	9,7	8,9	9,6	8,9	21,3	13,7	5,3	11,1	15,4	4,0	14,9
Self-treatment with medications	**31,7**	**3226**	21,2	33,2	25,4	39,5	44,4	20,2	34,2	22,3	30,1	24,6	39,0	21,7	35,3	32,9	42,7	36,3	37,6	24,0	30,5	35,3	45,8	23,5	30,2	52,0	21,5
Seek advice from a pharmacist at a pharmacy	**5,4**	**525**	0,4	5,8	7,0	5,1	1,3	5,7	6,1	7,3	5,5	2,8	3,5	2,1	5,5	7,6	7,2	9,7	9,3	7,3	9,1	1,6	2,8	10,7	2,3	3,5	3,9
Call ambulance	**2,9**	**295**	2,4	1,6	4,0	1,4	0,2	0,4	1,3	0,7	1,4	3,9	4,1	2,8	3,5	6,7	2,0	1,8	2,3	2,8	2,2	3,7	8,3	2,4	1,0	0,2	6,1
Visit family physician / district GP	**27,0**	**2946**	45,6	29,3	39,5	18,8	33,3	32,5	29,3	29,9	24,3	34,6	14,9	30,0	21,9	18,9	26,9	29,6	26,9	47,8	24,5	22,1	20,8	23,7	31,2	21,5	23,4
Visit subspecialist directly at an out-patient facility	**3,7**	**392**	4,2	2,7	4,1	0,8	4,6	6,1	6,1	6,9	2,9	7,4	4,1	3,3	5,6	2,1	1,1	3,8	4,8	3,2	2,9	5,4	3,4	1,5	1,3	3,3	6,1
Seek care from subspecialist at an in-patient facility	**1,2**	**118**	0,3	0,9	1,3	0,5	0,2	0,9	0,2	2,0	1,4	1,9	0,0	1,9	1,2	2,3	0,5	0,3	0,9	0,2	1,7	2,6	0,5	0,5	3,1	0,3	2,6
Seek care from traditional medicine specialists	**0,4**	**33**	0,2	0,0	0,0	0,4	0,0	0,0	0,0	0,5	0,4	0,3	0,0	1,1	0,4	0,3	0,7	0,8	0,9	0,0	0,0	0,5	0,0	0,0	0,4	0,0	1,9
Seek advice from healthcare specialists who are their relatives, friends, acquaintances	**2,6**	**282**	1,7	4,2	3,2	1,3	1,2	4,2	1,5	8,9	2,4	0,8	0,4	5,2	2,9	1,3	1,6	4,0	1,2	3,6	1,9	2,6	3,4	3,3	6,6	0,9	3,0
Look up the Internet for treating diseases by similar symptoms	**0,8**	**72**	0,7	0,4	0,6	0,0	0,1	0,0	0,6	1,5	0,4	0,0	0,0	1,6	0,6	1,3	1,0	0,4	2,1	1,0	2,3	1,3	0,8	3,8	0,0	0,0	0,5
Other	**0,1**	**6**	0,0	0,0	0,4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,9	0,5	0,0	0,0
Do nothing	**1,0**	**111**	0,6	1,0	0,9	1,1	0,5	0,3	0,4	2,2	0,4	6,2	0,2	0,0	1,0	0,5	3,8	0,5	0,0	0,2	0,3	4,0	0,3	4,5	2,1	0,2	0,3
DEPENDS ON SYMPTOMS	**9,4**	**844**	5,8	12,4	3,2	19,3	3,3	9,2	4,7	6,4	7,4	9,2	25,5	8,0	9,2	6,3	2,8	3,9	4,4	1,0	3,2	7,1	8,6	14,0	5,9	14,1	15,8

Table 1.8.

Behavior in case of illness: breakdown by social and demographic groups, %

What do you usually do first thing when you get sick?	Ukraine	By sex		By age				By type of settlement		By education							By income				
		Men	Women	18–29	30–44	45–59	60+	Urban	rural	Primary or incomplete high	Complete high	vocational	College	basic higher	complete higher	Degree	Up to 1000 UAH	1001–1500 UAH	1501–2000 UAH	2001–2500 UAH	More than 2500 UAH
Self-treatment with traditional medicinal means, no medications	**13,7**	15,1	12,6	8,2	12,9	14,6	17,1	13,0	15,4	18,4	15,7	16,1	13,4	9,6	11,2	7,5	12,0	14,7	13,9	14,6	13,1
Self-treatment with medications	**31,7**	31,1	32,2	32,0	32,2	29,9	32,6	32,0	31,0	31,3	33,3	31,4	31,7	31,0	31,3	5,1	26,2	33,3	34,7	30,5	32,6
Seek advice from a pharmacist at a pharmacy	**5,4**	5,9	5,0	7,2	6,4	5,1	3,6	5,3	5,6	3,7	5,2	5,9	5,7	6,4	4,6	12,6	7,2	5,4	5,4	6,6	4,5
Call ambulance	**2,9**	2,7	3,1	2,0	1,9	2,4	4,9	3,2	2,2	5,6	2,8	3,8	2,3	2,6	2,7	4,3	3,7	3,7	3,6	3,7	2,1
Visit family physician / district GP	**27,0**	23,4	30,0	27,5	26,3	27,0	27,6	27,0	27,1	25,7	27,4	24,8	27,8	32,2	26,9	5,9	31,7	27,1	27,0	25,6	27,5
Visit subspecialist directly at an out-patient facility	**3,7**	3,9	3,5	3,6	3,5	4,3	3,4	3,7	3,8	2,2	4,2	2,5	4,0	2,9	4,4	0,0	3,9	3,2	3,4	5,1	3,7
Seek care from subspecialist at an in-patient facility	**1,2**	1,0	1,3	0,7	1,3	1,3	1,2	1,3	0,9	0,3	1,2	0,7	1,0	2,0	1,4	7,4	2,1	1,1	1,0	0,9	1,2
Seek care from traditional medicine specialists	**0,4**	0,5	0,4	0,3	0,4	0,5	0,4	0,5	0,1	0,4	0,3	0,4	0,4	0,0	0,6	1,9	0,9	0,5	0,2	0,3	0,5
Seek advice from healthcare specialists who are their relatives, friends, acquaintances	**2,6**	3,1	2,2	3,7	2,4	2,5	2,4	2,4	3,2	1,4	1,9	2,5	2,7	2,2	3,4	8,4	2,1	1,8	3,0	1,9	3,5
Look up the Internet for treating diseases by similar symptoms	**0,8**	1,0	0,7	1,7	1,3	0,6	0,1	0,9	0,6	0,0	0,4	0,8	0,6	1,7	1,3	0,0	0,8	0,5	0,4	0,5	1,3
Other	**0,1**	0,1	0,1	0,0	0,1	0,0	0,1	0,0	0,2	0,9	0,1	0,1	0,1	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,0
Do nothing	**1,0**	1,7	0,5	1,2	1,0	1,1	1,0	0,9	1,3	2,9	1,8	0,9	0,7	1,3	0,7	0,0	1,5	0,4	0,9	0,6	0,7
DEPENDS ON SYMPTOMS	**9,4**	10,5	8,5	11,7	10,4	10,9	5,6	9,7	8,7	7,3	5,8	10,1	9,6	8,2	11,5	46,8	7,8	8,2	6,3	9,8	9,4

In subsequent questions respondents were asked to recall their last case of serious illness: "Think of the last time of illness or injury that prevented you from working or doing your usual routine for at least seven days during the previous 12 months. Name month and year when it happened", and also your experience of seeking care because of that: "Have you sought care of a doctor or feldscher in the event of your recent illness or injury?"

Recalling their real experience, 44.1% of respondents (N = 4432) reported having had a disease or injury in the previous 12 months breaking their routine. This score increased notably compared to 2017-2018 when it was around 36%. A bit less than two thirds of those having a disease (63.5%) sought medical care from a doctor or feldscher **(Fig. 1.7)**, which is no different from the last year score (65.6%).

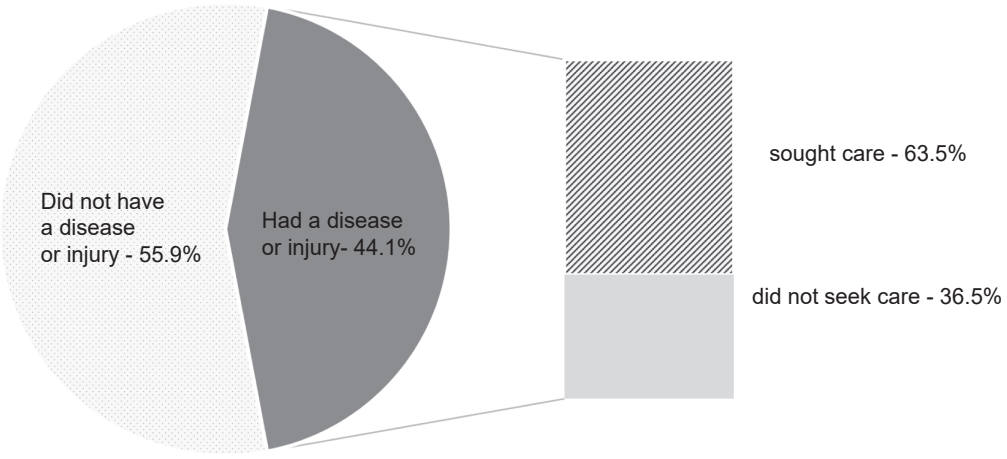

Fig. 1.7. Proportion of respondents who reported a case of illness in the previous 12 months and experience seeking medical care for that

The lowest level of seeking care (less than a half of the total number of people with injury or illness) is reported from Sumy, Mykolayiv, and Poltava Oblasts, whereas over 80% of those with disease or injury sought care in Ivano-Frankivsk, Ternopil, and Volyn Oblasts **(Fig. 1.8).**

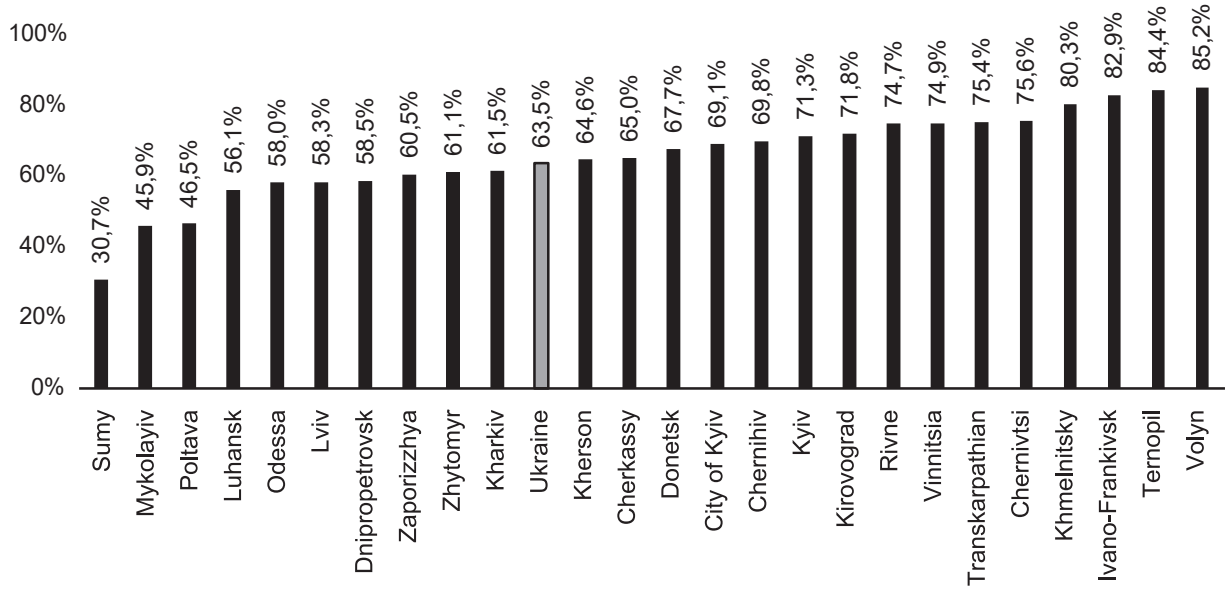

Fig. 1.8. Proportion of people seeking medical care for their last disease within the last 12 months (breakdown by regions)

Women seek medical care in case of illness more often (65.9%) than men (59.8%), the same relates to older respondents: 66.1% of the surveyed aged 60 and older vs 58.3% 18–29 age group, who had an illness in the previous year. Differences between rural and urban populations in seeking medical care reported last year were not registered in 2019 survey.

1.7. Barriers to Getting Care

Main barriers to getting medical care were revealed using the following question "Why have not you sought care from a doctor? Name not more than three reasons". The most common reason for people in Ukraine not to seek professional medical care in case of illness was that in the majority of cases they knew their symptoms as they already had experience treating them before (47.7%); 29.3% of the surveyed hoped that their disease will subside on its own; 18.0% were stopped by long waiting lines, and 17.7% were limited by expected high treatment cost. Another 17.5% did not seek care because of lack of trust towards healthcare workers **(Table 1.9).**

Compared to previous years the key reason for non-seeking care stays the same but its share has significantly dropped over the last four years (by 10 p.p.): symptoms awareness and experience of previous treatment was reported in 2016 by 57.5%, 2017 – 55.5%, 2018 – 54.8%, and in 2019 – 47.7% of respondents. During this year, the proportion of people hoping that their disease will be self-limiting was 29.3% in 2019 and 29.2% in 2018 vs 22.7% in 2017, and 25.3% in 2016. Such a barrier to health care as waiting lines in hospitals became relevant again in 2019 (18.0%), and changes for the better reported last year did not prove to be sustainable (13.0% in 2016, 19.5% in 2017, 14.1% in 2018). In 2019, lack of trust to physicians as a reason to non-seeking medical care has significantly increased (17.5%), whereas in previous years it stayed almost on the same level (11.2% in 2017, and 10.0% in 2018).

Treatment cost as a barrier to care remains relevant. Significant improvement of situation observed in previous years was maintained, but further progress has not been achieved (24.6% in 2016, 22.9% in 2017, 17.0% in 2018, and 17.7% in 2019).

Due to low representation in groups that are being assessed, no regional comparisons were made. By social and demographic characteristics, the following differences were observed:

- men demonstrate more mistrust towards doctors than women (21.3% vs 14.4%).
- also, men hope more than women that disease would go away on its own (33.8% vs 25.6%).
- whereas for women extremely high cost of these services is a much more relevant barrier to getting care.

Urban citizens are more limited by long waiting lines whereas rural citizens are more limited by poor public transportation. Rural citizens more often expect diseases to be self-limiting than urban citizens. It is of note that last year the situation was opposite. As it was expected, high treatment cost is the key barrier for the most socially vulnerable populations: older age groups and people with low income **(Table 1.10).**

Table 1.9.

Breakdown of respondents by reasons of non-seeking care in case of disease or injury by regions

Region	*N*	Too expensive (services, drugs, transportation), %	Lack of trust towards personnel, their qualifications, %	Bad attitude of personnel, being rude, loutish, %	Long waiting lines, %	Bad transportation, %	Know how to treat from previous experience, %	Do not know who to go to, %	Expected their disease to be self-limiting, was not too worrisome, %	Other, %
Ukraine	**1572**	**17,7**	**17,5**	**6,0**	**18,0**	**4,8**	**47,7**	**2,7**	**29,3**	**0,9**
Vinnitsia	57	24,0	14,0	1,4	5,5	0,0	49,9	0,0	44,3	1,4
Volyn	25	8,2	15,6	10,8	9,5	0,0	46,6	2,6	29,7	0,0
Dnipropetrovsk	88	16,1	25,4	0,7	34,8	4,5	31,1	0,0	36,7	0,7
Donetsk	56	6,1	13,2	7,6	13,8	3,2	39,5	2,7	38,5	3,3
Zhytomyr	87	22,0	11,6	2,2	12,7	0,3	61,4	0,0	18,4	0,0
Transkarpathian	20	19,0	24,3	9,5	7,0	26,5	27,7	0,0	24,4	0,0
Zaporizzhya	77	24,3	8,9	6,0	25,8	3,6	37,1	3,6	39,2	1,1
Ivano-Frankivsk	26	19,6	12,3	0,0	6,2	2,9	47,0	4,6	27,6	0,0
Kyiv	51	20,8	9,8	1,5	9,4	5,2	57,9	7,3	21,5	5,6
Kirovograd	31	28,2	7,8	0,0	18,3	19,7	14,4	0,0	57,8	0,0
Luhansk	74	25,3	6,0	3,3	18,2	0,0	59,0	0,0	54,4	0,0
Lviv	86	2,8	9,0	4,2	12,8	8,4	69,6	2,2	43,6	0,0
Mykolayiv	140	31,1	8,0	7,5	58,6	7,3	19,1	9,3	4,7	0,5
Odessa	70	24,4	28,5	4,8	17,8	4,4	57,1	1,3	14,3	1,3
Poltava	131	20,5	22,9	11,3	8,4	2,3	36,2	2,4	36,7	1,4
Rivne	30	20,1	11,6	2,3	4,5	6,0	49,0	0,0	26,4	2,3
Sumy	124	4,7	19,9	23,3	24,2	14,0	43,4	12,5	3,9	0,0
Ternopil	10	20,9	5,5	0,0	0,0	0,0	75,9	0,0	13,2	0,0
Kharkiv	68	24,2	52,5	12,1	6,6	5,5	42,0	0,0	26,6	0,0
Kherson	71	17,2	1,0	1,8	3,8	2,3	81,4	0,0	17,9	0,0
Khmelnitsky	34	9,0	21,0	5,2	16,5	1,7	60,6	0,0	14,2	0,0
Cherkassy	67	25,0	16,5	3,9	10,8	5,3	47,6	1,7	28,4	0,0
Chernivtsi	41	10,8	6,7	0,0	5,0	2,3	67,9	2,3	19,2	2,3
Chernihiv	33	4,7	6,1	0,0	13,0	33,7	60,2	6,3	47,4	0,0
City of Kyiv	75	17,1	21,3	5,8	14,6	1,3	57,9	3,8	16,7	0,0

Table 1.10.

Breakdown of respondents by reasons of non-seeking care in case of disease or injury by social and demographic characteristics

	N	Too expensive (services, drugs, transportation), %	Lack of trust towards personnel, their qualifications, %	Bad attitude of personnel, being rude, loutish, %	Long waiting lines, %	Bad transportation, %	Know how to treat from previous experience, %	Do not know who to go to, %	Expected their disease to be self-limiting, was not too worrisome, %	Other, %
Ukraine	**1572**	**17,7**	**17,5**	**6,0**	**18,0**	**4,8**	**47,7**	**2,7**	**29,3**	**0,9**
SEX										
Men	526	13,0	21,3	6,0	17,6	4,6	46,0	2,3	33,8	0,0
Women	1046	21,5	14,4	6,1	18,4	5,0	48,9	3,1	25,6	1,6
AGE GROUP										
18–29	196	6,9	15,6	9,9	15,0	1,0	52,0	2,2	29,0	0,0
30–44	398	12,2	19,4	5,8	22,5	4,2	45,8	2,4	35,7	1,4
45–59	395	13,1	17,8	3,8	19,4	4,0	50,1	3,0	27,5	1,3
60+	583	32,8	16,4	5,8	14,5	8,3	45,0	3,0	24,8	0,5
AREA TYPE										
Urban	998	17,2	18,1	6,3	21,3	1,7	45,5	2,4	29,3	0,8
Rural	574	19,0	15,8	5,4	9,7	12,8	53,1	3,6	29,3	1,2
LEVEL OF EDUCATION										
Primary or incomplete high	61	32,5	13,9	1,0	9,2	14,0	43,0	4,0	26,1	0,0
Complete secondary	305	25,3	18,5	6,7	23,0	7,6	43,3	3,9	24,4	0,7
Vocational	246	21,0	14,6	8,3	15,9	5,5	37,9	3,3	25,9	1,6
Incomplete high (college)	518	17,3	16,6	5,8	19,8	4,7	50,9	1,8	30,7	0,9
Basic higher (Bachelor)	105	8,1	22,2	5,5	16,3	3,4	48,2	2,5	27,0	0,0
Complete high (Master)	331	12,1	19,2	5,4	15,5	2,0	52,5	2,4	33,4	0,9
Degree (PhD, Doctor of Sciences)	8	0,0	0,0	7,0	0,0	0,0	47,0	16,2	55,5	0,0
HOUSEHOLD INCOME PER PERSON										
Up to 1000 UAH	180	18,2	18,7	10,2	25,0	8,8	37,9	7,0	22,4	0,6
1001–1500 UAH	230	25,4	17,6	13,2	19,6	7,0	41,7	3,4	27,6	1,2
1501–2000 UAH	282	25,4	14,5	5,7	13,6	8,0	47,2	1,6	34,9	0,7
2001–2500 UAH	178	17,6	19,5	3,0	18,2	1,9	55,2	2,4	20,8	0,3
More than 2500 UAH	402	11,2	19,4	3,8	21,3	1,7	50,2	1,3	32,6	0,6

"Health Index. Ukraine" annually registers increasing level of self-assessed health by population of Ukraine: from 3.34 out of 5 points in 2016 to 3.46 in 2019 p. Also, by objective health indicator – average life expectancy – Ukraine is lagging behind the majority of developed countries of Europe by 10 years (women by 7, and men almost by 12 years)[11]. At the same time the study demonstrates persistent and meaningful difference in assessments and attitudes of different social and demographic and regional groups to own health and health-related behaviors. That needs to be taken into consideration during development and implementation of national and regional programs aimed at disease prevention and health promotion as stipulated by the Concept for Public Health Development for 2017–2020 approved by the Cabinet of Ministers in November 2016[12].

Coronary heart disease and stroke are the main causes of death globally for many years now[13]. In Ukraine, circulation disorders are responsible for 2/3 of all deaths per year[14]. Besides, Ukraine is one of the leaders in this indicator globally. Stroke causes serious and long-term health disorders. Current treatment modalities can significantly mitigate disastrous consequences of stroke provided a patient is brought to the hospital within 60 minutes after the first symptoms developed[15]. That is why promoting population awareness of key stroke symptoms is critical.

Ways to improve public health lie in prevention of non-infectious chronic complications and minimizing disease risk factors, creating environment favorable for health, building-up responsible attitudes of citizens towards their health, and motivating people to have healthy lifestyles[16].

Health Index outcomes showed that in 2019 situation with early disease identification remains challenging but promising – there is gradual increase in coverage of population with key preventative check-ups, increase in number of visits in case of disease instead of self-treatment, revival of positive attitude towards vaccination, and vaccination experience.

Strengthening health of the most vulnerable populations, overcoming unfair access to quality health services have to become strategic focus and tasks for information policy in the area of prevention.

SECTION 2.
OUT-PATIENT CARE

Key results:

- Two out of five adult Ukrainians (39.3%) sought out-patient medical care because of their disease within the previous year.
- Compared to the last year proportion of out-patient care users who received it from a family doctor increased almost two-fold (from 34.8% in 2018 to 59.7% in 2019).
- In Kirovograd Oblast, the lowest proportion of respondents sought out-patient medical care last year (15.9%), and the highest proportion among all Oblasts – sought it from their district GP (45.4%).
- Almost three quarters (73.1%) of out-patient care users paid for their visit, medical items and/or lab and diagnostic work-up.
- The biggest proportion of respondents paying for their out-patient visit (through payments to a charity fund account, official cash-desk or informal payments) were from Kharkiv Oblast (40.8%, 36.1% and 37.7%, respectively).
- Among those making informal payments for their out-patient visits the proportion of

11 World Health Organization. Health Situation in the European Region in 2018: https://gateway.euro.who.int/en/indicators/hfa_43-1010-life-expectancy-at-birth-years/visualizations/#id=18850
12 https://www.kmu.gov.ua/ua/npas/249618799
13 http://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death
14 http://www.ukrstat.gov.ua/
15 https://www.stroke.nih.gov/materials/needtoknow.htm
16 National program "Health 2020: the Ukrainian dimension"

those who were solicited to pay increased from 30.9% in 2018 to 50.3% in 2019.

- Each year the proportion of out-patient care users undergoing lab and diagnostic tests decreases. Compared to 2016 it dropped from 70.1% to 59.4% for lab tests, and from 58.3% to 47.3% – for diagnostic tests.
- From year to year, proportion of respondents paying for their out-patient visit or its components is increasing as well as paid amounts. At the same time, compared to 2018 the proportion of people for whom it was difficult to cover that cost decreased or didn't change (46.9% in 2018, and 47.3% in 2019), and they had to borrow that money (53.1% in 2018, and 44.0% in 2019).

Out-patient care is a type of medical care not requiring hospitalization for round-the-clock care contrary to in-patient care. Out-patient facilities provide primary and (partially) specialized medical care. They play an important role in health care system because the majority of health problems can be dealt with on a primary level. Importance of primary health care is enshrined in Declaration of Astana about primary health care (2018) that says that strengthening primary health care (PHC) is the most inclusive, effective and efficient approach to enhance people's physical and mental health, as well as social well-being, and that PHC is a cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals[17] .

Healthcare reform in Ukraine provides for healthcare system transformation from the model based on maintaining healthcare facilities towards the model focused on a patient and health services he/she gets in order for all citizens of Ukraine to achieve equal access to quality health services. Realizing relevance and demand for primary health care led to healthcare reform in Ukraine to start from this very level. Starting from 2018, patient got the right to choose their primary health care doctor (family doctor, GP, pediatrician), e-health system was established, model of state health care funding has changed[18] . You can follow the survey results in this Section to see whether it had an influence on out-patient care usage and if it did it what way.

2.1. Seeking Out-Patient Care

On average, two out of five adult Ukrainians sought out-patient medical care because of their disease within the previous year (Fig.2.1). This proportion changes from year to year, and it grows slowly but steadily. Mean number of out-patient visits does not change though.

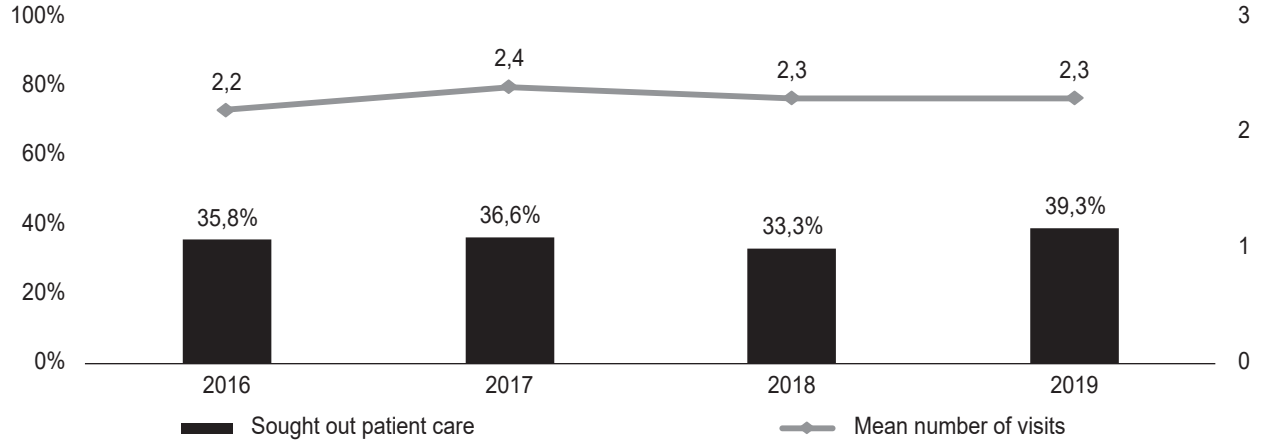

Fig. 2.1. Proportion of respondents seeking out-patient care due to their disease within 12 months prior to the survey, and mean number of visits among those seeking out-patient care: breakdown by years

17 WHO. Declaration of Astana. https://www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf
18 MOH. What has changed over the year after adoption of the Law on Health Reform, 19 October 2018. https://moz.gov.ua/article/reform-plan/scho-zminilosja-za-rik-pislja-prijnjattja-zakonu-pro-medichnu-reformu--

By regions of Ukraine, the range of values was from 15.9% of out-patient care users in Kirovograd Oblast to 49.7% in Zhytomyr, and 50.3% in Volyn Oblasts (Table 2.1).

Table 2.1.

Proportion of respondents seeking out-patient care within 12 months prior to the survey, and mean number of visits among those seeking out-patient care: breakdown by regions and survey years

Oblast/Region	Sought out-patient care in the last 12 months, %				Mean number of out-patient visits			
	2019	**2018**	**2017**	**2016**	**2019**	**2018**	**2017**	**2016**
Ukraine	**39,3**	**33,3**	**36,6**	**35,8**	**2,3**	**2,3**	**2,4**	**2,2**
Vinnitsia	47,5	42,5	39,4	44,4	2,6	2,2	2,2	2,2
Volyn	50,3	13,7	21,6	31,9	2,0	2,5	2,3	3,3
Dnipropetrovsk	44,7	46,6	37,6	44,4	2,6	2,3	2,7	2,0
Donetsk	41,4	30,2	26,3	31,2	2,2	1,9	1,9	1,5
Zhytomyr	49,7	50,8	51,0	39,9	2,4	3,3	1,9	1,7
Transkarpathian	24,6	30,1	28,1	34,3	2,1	2,2	2,4	1,8
Zaporizzhya	48,7	38,7	36,8	45,7	2,4	1,7	1,6	2,1
Ivano-Frankivsk	42,7	44,6	41,1	38,0	2,8	2,3	3,3	2,6
Kyiv	40,6	37,0	45,7	44,0	2,1	2,9	2,4	2,6
Kirovograd	15,9	41,2	29,6	24,0	2	1,4	1,6	1,5
Luhansk	35,8	30,6	29,7	23,5	1,8	1,6	1,5	1,4
Lviv	37,1	40,9	42,1	34,5	2,6	1,5	2,0	3,2
Mykolayiv	40,2	26,0	35,9	36,9	2,0	2,5	1,8	1,8
Odessa	40,9	27,3	32,7	31,5	2,3	2,9	2,5	1,9
Poltava	36,2	49,7	34,3	54,6	2,3	2,7	2,9	2,9
Rivne	40,1	44,8	54,5	46,6	2,7	1,9	2,6	2,2
Sumy	23,0	31,8	23,5	31,4	2,2	3,3	2,9	2,3
Ternopil	22,1	16,1	33,9	20,8	2,5	2,3	2,9	2,8
Kharkiv	35,8	19,3	29,6	35,6	2,6	1,4	2,2	1,9
Kherson	43,1	45,1	42,4	38,2	1,9	2,0	1,9	1,5
Khmelnitsky	41,8	20,4	23,4	28,7	2,1	2,7	1,8	1,6
Cherkassy	40,4	39,6	47,5	45,2	2,6	2,7	3,1	2,7
Chernivtsi	44,6	35,4	42,2	38,7	2,8	3,0	3,3	3,0
Chernihiv	32,8	32,7	45,9	38,1	2,2	2,4	2,8	2,0
City of Kyiv	43,4	14,8	50,1	24,7	2,3	2,4	3,5	2,8

2.2. The Choice of Health Care Providers

Compared to previous years, proportion of people whose last health visit was a visit to a GP/ family doctor has increased almost two-fold (59.7% in 2019 vs 34.8% in 2018, 28.6% in 2017, and 23.6% in 2016) (Fig. 2.2). Respectively, proportion of people visiting a district GP (13.0% in 2019 vs 29.0% in 2018, and 37.3% in 2016) and a subspecialist (24.3% in 2019 vs 33.5% in 2018, and 37.2% in 2016) has greatly decreased. There was an increase up to 41.0% of visitors who had a referral voucher from a family doctor/district GP to a subspecialist.

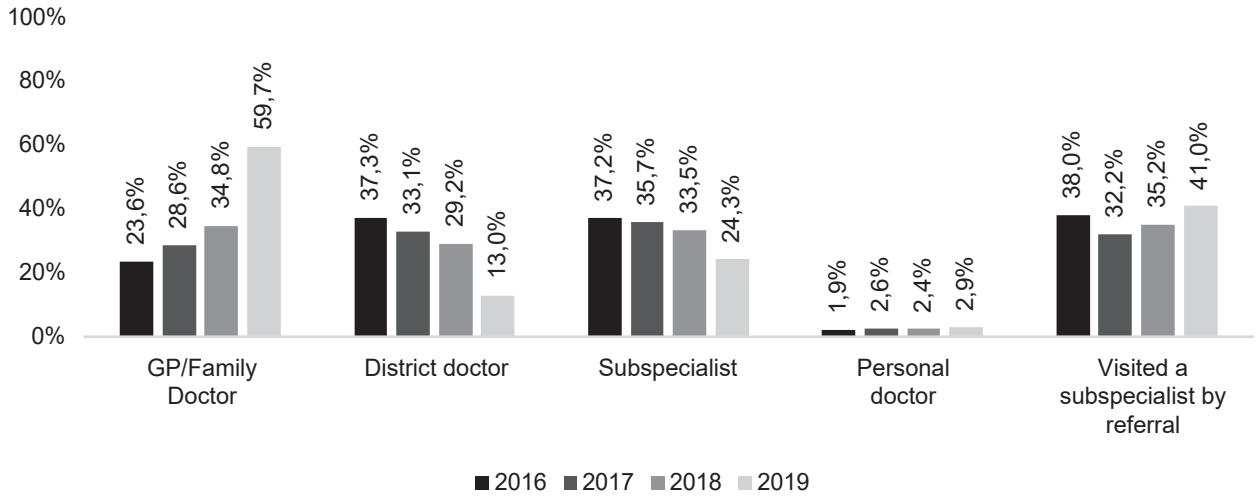

Fig. 2.2. Breakdown of respondents by the type of out-patient care provider during their last visit, and proportion of people who were referred to a subspecialist among all visiting subspecialists: comparison between years

By Oblasts, proportion of out-patient care users their last visit being to a family doctor ranged from 80.0% in Transkarpathian Oblast to 18.0% in Kirovograd Oblast (Table 2.2). Respectively, Kirovograd Oblast had the biggest proportion of those making their last out-patient visit to a district general practitioner (45.4%). Other three Oblasts with quite high number of such visits were Kharkiv (34.7%), Sumy (29.1%), and Khmelnitsky (22.6%). Oblasts with the number of visits to a district GP less than 10% were Cherkassy, Vinnitsia, Kyiv, Donetsk, Luhansk, Ivano-Frankivsk, Zhytomyr, and Ternopil Oblasts.

Subspecialist visit scores during the last out-patient visit were from 7.8% in Transkarpathian Oblast to up to 37.8% in Ivano-Frankivsk Oblast and 37.9% in the city of Kyiv. Proportion of patients seeing subspecialists by referral was from 21.2% in Cherkassy Oblast to 60.9% in Lviv Oblast.

Table 2.2.

Breakdown of respondents by the type of out-patient care provider during their last visit, and proportion of people who were referred to a subspecialist among all visiting subspecialists: by regions (N = 3866)

Region	*N*	Type of an out-patient care provider				Proportion of people having a subspecialist referral document
		GP/Family Doctor	District physician	Sub-specialist	Personal doctor	
Ukraine	**3866**	**59,7**	**13,0**	**24,3**	**2,9**	**41,0**
Vinnitsia	**191**	67,5	7,3	23,7	1,4	46,3
Volyn	**210**	62,0	10,8	21,6	5,6	44,1
Dnipropetrovsk	**176**	69,5	10,6	16,9	3,0	38,2
Donetsk	**170**	68,3	5,9	24,7	1,1	36,5
Zhytomyr	**186**	60,8	2,1	35,7	1,4	40,5
Transkarpathian	**110**	80,2	12,0	7,8	0,0	59,6
Zaporizzhya	**205**	53,5	21,4	21,9	3,2	28,8
Ivano-Frankivsk	**172**	51,0	4,0	37,8	7,3	28,3

Kyiv	**149**	60,7	6,3	26,3	6,6	42,1
Kirovograd	**70**	18,0	45,4	29,0	7,7	29,1
Luhansk	**141**	66,1	5,0	29,0	0,0	42,2
Lviv	**150**	58,3	10,8	25,4	5,5	60,9
Mykolayiv	**155**	66,3	11,7	19,8	2,1	38,0
Odessa	**149**	56,8	15,2	21,0	7,1	27,6
Poltava	**148**	71,8	15,7	11,8	0,6	52,5
Rivne	**167**	67,9	13,6	16,0	2,5	43,5
Sumy	**94**	41,1	29,1	28,1	1,8	46,1
Ternopil	**99**	73,9	1,8	23,4	0,9	39,8
Kharkiv	**146**	50,1	34,7	12,6	2,7	38,2
Kherson	**169**	56,5	14,9	27,0	1,5	40,5
Khmelnitsky	**154**	55,0	22,6	21,6	0,9	57,2
Cherkassy	**179**	56,7	7,4	32,4	3,5	21,2
Chernivtsi	**180**	59,2	10,7	23,8	6,3	34,6
Chernihiv	**137**	54,8	10,3	34,0	0,9	32,0
City of Kyiv	**159**	39,8	20,3	37,9	2,0	57,6

2.3. "Out-of-pocket" Payments for Outpatient Care

More than a half (62.6%) of out-patient care users incurred expenses directly related to their last out-patient visit **(Table 2.3)**. 13.2% of people paid to a charitable fund account, 12.6% – paid officially at a cash-desk, 11.5% – gave informal payments, and 36.1% paid for medical items during their visit.

Table 2.3.

Proportion of respondents paying "out-of-pocket" for their out-patient visit (not including medications, diagnostic and lab work-up)

		To a charity fund or other organization account	At a cash-desk according to the official procedure	Informal payments	For medical items	In any form
Patients making payments	%	13,2	12,6	11,5	36,1	62,6
	N	447	433	371	1090	2396
Requested to pay (among payers)	%	59,8	—	50,3	—	—
Average paid amount	UAH	352	1 159	639	212	531
Median paid amount	UAH	100	200	200	60	70

Proportions of out-patient care users paying to a charitable fund account at a cash-desk according to the officially established procedure and those making informal payments change insignificantly year to year, whereas proportion of people paying for medical items grows **(Fig. 2.3)**. Amounts paid also gradually grow.

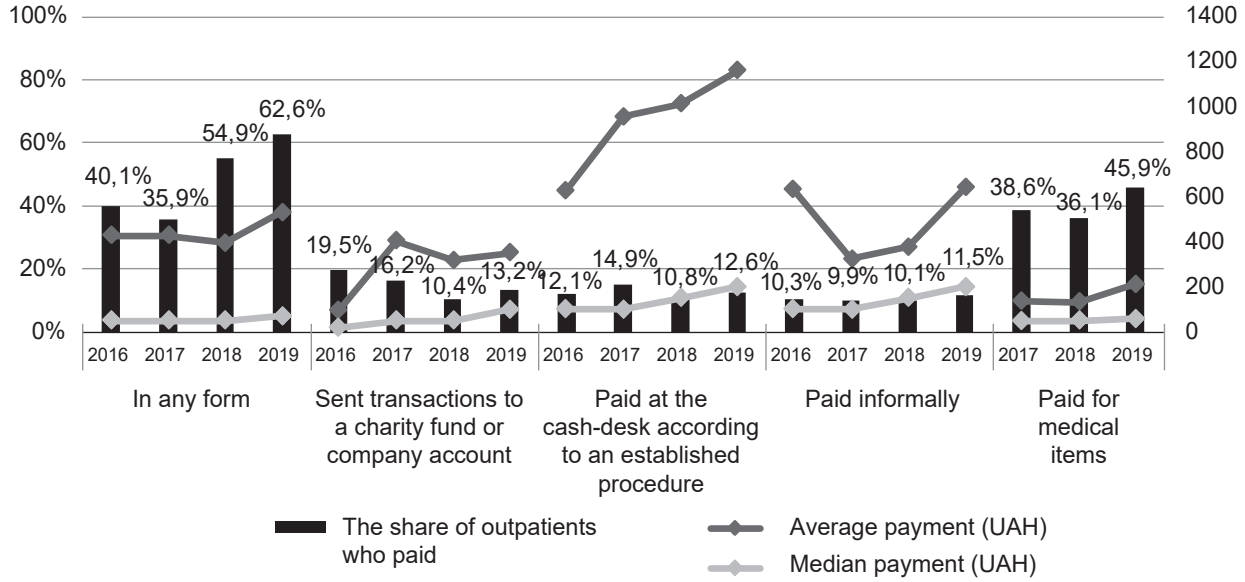

Fig 2.3. Out-of-pocket payment for an out-patient visit: comparison between years

To find out whether out-of-pocket payments were initiated by a patient himself or by health care workers respondents were asked: "Have you been demanded or at least prompted to pay?" Compared to the previous years, the proportion of those demanded to pay for their visit (among those who have made payments to a charitable fund account or other organization) has almost not changed. However, there was a significant increase in proportion of those demanded to pay among people who paid informally (50.3% in 2019 vs approximately 31% in previous years) (Fig. 2.4).

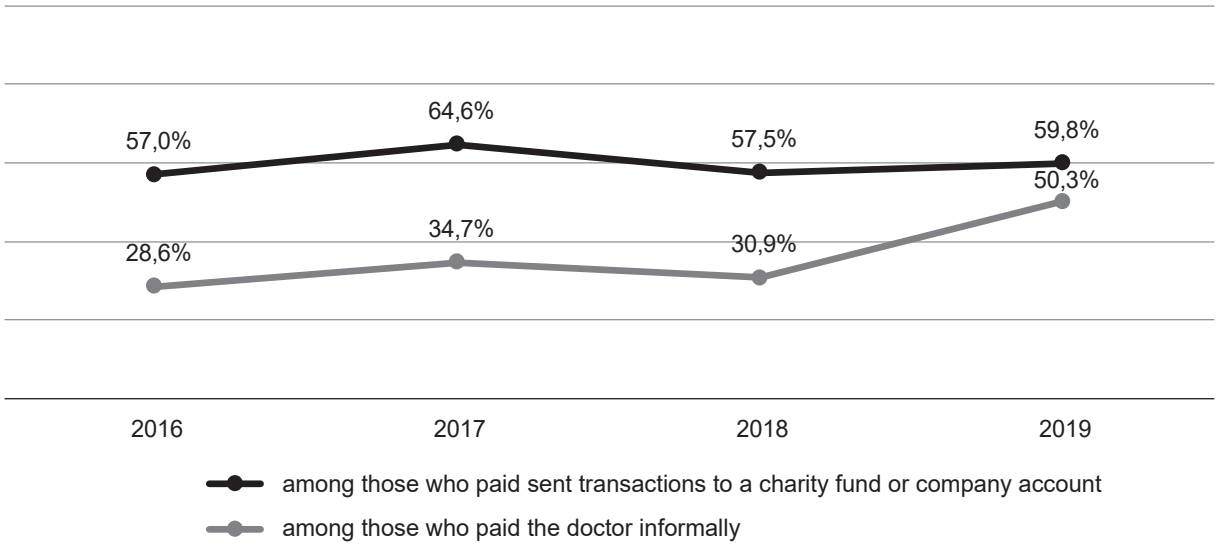

Fig. 2.4. Proportion of people demanded to pay for out-patient care: comparison between years

Proportion of people who have paid for their last out-patient visit varied significantly between Oblasts (Table 2.4). Thus, Kharkiv Oblast number one in all types of payments. 40.8% of respondents there reported paying to a charitable fund or other organization account during their last out-patient visit, 36.1% paid at a cash-desk according to the official procedure, 37.7% paid informally, and 78.0% – for medical items.

Proportion of people paying for their out-patient visit in other Oblasts was minimal. Thus, in Donetsk, Zaporizzhya and Chernihiv Oblasts it was below 10% by three types of payments. Next are Kyiv, Kirovograd, Luhansk, and Mykolayiv Oblast.

The lowest amount paid for medical items during the last out-patient visit was reported by Transkarpathian Oblast, it was 20.6%.

Table 2.4.

Proportion of respondents paying for their last out-patient visit, and amounts paid by regions

Region	To a charity fund or other organization account		At a cash-desk according to the official procedure		Informally		For medical items	
	proportion of people who paid, %	median amount, UAH	proportion of people who paid, %	median amount, UAH	proportion of people who paid, %	median amount, UAH	proportion of people who paid, %	median amount, UAH
Ukraine	**13,2**	**100**	**12,6**	**200**	**11,5**	**200**	**45,9**	**60**
Vinnitsia	22,7	200	19,1	200	11,3	500	56,8	100
Volyn	7,4	100	9,9	200	11,5	100	36,5	50
Dnipropetrovsk	11,1	60	11,7	100	5,8	200	36,7	54
Donetsk	2,4	50	4,0	2000	4,8	100	25,5	100
Zhytomyr	25,3	20	11,6	250	7,2	250	41,2	50
Transkarpathian	14,1	100	11,4	140	12,4	100	20,6	100
Zaporizzhya	1,3	50	5,2	150	0,3	200	24,2	50
Ivano-Frankivsk	13,1	100	16,4	200	19,5	200	32,7	50
Kyiv	9,8	150	7,9	300	8,0	150	56,8	70
Kirovograd	11,3	50	9,1	50	1,0	200	52,6	25
Luhansk	2,7	10	11,3	300	0,7	10	48,0	50
Lviv	18,0	30	11,2	50	30,2	200	61,1	60
Odessa	9,7	200	6,3	150	5,3	300	46,5	50
Одеська	22,7	80	19,8	200	26,2	200	56,2	100
Poltava	15,5	50	14,4	200	21,4	100	55,5	100
Rivne	20,8	100	14,8	100	11,1	200	50,9	100
Sumy	11,5	1000	29,6	500	3,6	1200	50,2	50
Ternopil	19,4	50	2,9	850	11,2	200	53,6	50
Kharkiv	40,8	100	36,1	200	37,7	200	78,0	85
Kherson	9,7	55	18,8	100	2,2	250	56,7	55
Khmelnitsky	7,5	20	7,4	500	14,1	200	50,3	50
Cherkassy	17,8	100	2,7	200	7,5	100	56,5	60
Chernivtsi	11,3	100	11,0	160	10,4	200	52,1	100
Chernihiv	7,2	200	3,4	150	0,0	--	34,7	37
City of Kyiv	10,1	100	18,6	500	8,6	500	45,5	100

Within 30 days preceding the survey, 7.2% of all adult population of Ukraine had expenditures for out-patient care. Median amount paid was 300 UAH, mean — 856 UAH.

2.4. Laboratory tests and diagnostic workup

Overall, 59.4% of out-patient care users had lab tests done in the previous year, and 47.3% underwent diagnostic work-up (Table 2.5). Out of them a bit less than a half paid for lab tests (46.7%) and a bit more than a half – for diagnostic work-up (62,9%). Seven out of ten users of lab and diagnostic services received them in public healthcare facilities.

Table 2.5.

Proportion of respondents undergoing lab and diagnostic workup, and expenditures for that in the previous 12 months (among out-patient care users)

Type of service	Proportion of respondents using it, %	Of them, proportion of respondents paying for it, %	Type of HCF, %	Amount of payment, UAH
Lab tests	59,4	46,7	public 77,4 private 17,3 both 5,2	mean 472 median 200
Diagnostic workup	47,3	62,9	public 67,5 private 27,3 both 5,2	mean 620 median 250

Proportion of out-patient care users undergoing lab or diagnostic workup decreases every year. According to survey results, over the last four years this proportion is gradually decreasing from 70.1% in 2016 to 59.4% in 2019 for lab tests, and from 58.3% in 2016 to 47.3% in 2019 for diagnostic work-up. At the same time, the proportion of people paying for their lab and diagnostic work-up varies within the same range, but the amounts paid grow (Fig. 2.5).

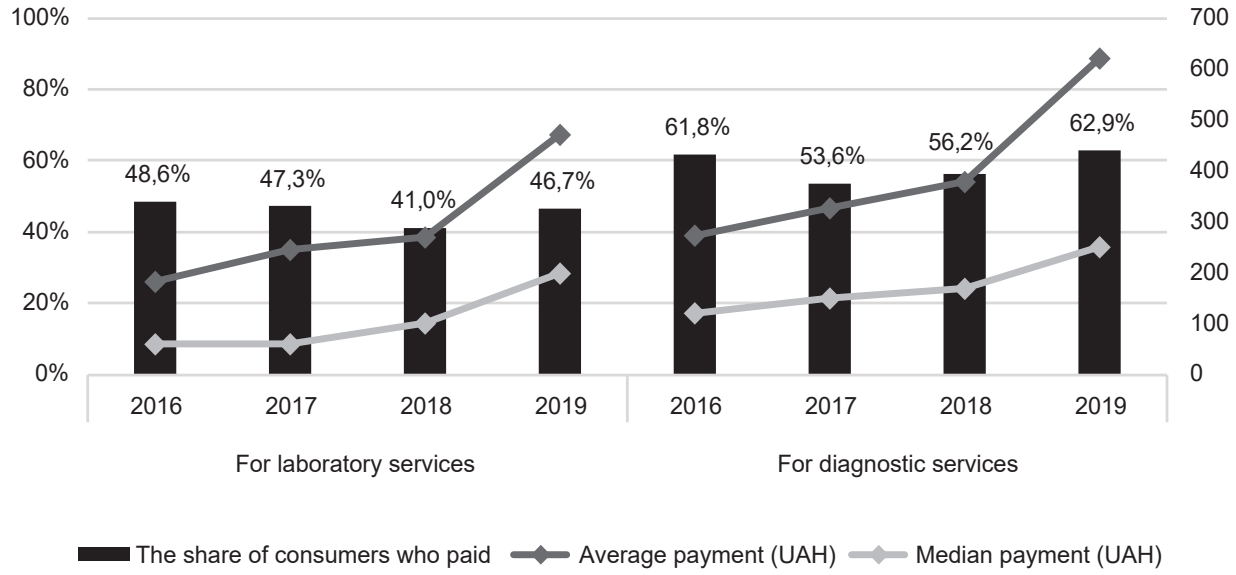

Fig. 2.5. Expenditures for lab and diagnostic services in the previous 12 months: breakdown by years

The highest proportion of out-patient services users who have had tests or diagnostic work-up last year is reported in Chernivtsi (74.2% and 70.9%, respectively), and Ternopil (72.0% and 69.5%) Oblasts (Table 2.6). The largest proportion of out-patient care users who had lab tests lived in Ivano-Frankivsk Oblast (75.4%), and those with diagnostic workup — in Cherkassy Oblast (71.0%). Poltava (41.1% had tests done) and Chernihiv (31.0% had diagnostic work-up done) Oblasts scored the lowest.

Table 2.6.

Proportion of respondents undergoing lab and diagnostic work-up in the previous 12 months: breakdown by regions and survey years, %

Region	Lab tests				Diagnostic workup			
	2019	**2018**	**2017**	**2016**	**2019**	**2018**	**2017**	**2016**
Ukraine	**59,4**	**62,7**	**67,6**	**70,1**	**47,3**	**48,5**	**50,8**	**58,3**
Vinnitsia	71,6	60,2	68,2	71,9	59,0	45,6	46,6	53,0
Volyn	52,7	73,6	46,8	53,8	43,1	40,7	25,9	62,7
Dnipropetrovsk	48,1	47,6	81,3	78,5	39,3	35,5	53,2	52,8
Donetsk	58,9	78,2	70,4	79,6	35,3	55,1	65,6	67,8
Zhytomyr	69,4	85,1	75,0	69,8	40,9	50,9	49,1	61,0
Transkarpathian	47,8	66,7	63,6	55,1	44,2	58,1	48,1	42,0
Zaporizzhya	55,7	54,7	50,4	82,6	47,5	47,9	47,5	78,1
Ivano-Frankivsk	75,4	73,5	63,4	68,9	66,2	60,7	58,3	66,6
Kyiv	68,4	54,4	60,9	65,2	58,0	46,3	58,2	57,8
Kirovograd	49,2	61,9	54,4	76,4	38,7	36,8	28,5	70,3
Luhansk	41,4	54,5	44,5	59,0	49,8	71,5	69,9	60,7
Lviv	68,2	67,3	78,4	77,2	49,2	47,4	57,6	61,6
Mykolayiv	50,1	65,8	67,9	75,8	40,4	35,3	26,2	56,2
Odessa	62,1	77,2	67,3	69,0	48,0	45,6	41,6	57,6
Poltava	41,1	75,0	65,2	73,5	37,9	66,4	49,0	61,2
Rivne	59,4	67,6	62,6	69,4	44,9	52,2	37,7	58,8
Sumy	47,0	47,0	63,7	70,1	49,9	41,7	48,2	64,3
Ternopil	72,0	67,2	59,7	63,7	69,5	41,4	42,8	63,8
Kharkiv	62,2	49,0	60,2	61,8	44,4	37,1	48,8	55,7
Kherson	55,4	54,2	74,5	68,2	39,6	30,4	41,3	60,3
Khmelnitsky	58,1	49,7	62,6	71,6	34,0	63,1	39,7	43,9
Cherkassy	69,0	70,6	83,0	69,3	71,0	58,9	59,9	49,3
Chernivtsi	74,2	69,6	74,7	54,1	70,9	60,7	64,0	45,6
Chernihiv	50,9	59,9	69,5	75,1	31,0	40,5	50,8	65,5
City of Kyiv	67,2	26,2	72,7	52,5	57,0	26,9	49,6	37,4

2.5. The Financial Burden

In general, three quarters (73.1%) of out-patient care users during their last out-patient visit paid for it and/or lab and diagnostic work-up as well as medications (Table 2.7). At that, the proportion of those who had difficulty covering all these expenses has almost not changed since last year – 47.3% of all who paid, but the proportion of those who had to borrow money to cover all expenses has decreased (44.0%) (Fig. 2.6).

Table 2.7.

Payment for out-patient care: financial burden *(among out-patient care users)*

Year	Payers for out-patient treatment and lab and diagnostic services **(%, N)**	Of them:		Amount of borrowed money to cover cost of out-patient treatment, UAH	
		Payers who had difficulty to cover all their costs **(%, N)**	Payers who had to borrow money **(%, N)**	**Mean**	**Median**
2019	73,1 (2801)	47,3 (1315)	44,0 (432)	8 065	2 000
2018	66,6 (2317)	46,9 (1127)	53,1 (1047)	2 967	1 500
2017	58,0 (2170)	52,7 (1168)	46,1 (394)	3 243	1 000
2016	62,6 (2398)	66,9 (1536)	36,8 (490)	2 192	1 000

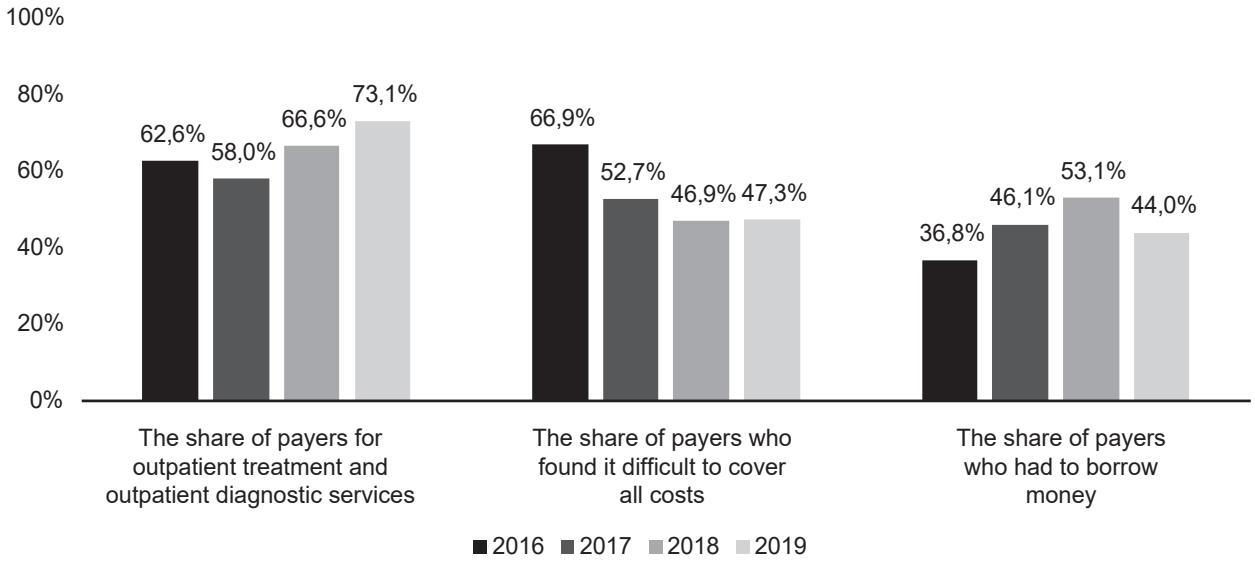

Fig. 2.6. Payment for out-patient care: financial burden (among out-patient care users)

Amount of money that patients have to borrow to cover their out-patient care grow annually (Fig. 2.7).

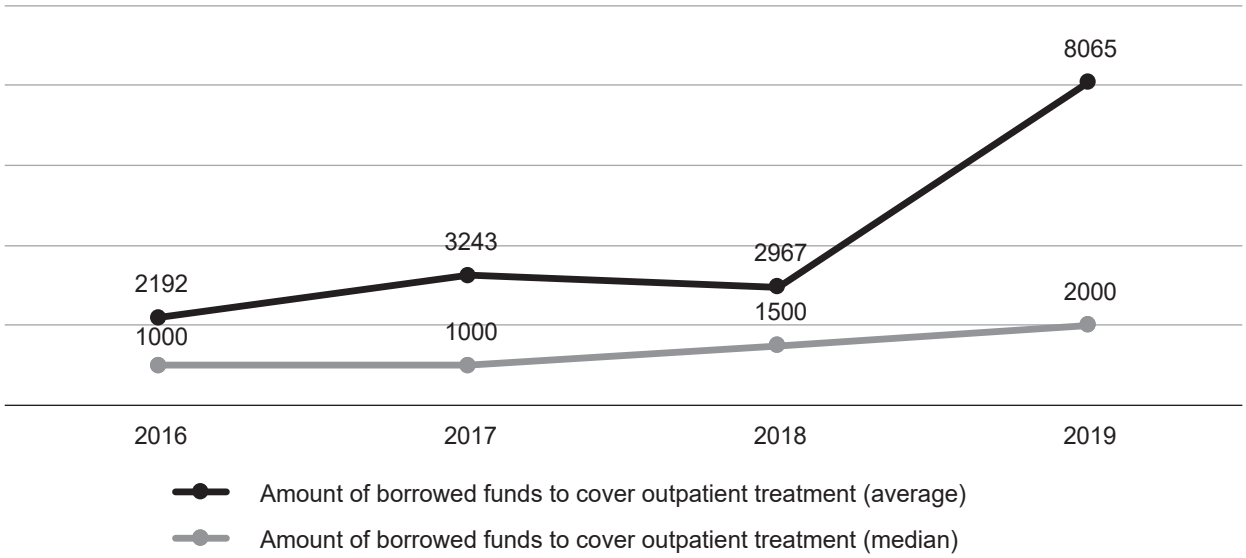

Fig. 2.7. Payment for out-patient care: financial burden (among out-patient care users)

Among all respondents, the proportion of them who reported non-seeking care in case of disease due to lack of money in the previous year was 24.5% for Ukraine in general, and it varied from 2.8% in Kirovograd Oblast to 42.0% in Mykolayiv Oblast (Fig. 2.8). This proportion is smaller than in 2016 and 2017, but it equals or exceeds the one for 2018.

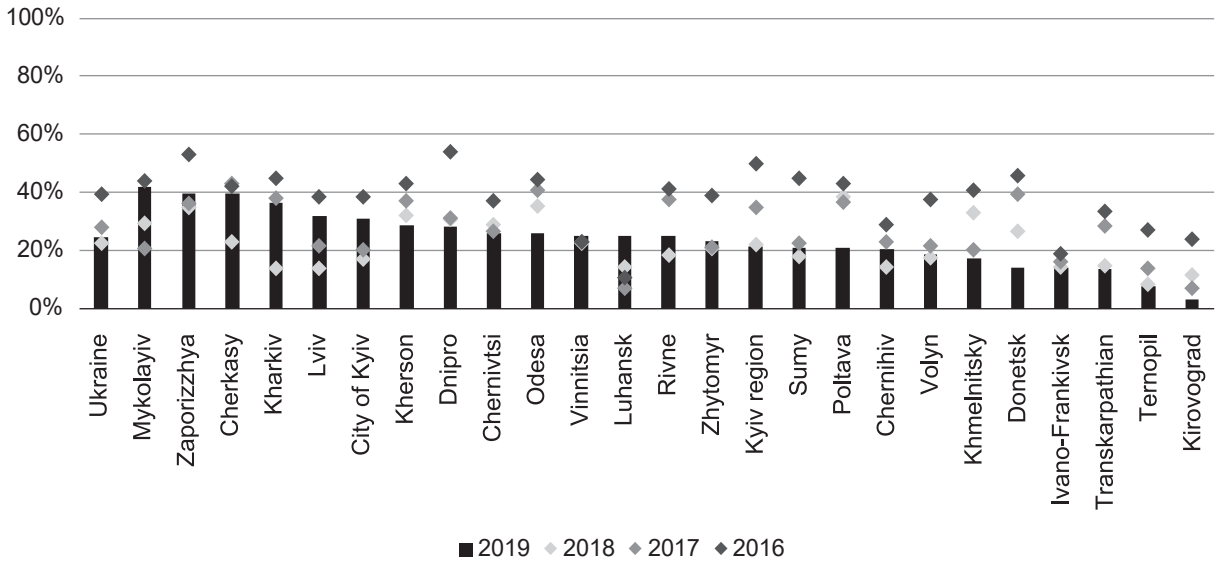

Fig. 2.8. Necessitated refusal from out-patient care due to lack of money in the previous year *(among all)*: breakdown by regions and survey years

2.6. Evaluation of Outpatient Care Aspects

The most important aspect of out-patient care for Ukrainians was and still is treatment efficacy (78.6%). Number two is the opportunity to undergo free-of-charge diagnostic work-up, lab tests and treatments (46.3%). Number three is clarity of doctors' explanations (23.3%), and number four – doctors' manners (22.3%). Relevance of the latter two increases every year (Fig. 2.9). The rest of the options got less than one fifth of respondents' votes. Breakdown of answers by regions is provided in Table 2.8.

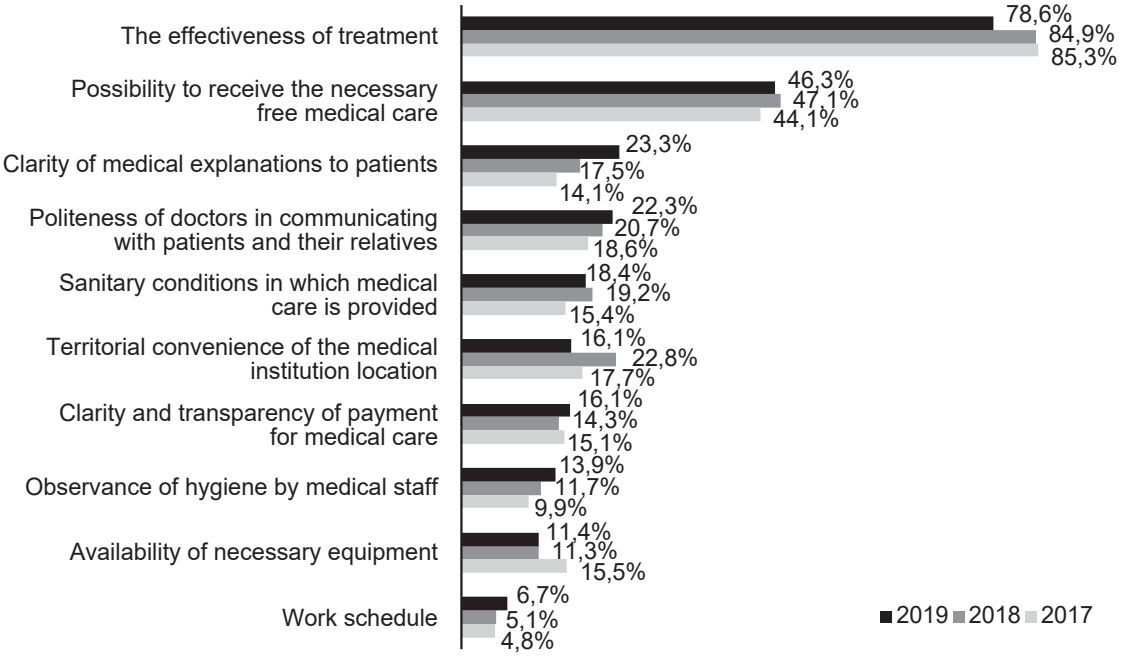

Fig. 2.9. The most important aspects of out-patient care provision (among those seeking out-patient care in the previous 12 months): breakdown by years (up to 3 answers can be chosen)

Table 2.8.

Breakdown of respondents by the most important aspects of out-patient care provision (% among those seeking out-patient care in the previous 12 months):

Region	*N*	Treatment effectiveness	Politeness of doctors when communicating with patients and their families	Clarity of medical explanations to patients	Good location of a health care facility	Sanitation and setting of healthcare provision	Work schedule	Possibility to get necessary diagnostic workup free-of-charge	Clarity and transparency of payment for care	Observing hygiene by HCWs during examination and procedures	Availability of necessary equipment
Ukraine	**3870**	**78,6**	**22,3**	**23,3**	**16,1**	**18,4**	**6,7**	**46,3**	**16,1**	**13,9**	**11,4**
Vinnitsia	**191**	77,4	14,4	24,3	19,3	18,9	2,0	44,4	24,7	11,7	9,5
Volyn	**212**	74,3	14,3	16,9	14,6	32,2	1,1	46,6	13,9	10,6	16,4
Dnipropetrovsk	**175**	80,0	18,7	31,7	11,5	19,3	1,8	49,1	10,4	8,1	14,3
Donetsk	**172**	89,8	27,1	21,0	1,7	10,9	6,7	39,6	7,6	17,1	1,9
Zhytomyr	**188**	87,2	35,7	25,5	17,8	10,5	21,9	35,7	16,3	4,1	6,2
Transkarpathian	**111**	79,7	50,1	24,7	17,4	11,4	0,6	47,4	18,6	3,1	17,0
Zaporizzhya	**206**	77,0	18,1	27,6	24,2	21,3	10,5	45,3	14,7	23,0	11,3
Ivano-Frankivsk	**171**	69,1	33,4	28,2	9,7	14,2	7,4	46,5	15,1	22,9	25,7
Kyiv	**148**	74,4	16,5	20,3	17,6	9,9	3,6	47,3	14,1	16,1	21,3
Kirovograd	**71**	91,1	15,1	17,1	41,2	11,7	6,6	37,9	10,5	0,9	4,7
Luhansk	**141**	92,3	14,4	11,6	24,1	23,1	5,1	57,5	23,0	20,4	5,4
Lviv	**150**	70,4	14,4	24,0	35,2	30,8	8,7	51,8	14,0	12,6	9,4
Mykolayiv	**155**	91,4	17,2	16,2	34,6	19,8	18,7	49,1	14,0	11,5	4,5
Odessa	**149**	85,3	12,8	37,1	20,9	18,2	10,9	48,6	24,4	16,0	16,5
Poltava	**145**	64,8	38,6	29,0	17,5	21,1	10,8	28,1	10,5	6,6	5,7
Rivne	**169**	73,4	18,3	21,6	10,7	18,8	1,7	43,8	21,5	14,8	17,9
Sumy	**94**	53,0	28,4	22,6	37,3	34,3	17,5	46,6	10,5	5,3	1,3
Ternopil	**99**	48,3	31,2	10,0	9,1	15,1	0,9	44,0	7,0	8,7	10,6
Kharkiv	**147**	73,7	25,2	9,5	15,3	22,5	1,4	62,6	30,7	20,2	8,3
Kherson	**170**	87,9	15,2	14,4	19,4	4,4	9,4	48,0	24,4	15,1	8,9
Khmelnitsky	**149**	78,4	32,9	17,1	9,4	26,7	7,1	37,8	14,0	17,2	2,9
Cherkassy	**179**	63,6	26,7	28,6	8,0	5,9	5,3	62,4	25,4	13,0	23,1
Chernivtsi	**181**	72,9	10,8	38,8	17,5	19,2	6,0	58,8	12,8	18,4	17,6
Chernihiv	**137**	89,2	50,2	36,1	11,3	7,1	3,1	33,4	2,6	4,1	14,9
City of Kyiv	**160**	76,6	17,8	22,5	8,9	23,0	6,3	36,8	15,4	11,8	18,4

Proportion of out-patient care users for the whole period of survey varies within 25–45% between Oblasts, and according to 2019 survey the average for Ukraine is 39.3% among adult population.

In the majority of cases, at a primary health care level, users visit a GP (59.7%) or internist (13%); one quarter visited a subspecialist. Compared to the previous years, the proportion of people visiting a GP increases and the proportion of people visiting a subspecialist decreases just as the proportion of visits to subspecialists without referrals. So, just like it was envisaged by the health reform the practice of visiting subspecialists by people's own decision (without being referred) becomes less prevalent, at the same time there is more visits to GPs related to health problems.

It is alarming though that according to the survey there is an increase in the proportion of people who paid for out-patient care in any way in the previous 12 months, first of all at the expense of increasing proportion of people paying for medical items. Amount of payment, both formal and informal, is also increasing each year. At the same time, proportion of payers who had difficulty covering all out-patient care expenses compared to the previous survey has not changed, in other words, increasing payment amounts for out-patient care was generally compensated by increasing income of people. However, increasing expenses for out-patient care as well as continuing informal payments practice is alarming because they can be barriers to getting basic health services by more vulnerable populations.

SECTION 3. INPATIENT CARE

Key results:

Overall, 13.5% (N = 1386) of respondents had hospitalization episodes in the previous year. The majority of them (81.0%) had one hospitalization episode.

- The majority of people with hospitalization experience reported having been referred for hospitalization by their doctor although the rate of such hospitalizations has decreased from 46.8% in 2018 to 37.0% in 2019. Rather, there is an increase in the proportion of people referred for hospitalization by an ambulance team (from 24.4% in 2018 to 30.6% in 2019) or those self-referred (from 17.8% in 2018 to 22.7% in 2019). Proportion of people with scheduled hospitalization has not changed.
- The key in-patient care services providers just like in previous years are city/district (rayon) (73.1%) and Oblast hospitals (21.8%).
- 86.1% paid for their hospitalization in any way which is no different from previous year rates (87.8%). In particular, almost two thirds (63.2%) of people treated in hospitals paid for their medical items during their last hospitalization: 36.1% – to charity fund or other organization account, 31.3% – at a cash-desk as per formal procedure, and one quarter (25.5%) – informally ("in an envelope" hand to hand) or gave a present to their doctor or other health care worker. Prevalence of each of these types of payment changed very little since the last survey.
- Amount of payment for in-patient care increases: median payment to a charity fund account during the period from 2016 to 2019 has increased from 60 to 200 UAH, formal payment – from 200 UAH to 500 UAH, informal payment to doctor – from 400 UAH to 500 UAH, payment amount for medical items – from 100 to 200 UAH.
- Also, the study reports increasing proportion of people paying for lab and diagnostic services (with the same proportion of people getting them), and cost of such services. According to 2017 survey, 41.9% of people getting lab and diagnostic services paid for them during their last hospitalization, 2018 – 47.6%, 2019 – 52.5%. Median payment for lab services grew from 100 UAH in 2017 to 260 UAH in 2019, for diagnostic work-up – from 200 UAH in 2017 to 360 UAH in 2019.
- A bit more than a half of payers (53.8%) reported that it was difficult for them to cover all in-patient care related expenses, which is more than last year (48.0%).

- According to 2019 data, proportion of necessitated refusal from hospitalization has somewhat increased and got back to the 2017 level (11.8% in 2017, 9.0% in 2018, 11.2% in 2019).

In-hospital medical care compared to out-patient means round-the-clock presence of a patient in the facility under continuous care of health personnel, and as a rule it is more expensive. For example, in OECD countries, hospitals on average account for around 38% of total health care cost, and this line item is the key cost item of healthcare in countries that joined this organization, except a few[19]. In Ukraine, out of the total health care cost in 2016 hospitals took up 31.8% of the cost, out-patient care providers – 12.8%, the highest – 40.8% – retail sale (pharmacies) and other medical products suppliers[20].

Significant proportion of treatment cost is incurred by households: according to official data, out of total healthcare expenditures in 2016 households incurred 52.3% (99.7% of expenditures – medications, 62.3% – lab and diagnostic services, 42.5% – out-patient care, 12.7% – in-patient care)[21]. Such high expenditures is a financial barrier to access to health services, especially for economically disadvantaged populations. In case of necessitated hospitalization financial barriers might have severe consequences because hospitalization is often urgent and condition of patients to be hospitalized is usually more severe, and hospitalization might require high level of expenditures that a household cannot always afford.

Data of 2013 comparison study in six Eastern European countries (Bulgaria, Hungary, Lithuania, Poland, Romania and Ukraine) show high prevalence of payment related to in-patient care in Ukraine, both formal and informal, as well as the fact that Ukrainian patients often encounter difficulties paying for health services (in particular, they have to borrow money to cover treatment cost or defer care)[22] .

Our data about getting in-patient care allow tracking possible changes in practices of getting in-patient care by adult population in Ukraine as well as assessing financial burden for households..

3.1. Seeking In-Patient Care

All in all, 13.5% of respondents reported having been hospitalized at least once in the previous 12 months [23] The rest 86.5% reported having had no hospitalization episodes in the previous 12 months.

Compared to the last year survey, the proportion of people with hospitalization experience has increased a little (from 12.3% in 2018 to 13.5% in 2019), however, it remains to be lower than in the beginning of the survey period (14.9% in 2016, 15.4% in 2017) ***(Fig. 3.1).***

19 OECD (2019), Health at a Glance 2019: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/4dd50c09-en

20 State Statistics Service of Ukraine. Statistical Collection "National Health Accounts (NHA) of Ukraine, 2016," http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/02/zb_nroz16.zip

21 State Statistics Service of Ukraine. Statistical Collection "National Health Accounts (NHA) of Ukraine, 2016," http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/02/zb_nroz16.zip

22 Tambor, M., Pavlova, M., Rechel, B., Golinowska, S., Sowada, C., & Groot, W. (2013). Tambor, M., Pavlova, M., Rechel, B., Golinowska, S., Sowada, C., & Groot, W. (2013). evidence from six countries. The European Journal of Public Health, 24(3), 378–385, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4032479/pdf/ckt118.pdf

23 Complete wording of the question: "How many times have you been admitted to the hospital in the previous 12 months, excluding daycare, hospitalization for child's illness, but including hospitalization for pregnancy and delivery?"

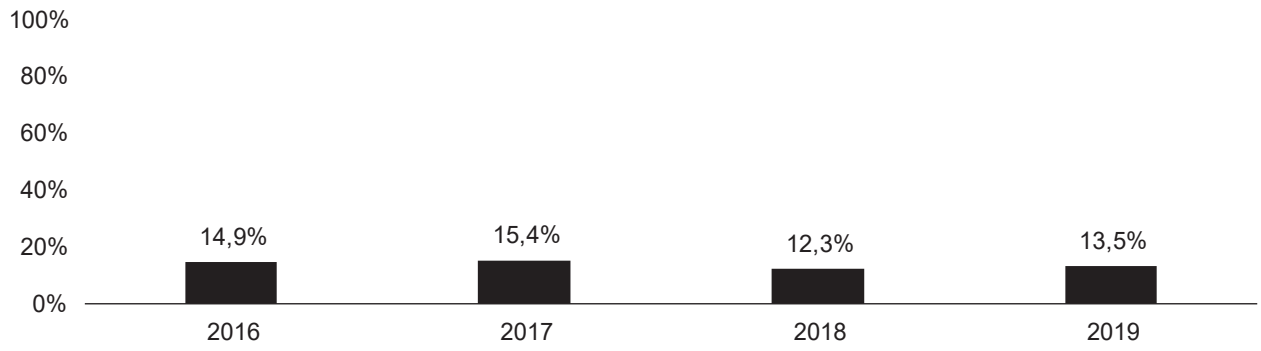

Fig. 3.1. Getting in-patient care in Ukraine: comparison in between years (% of those who reported having had hospitalization experience in the previous 12 months)

The highest rates of hospitalization experience was reported by Kyiv (18.1%), Vinnitsia (16.9%), Dnipropetrovsk (16.4%), Zaporizzhya (16.4%), Cherkassy (16.1%), Ternopil (16.0%), Volyn (16.0%) Oblasts, the lowest – in Transkarpathian (6.9%), Luhansk (7.0%), Sumy (8.8%) Oblasts (Fig. 3.2). Data of hospitalization experience by Oblasts are not stable in time, and that can be partially explained by statistical error[24], partially – by changing situations in Oblasts. It is worthwhile mentioning that in some Oblasts (Luhansk, Transkarpathian, Khmelnitsky) proportion of people reporting hospitalization experience in the previous 12 months is consistently lower than average for Ukraine; in Kyiv and Cherkassy Oblasts – consistently higher than average. In the majority of Oblasts the proportion of people with hospitalization experience varies year to year, one measurement showing higher than average, other – lower or approximating the average. So in general it can be assumed that in the majority of Oblasts there is no persistent features of getting in-patient care by adult population, however, in some Oblasts hospitalization level can be persistently higher or lower than the average which can be attributed both to health status of people and accessibility of in-patient care in the Oblast (healthcare facility network, quality and cost of services etc.).

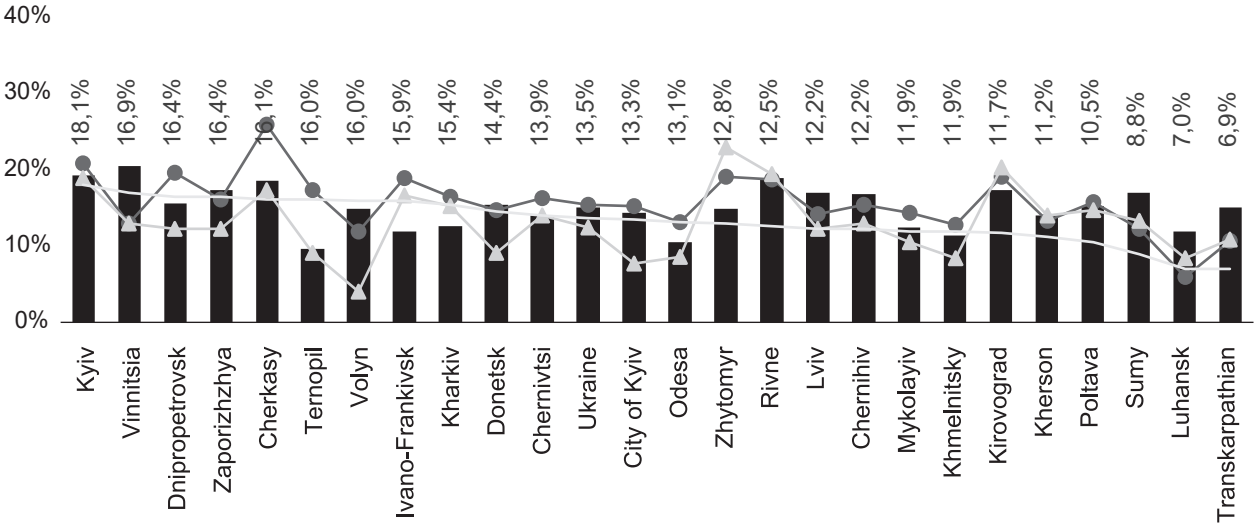

Fig. 3.2. Getting in-patient care in Ukraine by Oblasts: comparison in between years (% of those who reported having had hospitalization experience in the previous 12 months)

24 On the level of Oblasts statistical error is up to 5.0%.

Relationship between in-patient care use and social-demographic characteristics stays similar during all period of study. Just like in previous surveys, proportion of people hospitalized in the previous year is higher for women (14.6%) than for men (12.1%), also for people over 60 (17.7%) than for younger groups (11.1% for people aged 18–29, 10.2% – aged 20–44, 14.3% – 45–59 years old) (Table 3.1). Also, just like in previous years, the results do not exhibit significant difference in hospitalization experience depending on the type of locality: 13.5% of respondents both from urban and rural areas reported about their hospitalization experience in the previous year.

By income level, 14.2% respondents of the group with 1000 UAH income per person had hospitalization experience, 1000 to 2500 UAH group – 15.7%, over 2500 UAH – 12.9%. Looking at previous survey data, it can be noted that proportion of people with hospitalization experience during all the years used to be the lowest for respondents from the highest income households; and proportion of those with hospitalization experience in the lowest income group is usually a bit lower than in average income group. Influence of this factor is not big, yet it is statistically significant and is relevant for the majority of study rounds. This indicates that financial status of the household might have an influence both on hospitalization need (people who are better well off less often require in-patient care likely because of better prevention and health maintenance possibilities), and likelihood getting it (poor people might refuse from in-patient care more often because of associated expenses).

Among people with hospitalization experience in the previous year 81.0% had one hospitalization episode, 13.2% - two episodes, 5.7% – three or more episodes. Mean hospitalization episodes among people with hospitalization experience in the previous 12 months was 1.3 per year.

Hospitalization frequency does not depend on sex, however, there are some differences depending on age, area of living and income [25] (Table 3.1.). According to survey, mean of hospitalization episodes is 1.3 both for men and women. By age, mean number of hospitalization episodes is lower for young people under 30 compared to older ones: in 18–29 age group mean of hospitalization episodes is 1.1, one hospitalization episode was experienced by 91.0%, in 30 age group mean of hospitalization episodes is 1.3, one hospitalization episode - 79.5%. By area type, on average urban citizens have more hospitalization in a year (1.4) compared to rural citizens; proportion of people with one hospitalization episode was 79.0% in cities, and 85.9% in rural area. By income, on average the poorest people have the highest hospitalization rate: for household income under 1000 UAH per person the mean number of hospitalization episodes in the previous year is 1.6, one episode was experienced by 73.1%; for the rest – mean number of hospitalizations is 1.3, one episode was experienced by 82.8%.

Table 3.1.

Proportion of respondents with hospitalization experience, and number of hospitalization episodes in the previous 12 months by various social and demographic characteristics: comparison by years

			Admitted to hospital in the previous 12 months				Number of hospitalization episodes in the previous 12 months (2019)				
			2019	**2018**	**2017**	**2016**	**1**	**2**	**3 +**	mean	**Median**
Altogether		%	**13,5**	**12,3**	**15,4**	**14,9**	**81,0**	**13,2**	**5,7**	1,3	1
		N	**1386**	**1362**	**1650**	**1607**	**1115**	**181**	**90**		
SEX	Men	%	12,1	10,5	14,1	12,5	78,8	15,8	5,4	1,3	1
		N	427	380	519	469	335	65	27		
	Women	%	14,6	13,8	16,5	16,9	82,6	11,4	6,0	1,3	1
		N	959	982	1131	1138	780	116	63		

25 Analysis of data about hospitalization experience on the level of Oblasts is not possible due to small size of comparison groups that is why here and hereinafter the results are reported only for the national level, and in some cases for some social-demographic groups.

AGE GROUP	18–29	%	11,1	10,8	12,6	11,8	91,0	6,0	3,0	1,1	1
		N	150	157	193	195	131	12	7		
	30–44	%	10,2	8,8	13,5	12,8	80,5	13,7	5,8	1,3	1
		N	270	255	324	330	230	26	14		
	45–59	%	14,3	13,1	14,9	15,1	79,2	15,3	5,6	1,4	1
		N	356	381	454	443	270	59	27		
	60+	%	17,7	16,4	19,9	19,1	79,1	14,1	6,8	1,4	1
		N	610	569	679	639	484	84	42		
AREA TYPE	Urban	%	13,5	12,7	15,3	14,4	79,0	14,6	6,4	1,4	1
		N	864	852	1028	986	679	123	62		
	rural	%	13,5	11,6	15,7	16,1	85,9	10,0	4,1	1,2	1
		N	522	510	622	621	436	58	28		
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	14,2	11,0	17,9	15,6	73,1	19,0	7,9	1,6	1
		N	175	103	216	396	131	27	17		
	1001–1500 UAH	%	15,8	13,6	17,6	16,4	79,5	17,3	3,3	1,3	1
		N	212	203	431	472	169	34	9		
	1501–2000 UAH	%	14,9	13,9	17,5	14,7	83,7	9,9	6,4	1,3	1
		N	256	291	296	230	213	25	18		
	2001–2500 UAH	%	16,5	14,2	14,3	16,3	81,2	13,8	5,1	1,3	1
		N	160	152	111	98	124	23	13		
	More than 2500 UAH	%	12,9	10,6	13,9	13,0	84,9	9,3	5,7	1,2	1
		N	298	270	175	67	252	34	12		

3.2. The Choice of an In-Patient Care Provider

The majority of people with hospitalization experience (37.0%) reported having been referred to hospitalization by a doctor, another 30.6% – by ambulance team, 22.7% – own decision, and 9.8% had scheduled hospitalization (Fig. 3.3).

Compared to the previous survey, there is decrease in people who reported having been referred for hospitalization by their doctor (from 46.8% in 2018 to 37.0% in 2019), rather, there is an increase in the proportion of people referred for hospitalization by an ambulance team (from 24.4% in 2018 to 30.6% in 2019) or those self-referred (from 17.8% in 2018 to 22.7% in 2019). Proportion of people with scheduled hospitalization has not changed (11.0% in 2018, 9.8% in 2019).

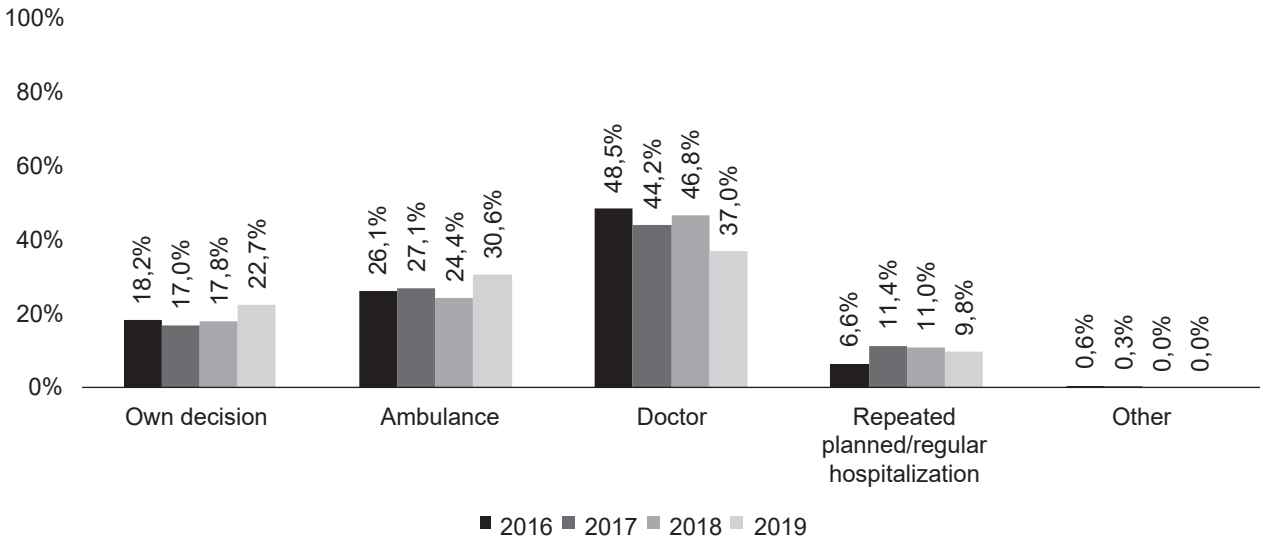

Fig. 3.3. Breakdown of answers to the question "Who referred you to your last hospitalization?" by years, proportion of those with hospitalization experience in the previous 12 months

Ways of referring for hospitalization differ a little depending on social and demographic features (Table 3.2). In particular, among women the proportion of those referred by a doctor is a bit higher (39.3%) than for men (33.7%). Urgent hospitalization by referral of an ambulance team was most often offered to young people (18–29 yo, 39.5%) and the oldest age category (60 and over, 35.0%) vs middle age group categories (28.5% for people aged 30–44, 21.8% for people aged 45–59). Also, in the young age group the proportion of people reporting their last hospitalization to be scheduled was the lowest (3.9% in the 18–29 age group, 10.7% for people over 30). By area type, cities and towns have higher proportion of people hospitalized by an ambulance team (33.1% in urban, and 24.6% in rural area), at the same time there are more people in villages reporting self-referral for hospitalization (21.1% in urban, and 26.4% in rural area) or scheduled hospitalization (7.5% in urban, 14.5% in rural area). There is no strong correlation between the way of hospitalization and income level.

Table 3.2.

Breakdown of respondents by ways of hospitalization during the last hospitalization episode, and by different social and demographic characteristics *(among those with hospitalization experience in the previous 12 months)*

			Who referred you to the most recent hospitalization?			
			self-referral	**ambulance team**	**doctor**	**scheduled hospitalization**
Altogether		%	**22,7**	**30,6**	**37,0**	**9,8**
		N	**313**	**390**	**521**	**152**
SEX	Men	%	24,1	31,1	33,7	11,1
		N	96	118	157	55
	Women	%	21,7	30,3	39,3	8,8
		N	217	272	364	97
AGE GROUP	18–29	%	21,7	39,5	35,0	3,9
		N	43	47	52	7
	30–44	%	25,5	28,5	36,4	9,6
		N	66	65	102	32
	45–59	%	25,9	21,8	39,7	12,6
		N	83	81	138	52
	60+	%	19,0	35,0	36,1	10,0
		N	121	197	229	61
AREA TYPE	Urban	%	21,1	33,1	38,1	7,7
		N	191	265	323	77
	Rural	%	26,4	24,6	34,5	14,5
		N	122	125	198	75

HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	30,5	30,2	27,3	12,0
		N	51	48	52	22
	1001–1500 UAH	%	27,5	30,8	34,2	7,5
		N	48	63	80	20
	1501–2000 UAH	%	14,3	43,0	35,3	7,5
		N	43	87	102	22
	2001–2500 UAH	%	22,4	30,4	40,0	7,2
		N	38	51	58	13
	More than 2500 UAH	%	25,6	27,0	37,8	9,6
		N	79	74	108	36

The vast majority (73.1%) of people with hospitalization experience were admitted to city or district hospital/maternity hospital, 21.8% – to Oblast hospital/maternity hospital. Much smaller proportion were admitted to a private (2.0%), National-level (1.6%) or sectoral (1.6%) heath care facility (clinic /hospital /maternity hospital). There is no significant difference between the breakdown of types of in-patient care providers by survey years ***(Fig.* 3.4).**

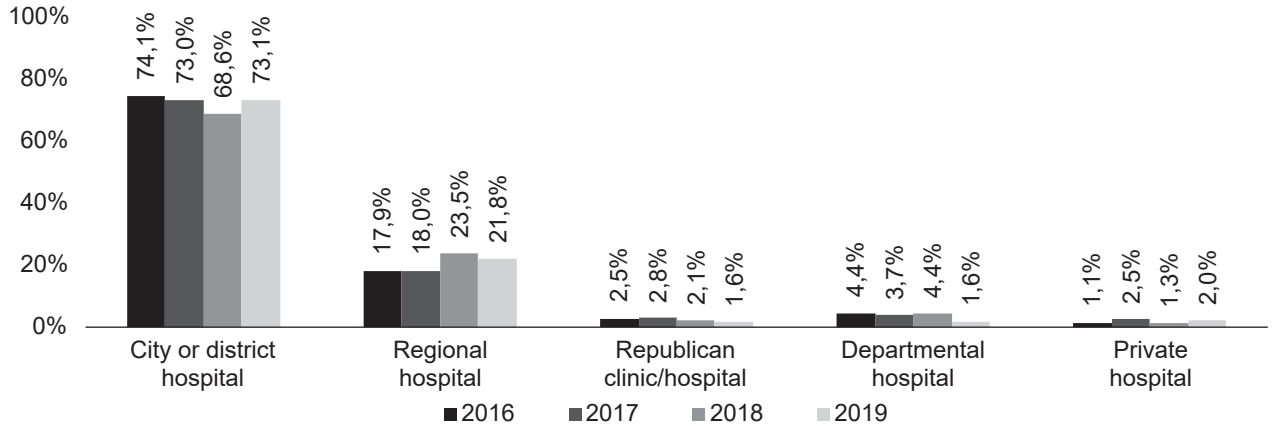

Fig. 3.4. Breakdown of answers to the question "Where have you been admitted to during your recent hospitalization?" by years, *proportion of those with hospitalization experience in the previous 12 months*

Type of health care facilities that patients were admitted to almost do not depend on sex, age and income level, however, there is some difference depending on type of locality (Table 3.3). Just like in previous surveys, proportion of those admitted to the city/district hospital is a little higher for urban inhabitants (75.2% in urban, 68.2% in rural area), whereas for rural inhabitants the proportion of admissions to the Oblast hospital is higher (19.2% for urban, 27.8% for rural area).

Table 3.3.

Breakdown of respondents by types of in-patient care providers and by different social and demographic characteristics *(among those with hospitalization experience in the previous 12 months)*

	Where to have you been admitted during your recent hospitalization?				
	city or district hospital	**Oblast hospital**	**National clinic/ hospital**	**sectoral hospital**	**private clinic**

Altogether		%	**73,1**	**21,8**	**1,6**	**1,6**	**2,0**
		N	**983**	**318**	**21**	**31**	**30**	
SEX	Men	%	70,9	24,4	2,4	1,5	0,9
		N	293	112	9	9	4
	Women	%	74,6	20,0	1,0	1,7	2,7
		N	690	206	12	22	26
AGE GROUP	18–29	%	74,5	18,1	0,3	3,3	3,9
		N	106	28	1	8	7
	30–44	%	77,5	18,5	1,0	0,9	2,2
		N	196	58	4	3	7
	45–59	%	69,8	26,1	2,0	1,0	1,1
		N	243	98	6	4	5
	60+	%	72,3	21,9	2,0	1,9	1,8
		N	438	134	10	16	11
AREA TYPE	Urban	%	75,2	19,2	1,7	1,9	2,1
		N	619	182	16	24	20
	Rural	%	68,2	27,8	1,2	1,1	1,7
		N	364	136	5	7	10
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	70,5	24,9	0,7	1,8	2,1
		N	121	43	2	4	4
	1001–1500 UAH	%	76,7	20,8	0,6	0,5	1,3
		N	157	47	1	2	4
	1501–2000 UAH	%	72,1	24,9	1,6	0,9	0,4
		N	185	60	5	4	2
	2001–2500 UAH	%	80,0	14,9	1,2	0,8	3,1
		N	119	33	4	1	3
	More than 2500 UAH	%	74,3	18,9	1,6	2,7	2,5
		N	212	62	3	12	9

3.3. "Out of pocket" Payment for Hospital Treatment

In order to assess how prevalent are expenditures for in-patient care (besides expenditures for medications, lab and diagnostic work-up) as well as amount of money paid respondents with experience of hospitalization in the previous year were asked how much they (or their relatives) had to pay during their recent hospitalization. Different forms of expenditures were considered: to a charitable fund or other organization account; at a cash-desk as per the formal procedure; informally to a doctor or other health care worker; payment for medical items (gloves, syringes, X-ray film or other consumables).

Survey data demonstrate wide-spread "out-of-pocket" payments associated with getting in-patient care: almost two thirds (63.2%) of people treated in hospitals paid for their medical items during their last hospitalization: 36.1% – to charity fund or other organization account, 31.3% – at a cash-desk as per formal procedure, and one quarter (25.5%) – informally ("in an envelope"

hand to hand) or gave a present to their doctor or other health care worker. Prevalence of each of these types of payment changed very little since the last survey ***(Fig. 3.5).***

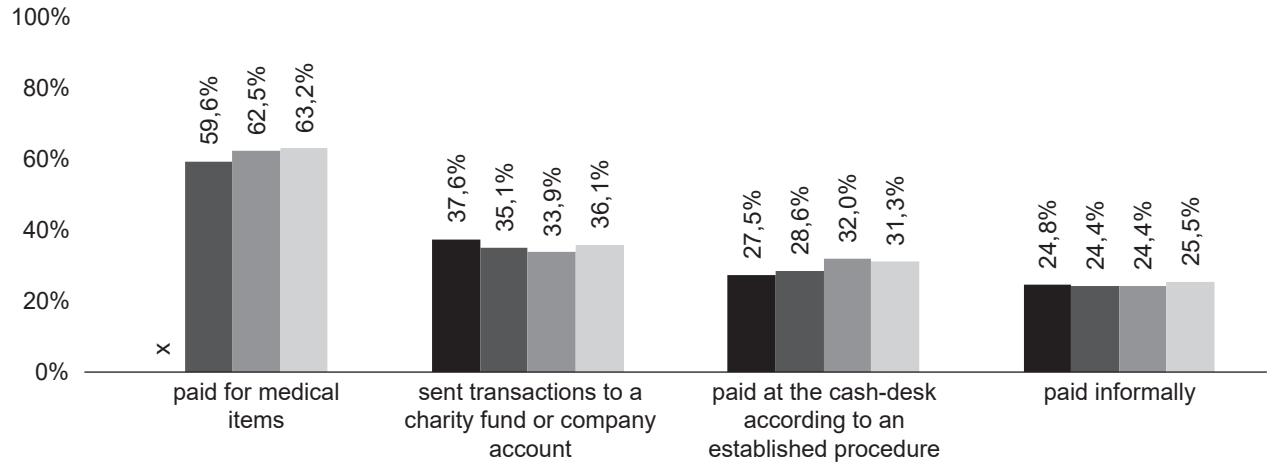

Fig. 3.5. Proportion of people who paid for in-patient care during their recent hospitalization episode: comparison by years, *among those with hospitalization experience in the previous 12 months)*

86.1% paid for their hospitalization in any way which is no different from previous year rates (87.8%).

Proportion of people paying for in-patient care in any way is a bit higher for women (88.9%) than for men (82.1%) but in general there is little correlation with age, type of locality or income level (Table 3.4). It is of note, that the proportion of people making informal payments is the highest for young people (18–29 of age, 37.5%), and it decreases for older age groups (27.2% for those aged 30–44, 25.4% – for 45–59 age group, 9.6% – for 60 and older). Proportion of people paying for in-patient care formally at a cash-desk is higher in urban (33.4%) than in rural area (26.5%), as well as for people with high income (39.7% for income over 2500 UAH per one household member) than with low income (23.4% for income up to 1000 UAH per one person).

Table 3.4.

Proportion of respondents paying for in-patient care during the recent hospitalization episode, by different social and demographic characteristics *(among those with hospitalization experience in the previous 12 months)*

			To a charity fund or other organization account	At a cash-desk according to the official procedure	Informally	For medical items	In any way
Altogether		%	**36,1**	**31,3**	**25,5**	**63,2**	**86,1**
		N	**393**	**336**	**259**	**633**	**1206**
SEX	Men	%	32,6	28,3	25,0	61,2	82,1
		N	113	93	82	192	353
	Women	%	38,4	33,3	25,8	64,6	88,9
		N	280	243	177	441	853

AGE GROUP	18– 29	%	41,2	34,2	37,5	62,9	88,7
		N	47	44	45	83	139
	30–44	%	35,4	30,8	27,2	65,9	84,8
		N	86	76	68	139	237
	45–59	%	42,2	31,7	25,4	56,3	84,1
		N	114	79	60	144	296
	60+	%	30,0	30,2	19,6	67,4	87,4
		N	146	137	86	267	534
AREA TYPE	Urban	%	36,6	33,4	25,4	61,9	86,1
		N	258	226	174	396	761
	Rural	%	34,9	26,5	25,6	66,4	86,2
		N	135	110	85	237	445
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	30,7	23,4	22,4	61,0	87,0
		N	48	37	32	81	155
	1001–1500 UAH	%	36,8	33,5	23,9	64,4	86,7
		N	53	52	31	99	181
	1501–2000 UAH	%	34,3	29,7	21,6	61,8	82,6
		N	70	55	40	115	222
	2001–2500 UAH	%	36,6	34,7	27,8	66,5	82,8
		N	42	46	32	77	139
	More than 2500 UAH	%	41,4	39,7	29,9	62,9	89,0
		N	110	99	80	160	264

Payments for in-patient care vary in size greatly, and according to respondents they can be couple of hryvnas or hundreds of thousands of hryvnas. Thus, mean values for payments are not reliable as they depend on limits. That is why we will use median values for comparison (value in the middle of a series of data points) as they better show central tendency.

According to 2019 survey, median payment to a charitable fund or other organization account made by respondents for in-patient care is 200 UAH (that is half of those making payments paid less than that, another half – more than that). Approximately the same amount (200 UAH) is also a median payment for medical items. Amounts formally paid at a cash-desk and informal payments in half of all cases exceeded 500 UAH. Median of total amount paid for in-patient care during the most recent hospitalization is 300 UAH.

As Table 3.5 shows, with time amount of payment for in-patient care increases. Median payment to a charitable fund account in 2016 was 60 UAH, 2017–2018 – 100 UAH, 201 – 200 UAH. Median formal payment increased from 200 UAH in 2016 to 500 UAH in 2019. Median informal payment to a doctor increased from 400 UAH in 2016–2017 to 500 UAH in 2018–2019. Median payment for medical items grew from 100–110 UAH in 2017 and 2018 to 200 UAH in 2019. Median total payment increased from 200 UAH in 2016–2018 to 300 UAH in 2019. Thus, although the proportion of people paying for in-patient care did not change compared to the previous year, yet the amount of such payment increased.

Table 3.5.

Amount of payment for in-patient care during the most recent hospitalization: comparison by years

	Year			
	2019	**2018**	**2017**	**2016**
Amount paid to a charity fund or other organization account, UAH				
Median	200,0	100,0	100,0	60,0
Mean	801,5	624,0	1048,5	181,3

Standard error	122,3	255,5	217,7	21,4
Amount paid at a cash-desk as per formal procedure, UAH				
Median	500,0	400,0	500,0	200,0
Mean	5196,8	11 276,2	3356,7	1950,6
Standard error	1257,9	10 772,9	627,3	287,6
Amount paid informally to a doctor, UAH				
Median	500,0	500,0	400,0	400,0
Mean	2021,3	2847,9	2521,0	1859,7
Standard error	298,9	670,8	574,2	275,8
Amount paid for medical items, UAH				
Median	200,0	100,0	110,0	×
Mean	567,9	372,8	646,1	×
Standard error	66,1	32,9	171,3	×
Total amount paid for in-patient care during the most recent hospitalization, UAH				
Median	300,0	200,0	200,0	200,0
Mean	2836,5	4812,9	2715,8	1577,7
Standard error	433,1	3573,2	369,0	167,3

The survey data show that in many cases payments for in-patient care ("charity", informal payment) were not voluntary: of those paying to a charity fund or other organization account 69.4% did it per demand (30.6% – on a voluntary basis); of those paying informally to a doctor, 53.8% reported having been demanded to pay, 46.2% – not been demanded (Table 3.6). Part of respondents reported having been demanded to pay during their most recent hospitalization but they in fact did not: of those not paying to a charity fund or other organization account it was demanded in 5.2% of them; of those not making informal payments it was demanded in 5.0% of them. In other words, in in-patient care area both demand of payment and voluntary payment are widely spread practices, and only a small percentage of in-patient care users refused to pay when faced with such a demand.

Table 3.6.

Proportion and number of respondents demanded to pay for in-patient care: comparison by years

		2019	**2018**	**2017**	**2016**
Of those paying to a charity fund or other organization account	%	69,4	67,0	66,9	62,9
	N	269	250	317	297
Of those not paying to a charity fund or other organization account	%	5,2	4,6	5,3	3,0
	N	36	38	36	25
Of those paying informally to a doctor	%	53,8	51,7	54,6	35,8
	N	118	107	137	88
Of those not paying informally to a doctor	%	5,0	4,1	3,2	2,3
	N	44	41	34	21

To assess total expenditures related to in-patient care (hospitalization episodes) and their relevance for monthly household budget, respondents were asked to recall how much they spend in total for hospitalization out of pocket (except transportation cost, ambulance cost or medications) in the recent 30 days.

According to 2019 data, of all respondents 2.5% had hospitalization expenditures in the recent 30 days, 97.5% - no such expenditures incurred (Table 3.7). Proportion of people with hospitalization expenditures in the recent month is a bit higher in urban (2.8%) than in rural areas (1.9%). By income level, the poorest category had a bit higher proportion of people with hospitalization expenditures: of people with income up to 1000 UAH per person 4.0% had hospitalization expenditures in the previous, 1000 - 2000 UAH – 2.5%, over 2000 UAH – 3.2%.

By social and demographic characteristics (age, sex) there is no significant difference.

Table 3.7.

Proportion and number of respondents who had hospitalization expenditures in the previous 30 days, by different social and demographic characteristics

			Of all respondents		
			had hospitalization expenditures in the previous 30 days	**did not have hospitalization expenditures in the previous 30 days**	**TOTAL**
Altogether		%	**2,5**	**97,5**	**100,0**
		N	**238**	**8852**	**9090**
SEX	Men	%	2,4	97,6	100,0
		N	74	3014	3088
	Women	%	2,7	97,3	100,0
		N	164	5838	6002
AGE GROUP	18–29	%	2,3	97,7	100,0
		N	31	1188	1219
	30–44	%	2,6	97,4	100,0
		N	59	2331	2390
	45–59	%	2,4	97,6	100,0
		N	61	2351	2412
	60+	%	2,8	97,2	100,0
		N	87	2982	3069
AREA TYPE	Urban	%	2,8	97,2	100,0
		N	173	5336	5509
	Urban	%	1,9	98,1	100,0
		N	65	3516	3581
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	4,0	96,0	100,0
		N	43	1202	1245
	1001–1500 UAH	%	2,6	97,4	100,0
		N	33	1224	1257
	1501–2000 UAH	%	2,2	97,8	100,0
		N	36	1486	1522
	2001–2500 UAH	%	3,2	96,8	100,0
		N	31	894	925
	More than 2500 UAH	%	3,1	96,9	100,0
		N	66	2000	2066

Mean hospitalization expenditure in the previous 30 days was 2496 UAH (median 1000 UAH). There is no statistically significant difference in mean in-patient care expenditure by social and demographic characteristics, type of locality or income level, however, these estimates are unreliable due to relatively few cases and broad range of values (according to reports amount of hospitalization expenditure in the previous month was from 1 to 55,000 UAH).

In-patient care expenditure is essential for family budget, and it was over a half of cumulative income (58.0%) for those who had such expenditures in the previous 30 days. As long as mean in-patient care expenditure almost does not depend on income level, poor households feel them the most: of people with income less than 1000 UAH per person, hospitalization expenditure in the previous 30 days on average exceeded the total household income (119.2%), of those with income from 1000 to 2000 UAH per person hospitalization expenditure was more than three quarters (76.5%) of total family income, of those with income over 2000 UAH per person hospitalization expenditure was almost one third (31.9%) of monthly income.

3.4. Laboratory Tests and Diagnostic Workup During Hospitalization

The absolute majority of people with hospitalization episodes in the previous 12 months had diagnostic work-up or lab tests during their recent hospitalization: 92.6% had tests, 76.8% had diagnostic work-up; 94.6% had any of that. Compared with the previous surveys, proportion of people undergoing lab test and/or diagnostic work-up has not changed (Fig. 3.6).

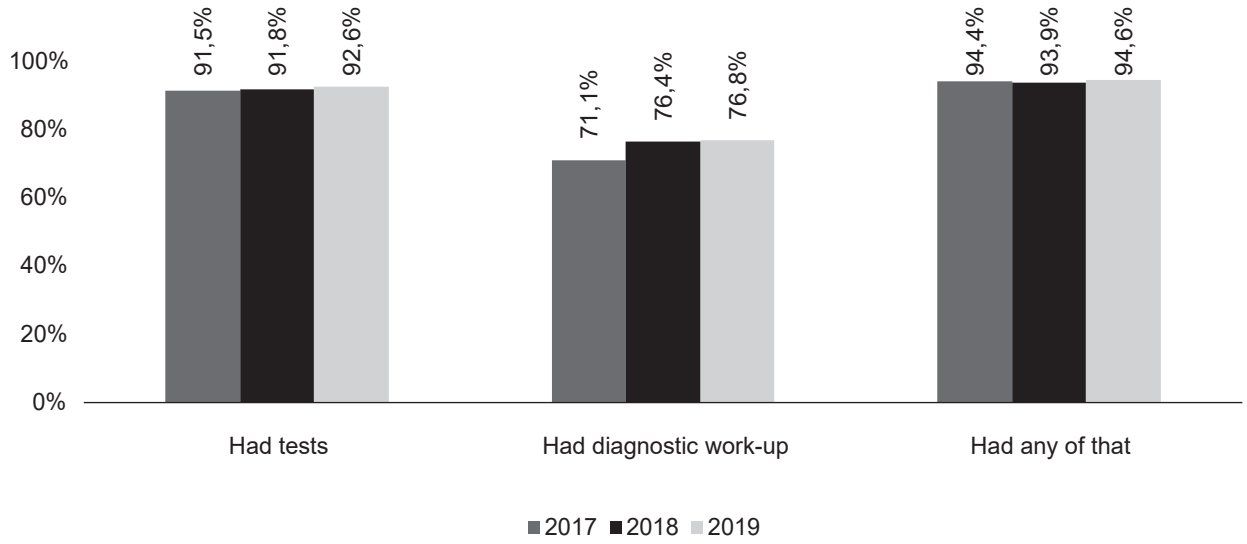

Fig. 3.6. Lab/diagnostic services use during the most recent hospitalization episode: comparison by years *(proportion of those with hospitalization experience in the previous 12 months)*

Almost half (52.5%) of people getting lab/diagnostic services paid for them during hospitalization, in particular 37.5% paid for tests, 54.2% – for diagnostic work-up.

Compared to the previous years, proportion of people paying for lab/diagnostic services increases: according to 2017 survey, 41.9% of people getting lab and diagnostic services paid for them during their last hospitalization, 2018 – 47.6%, 2019 – 52.5% (Fig. 3.7). Along with that there is also increase in the proportion of people paying for tests (27.6% in 2018, 37.5% in 2019), and people paying for diagnostic work-up (48.7% in 2018, 54.2% in 2019). In other words, although the proportion of people undergoing tests or diagnostic work-up has not changed more people are now paying for them out-of-pocket.

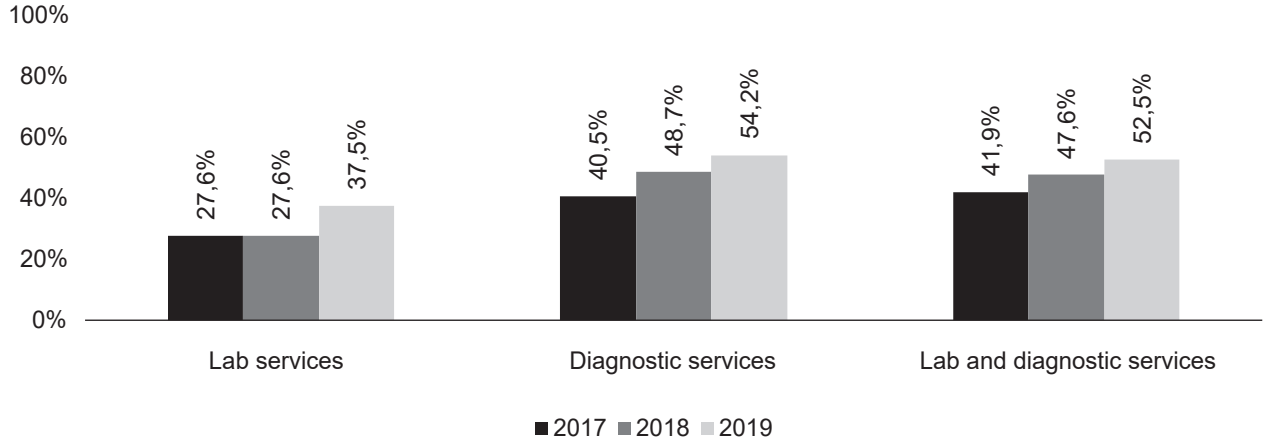

Fig. 3.7. Proportion of people paying for lab/diagnostic services during their recent hospitalization: comparison by years *(proportion of those getting such services during their recent hospitalization)*

By social and demographic characteristics, the smallest proportion of people undergoing tests or diagnostic work-up are people of 18-29 age group (88.3%). By other features (sex, area type, household income) there is no significant difference in proportion of people getting lab/diagnostic services during their recent hospitalization (Table 3.8).

Proportion of people paying for lab and diagnostic services is a bit higher in urban (54.8%) than in rural areas (46.9%). Other aspects (sex, age, income) have almost no influence on practices of paying for lab/diagnostic services, in other words, this is more a feature of health care facilities than wishes or capabilities of patients.

Table 3.8.

Lab and diagnostic services consumption during the most recent hospitalization by social and demographic groups, proportion of those with hospitalization experience in the previous 12 months

			Proportion of hospitalized people who in the previous 12 months:			Of them, proportion paying for:		
			underwent lab tests	**underwent diagnostic workup**	**underwent lab tests or diagnostic work-up**	**lab services**	**diagnostic services**	**total lab/ diagnostic services**
Altogether		%	**92,6**	**76,8**	**94,6**	**37,5**	**54,2**	**52,5**
	N	**1275**	**1085**	**1305**	**381**	**452**	**583**	
SEX	Men	%	92,5	78,5	95,1	36,8	51,2	50,7
		N	391	344	403	117	137	176
	Women	%	92,7	75,6	94,2	37,9	56,2	53,7
		N	884	741	902	264	315	407
AGE GROUP	18–29	%	86,4	63,6	88,3	39,3	61,7	49,6
		N	131	99	133	42	49	61
	30–44	%	90,4	76,5	93,5	37,6	54,2	52,5
		N	243	205	251	84	104	127
	45–59	%	95,4	80,4	96,7	34,6	53,4	51,5
		N	336	295	343	95	120	148
	60+	%	94,2	79,0	96,0	38,9	52,5	54,2
		N	565	486	578	160	179	247
AREA TYPE	Urban	%	92,3	77,3	94,7	39,3	55,5	54,8
		N	789	686	811	259	310	394
	rural	%	93,4	75,4	94,2	32,9	50,6	46,9
		N	486	399	494	122	142	189
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	89,9	73,1	93,6	37,6	51,0	49,0
		N	158	129	164	48	53	68
	1001–1500 UAH	%	93,7	77,5	95,4	35,6	52,7	52,7
		N	196	171	202	57	66	88
	1501–2000 UAH	%	96,8	73,8	97,4	35,6	60,6	53,9
		N	242	197	244	67	86	108
	2001–2500 UAH	%	85,6	72,5	88,4	41,8	53,8	56,6
		N	138	119	142	52	56	76
	More than 2500 UAH	%	92,3	75,6	94,5	40,5	58,8	54,1
		N	276	228	282	94	110	138

As per 2019 survey, mean amount of payment for lab services (tests) during hospitalization was 559 UAH, median – 260 UAH (which is half of those paying for these services paid less than this amount, half – more). On average, women paid more for tests (mean – 648 UAH, median – 300 UAH) than men (mean – 425 UAH, median – 230 UAH), as well as urban (mean – 628 UAH, median – 300 UAH) than rural citizens (mean – 360 UAH, median – 200 UAH).

Mean cost of diagnostics – 827 UAH (median – 360 UAH). There is no statistically significant difference in cost of diagnostic work-up depending on sex, age, type of area or income level reported by the survey.

Survey data show that with each year expenditures for lab and diagnostic services increase, with increasing both cost of lab tests and diagnostic work-up. According to 2017 data, mean payment amount for tests was 350 UAH (median – 100 UAH), 2018 – 415 UAH (median – 200 UAH), 2019 – 559 UAH (median – 260 UAH) (Table 3.9). Mean payment for diagnostic work-up was 420 UAH (median – 200 UAH) in 2017, 483 UAH (median – 200 UAH) in 2018, 827 UAH (median – 360 UAH) in 2019.

Table 3.9.

Amount of payment for lab and diagnostic services during the most recent hospitalization: comparison by years

		Year		
		2019	**2018**	**2017**
Amount paid for lab services, UAH				
Median		260,0	200,0	100,0
Mean		559,2	415,6	350,2
Standard error		43,6	62,5	49,1
Amount paid for diagnostic services, UAH				
Median		360,0	200,0	200,0
Mean		827,1	483,0	419,9
Standard error		67,8	55,2	31,2

3.5. The Financial Burden

The survey shows that just like in previous years the majority of people incurring hospitalization cost had difficulty finding them: of those paying for medications, 83.1% had difficulty finding the necessary sum; for diagnostics and lab tests – 67.8%; for doctor services, surgery – 56.7%. Overall, a bit more than a half (53.8%) of payers reported having had difficulty covering all in-patient care costs ***(Fig. 3.8).***

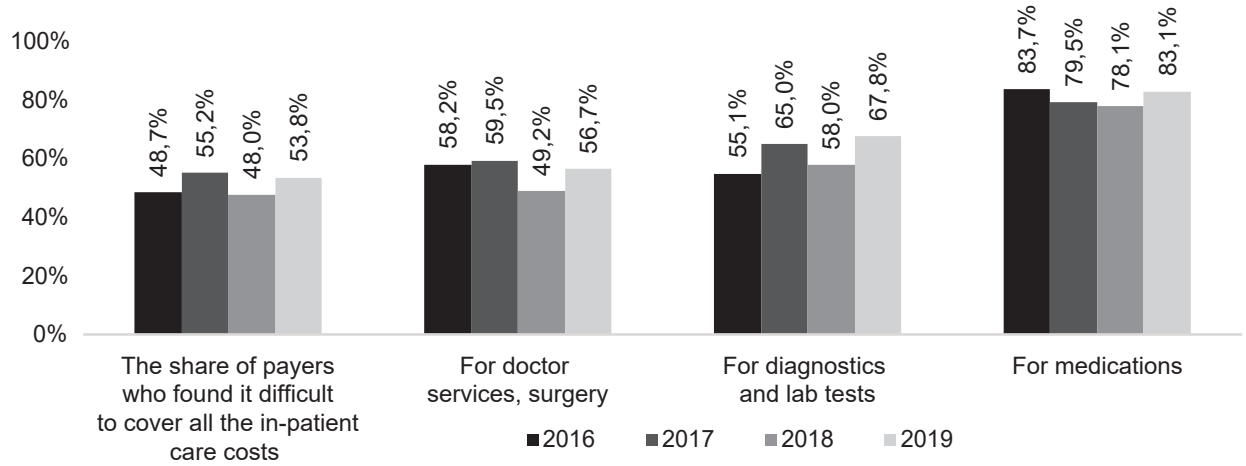

Fig. 3.8. Proportion of payers who had difficulty covering in-patient care costs: comparison by years (proportion *of those incurring hospitalization costs in the previous 12 months)*

By social and demographic characteristics, proportion of people reporting having had difficulty covering all in-patient care costs was a bit lower in young age group (in 18–29 age group the proportion of people having difficulty covering all the costs is 45.4%) vs older age group (60 and over – 61.7%). By area type, proportion of payers having had difficulty covering all in-patient care costs is higher in cities (57.0%) than in villages (46.4%), however, in urban area there are more people having difficulty covering doctor's services, surgery (59.3% in urban, 50.5% in rural area) and diagnostic work-up (69.5% in urban, 62.9% in rural area), but in rural area there are more people having difficulty covering medication cost (81.1% in cities, 87.4% in villages).

Table 3.10.

Proportion and number of respondents having difficulty paying for in-patient care, by different social and demographic characteristics *(proportion of those incurring relevant hospitalization costs in the previous 12 months)*

			Proportion of payers who had difficulty covering all in-patient care costs:	Of them, had difficulty covering:		
				doctor's services, surgery	**medicines**	**diagnostic workup and laboratory tests**
Altogether		%	**53,8**	**56,7**	**83,1**	**67,8**
		N	**653**	**627**	**859**	**415**
SEX	Men	%	51,8	54,9	80,7	65,1
		N	199	187	260	126
	Women	%	55,1	57,8	84,7	69,6
		N	454	440	599	289
AGE GROUP	18–29	%	45,4	47,0	67,1	63,8
		N	60	60	67	41
	30–44	%	52,8	56,2	77,0	57,2
		N	129	126	146	77
	45–59	%	48,3	53,0	80,8	63,7
		N	153	144	233	101
	60+	%	61,7	63,5	92,7	78,6
		N	311	297	413	196
AREA TYPE	Urban	%	57,0	59,3	81,1	69,5
		N	441	424	526	289
	rural	%	46,4	50,5	87,4	62,9
		N	212	203	333	126
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	49,4	51,7	81,4	71,1
		N	77	75	107	51
	1001–1500 UAH	%	60,8	62,5	89,7	73,7
		N	109	100	145	74
	1501–2000 UAH	%	61,2	67,5	90,9	73,2
		N	126	120	183	80
	2001–2500 UAH	%	53,9	57,7	80,9	73,1
		N	80	78	104	57
	More than 2500 UAH	%	47,3	49,1	75,5	61,2
		N	128	127	171	88

Of people who had difficulty covering any hospitalization costs, 59.6% reported that their household was necessitated to borrow money for treatment. Median loan was 5000 UAH (so, half of people borrowing money borrowed up to 5000 UAH, another half – more than that sum), mean – 10,315 UAH (Table 3.11).

Table 3.11.
Proportion and number of respondents who had to borrow money to cover in-patient care costs, and amount of money borrowed, by different social and demographic characteristics *(proportion of those having difficulty to cover all hospitalization costs)*

			Proportion of people who had to borrow money to cover all costs		Amount of borrowed money to cover cost of in-patient care		
			among payers	**among users**		**among payers**	**among users**
Altogether		**%**	**59,6**	**60,4**	**mean**	**10 314,7**	**10 297,2**
		N	**489**	**488**	**median**	**5000**	**5000**
SEX	Men	%	58,1	58,9	mean	9782,6	9782,6
		N	136	136	median	5000	5000
	Women	%	60,5	61,3	mean	10 632,6	10 605,0
		N	353	352	median	5 000	5 000
AGE GROUP	18–29	%	52,7	52,7	mean	7283,4	7283,4
		N	34	34	median	6 000	6 000
	30–44	%	52,8	53,0	mean	14 834,5	14 834,5
		N	78	78	median	5000	5000
	45–59	%	58,5	59,3	mean	11 608,0	11 608,0
		N	110	110	median	3500	3500
	60+	%	65,5	66,7	mean	8387,1	8345,3
		N	267	266	median	5000	5000
AREA TYPE	Urban	%	61,7	62,7	mean	10 469,4	10 444,8
		N	314	313	median	5000	5000
	rural	%	55,1	55,4	mean	9940,9	9940,9
		N	175	175	median	5 000	5 000
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	65,6	66,6	mean	16 389,7	16 389,7
		N	65	65	median	5000	5000
	1001–1500 UAH	%	56,4	57,4	mean	11 018,7	11 018,7
		N	71	71	median	3000	3000
	1501–2000 UAH	%	68,9	69,1	mean	7638,0	7543,9
		N	126	125	median	5000	5000
	2001–2500 UAH	%	60,2	61,3	mean	6924,3	6924,3
		N	64	64	median	5000	5000
	More than 2500 UAH	%	56,1	57,2	mean	9607,6	9607,6
		N	89	89	median	5000	5000

About one out of ten people (11.2%) in the previous 12 months required hospital care, but they were not hospitalized due to lack of money. Almost half of them (46.8% of those refusing or 5.3%

of total population) refused from hospitalization one time in the previous year, one third (34.6% of those refusing or 3.9% of total population) had two such episodes, and almost one fifth (18.5% of those refusing or 2.1% of total population) refused from hospitalization three or more times in the previous year. In a cohort of in-patient care consumers, the proportion of people having experience refusing from hospitalization in the previous year is 27.6%.

Compared to the previous years, the proportion of people refusing from hospitalization due to lack of money has increased a little (Fig. 3.9): before 2018 there was a positive trend, yet according to 2019 data, proportion of necessitated refusal from hospitalization got back to the 2017 level (11.8% in 2017, 9.0% in 2018, 11.2% in 2019).

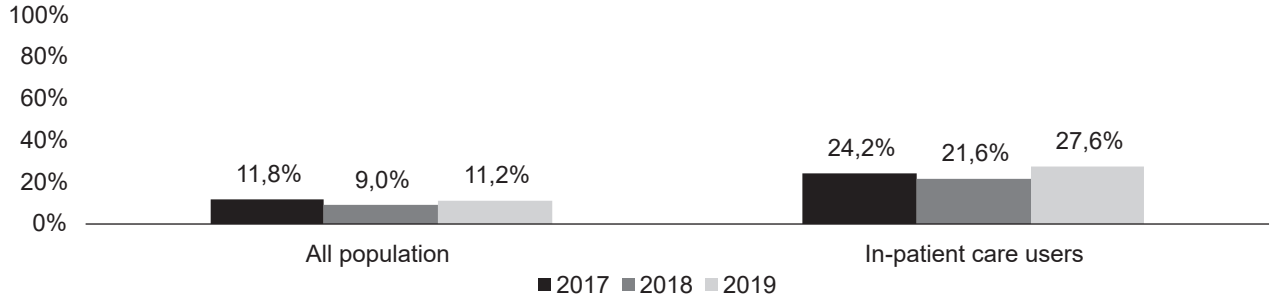

Fig. 3.9. Necessitated refusal from admission to the hospital due to lack of money: comparison by years

By social and demographic characteristics, the proportion of people with episodes of necessitated refusal from hospitalization due to lack of money was higher for women (13.9%) than for men (8.1%), and it increases significantly with age: in the previous year the rate of refusal from hospitalization due to lack of money in young age group (18–29) was 5.8%, 30–44 age group – 6.7%, 45–59 age group – 10.7%, 60 and older – 20.3% (Table 3.12). By income level, the proportion of those refusing from hospitalization is lower in the highest household income group (over 2500 UAH per person – 7.3%) vs other households. There is no statistically significant difference between people living in urban and rural areas in rates of refusal from in-patient care due to lack of money.

Table 3.12.

Proportion and number of respondents who refused from hospitalization due to lack of money, and rate of such refusals in the previous year, by different social and demographic characteristics

			Proportion of people refusing from hospitalization due to lack of money		Number of refusals from hospitalization due to lack of money:		
			all population	**in-patient care users**		**all population**	**in-patient care users**
Altogether		%	**11,2**	**27,6**	**mean**	**0,3**	**0,9**
		N	**1165**	**339**	**median**	**0,0**	**0,0**
SEX	Men	%	8,1	23,2	mean	0,2	0,8
		N	281	86	median	0,0	0,0
	Women	%	13,9	30,5	mean	0,4	1,0
		N	884	253	median	0,0	0,0

AGE GROUP	18–29	%	5,8	20,0	mean	0,1	0,4
		N	71	28	median	0,0	0,0
	30–44	%	6,7	19,1	mean	0,1	0,3
		N	170	47	median	0,0	0,0
	45–59	%	10,7	28,8	mean	0,2	0,5
		N	286	82	median	0,0	0,0
	60+	%	20,3	35,2	mean	0,7	1,8
		N	638	182	median	0,0	0,0
AREA TYPE	Urban	%	11,5	30,7	mean	0,3	1,1
		N	738	245	median	0,0	0,0
	rural	%	10,7	19,9	mean	0,2	0,4
		N	427	94	median	0,0	0,0
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	13,9	29,9	mean	0,5	0,6
		N	168	46	median	0,0	0,0
	1001–1500 UAH	%	16,2	31,9	mean	0,3	0,7
		N	207	51	median	0,0	0,0
	1501–2000 UAH	%	15,9	31,0	mean	0,5	1,5
		N	278	73	median	0,0	0,0
	2001–2500 UAH	%	15,7	43,1	mean	0,6	2,8
		N	151	54	median	0,0	0,0
	More than 2500 UAH	%	7,3	18,8	mean	0,2	0,3
		N	181	60	median	0,0	0,0

3.6. Evaluation of Inpatient Care Aspects

Compared to the previous years, perceptions of users about the most critical aspects of in-patient care provision are left practically unchanged (Fig. 3.10).

Just like in previous years, users report that the most important aspects of in-patient care provision are doctor's qualification (out of top three important aspects this one was chosen by 64.0% of people with hospitalization experience in the previous 12 months), treatment effectiveness (50.1%), availability of medicines (41.0%), and availability/affordability of diagnostic and lab services (38.2%).

According to in-patient care users, relatively less important are such aspects as sanitary conditions and conveniences (among the three top options this one was chosen by 20.4%), time spent in admission ward (16.1%), good attitudes on part of doctors (15.1%). The least important are clarity and transparency of payment policies (9.4%), food quality (8.4%), and friendliness of nurses (6.1%).

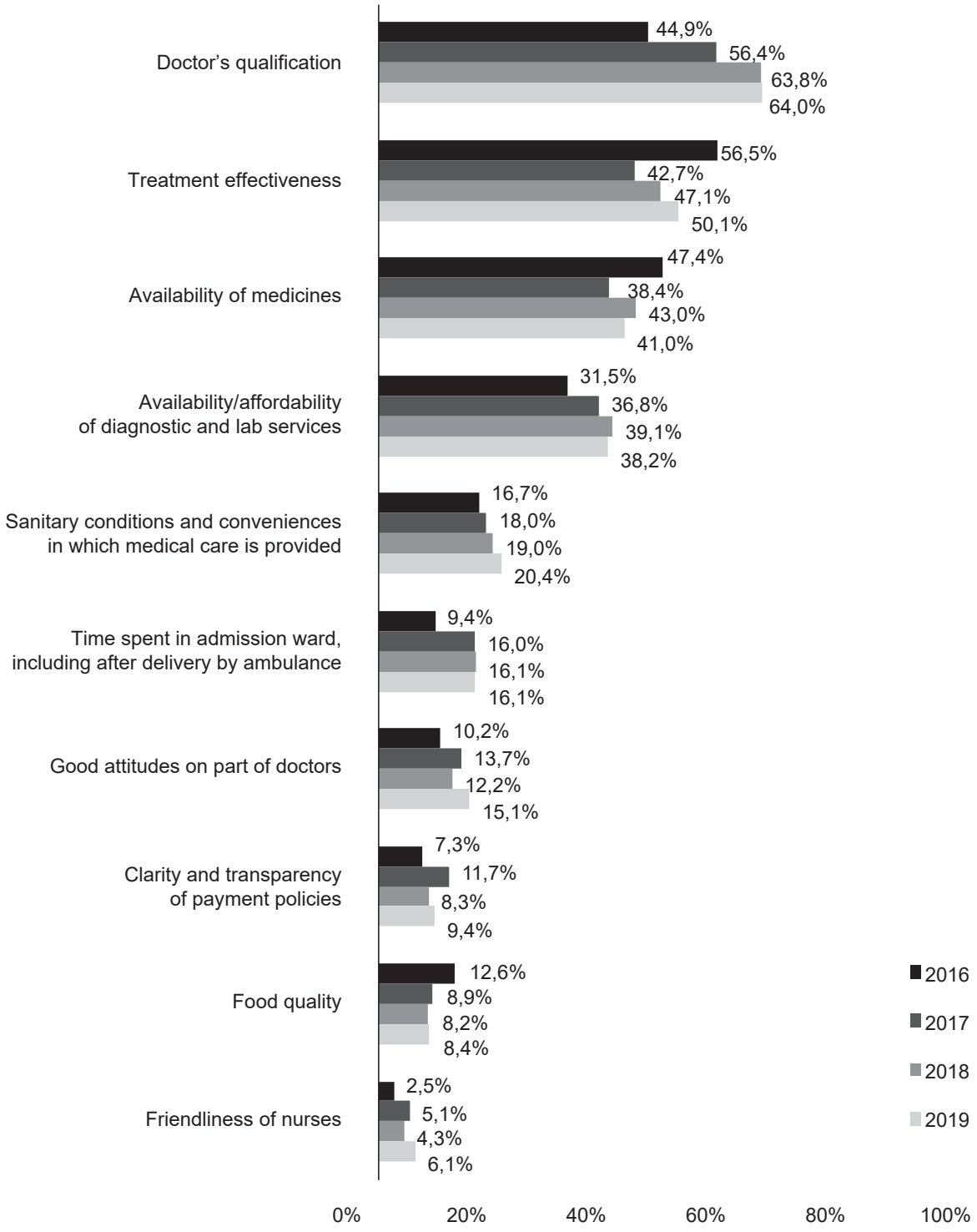

Fig. 3.10. The most important aspects of in-patient care provision: comparison by years *(proportion of those with hospitalization experience in the previous 12 months)*

Perceptions of the most important aspects of in-patient care provision by different social and demographic groups are very similar (Table 3.13): for all these groups the most important one is doctor's qualification and treatment effectiveness, and level of importance of the other aspects also mostly coincide. At the same time, it can be noted that sanitary conditions and conveniences are somewhat more important for younger people than older ones: for age category 18–29 among the top three important aspects this one was chosen by 32.8%, 30–44 age group – 23.0%, 45–59 – 18.4%, 60 and older – 15.9%. Accessibility of diagnostic work-up and availability of medicines are more important for older people (availability of medicines – 47.3%, accessible diagnostics – 42.5%), as well as for rural area (availability of medicines – 45.3%, accessible diagnostics – 43.0%) than urban (availability of medicines – 39.2%, accessible diagnostics – 36.2%). Proportion of people who chose doctor's qualification as one of the most important aspects is a bit higher in urban (66.8%) than in rural area (57.4%), as well as for people with high income (70.8% for income over 2000 UAH per one household member) than with low income (49.3% for income up to 1000 UAH per one person). Good attitude of doctors is somewhat more important for women (17.0%) than for men (12.3%).

Thus, respondents' experience regarding in-patient care use is similar to previous years' experience. With some fluctuations though, proportion of people having had hospitalization experience in the previous year stays practically on the same level (14.9% in 2016, 15.4% in 2017, 12.3% in 2018, 13.5% in 2019). Like in previous years, the majority get admitted by doctor's referral (although the proportion has decreased a little). The key providers of in-patient care continue to be city/district and Oblast hospitals. Also, "out-of-pocket" payments and expenditures for lab and diagnostic services associated with in-patient care continue to be wide-spread practice.

At the same time, the survey shows increasing amount of hospitalization-associated expenditures as well as increasing proportion of people having difficulty covering in-patient treatment cost and people who had to refuse from hospitalization due to lack of money, in the previous year. Thus, the financial burden for in-patient care users has aggravated compared to the previous year.

Table 3.13.

Breakdown of respondents by the most important aspects of in-patient care provision and by different social and demographic characteristics *(proportion of those with hospitalization experience in the previous 12 months)*

			Time spent in the admission ward	Sanitary conditions and conveniences	Quality of food	Availability of diagnostic and laboratory workup	Availability of medicines	Qualification of doctors	Friendliness of doctors	Friendliness of nurses	Treatment effectiveness	Clarity and transparent of payment policies
Altogether		%	**16,1**	**20,4**	**8,4**	**38,2**	**41,0**	**64,0**	**15,1**	**6,1**	**50,1**	**9,4**
N			**218**	**276**	**127**	**540**	**601**	**836**	**217**	**85**	**692**	**133**
SEX	Men	%	13,9	20,8	7,7	39,2	42,6	62,3	12,3	6,2	50,4	8,1
		N	61	80	38	169	200	253	59	28	207	32
	Women	%	17,6	20,2	8,8	37,5	39,9	65,2	17,0	6,0	49,9	10,2
		N	157	196	89	371	401	583	158	57	485	101
AGE GROUP	18–29	%	19,2	32,8	7,6	30,8	28,2	65,4	11,7	5,8	49,1	14,8
		N	31	49	17	57	45	95	19	11	63	20
	30–44	%	17,1	23,0	7,7	32,6	37,5	70,0	16,6	8,3	48,2	7,4
		N	46	72	25	96	94	173	47	19	130	22
	45–59	%	19,1	18,4	9,3	40,6	41,7	60,3	15,1	4,1	49,5	9,5
		N	61	62	35	139	158	203	56	15	186	37
	60+	%	12,1	15,9	8,4	42,5	47,3	62,8	15,5	6,4	51,9	8,4
		N	80	93	50	248	304	365	95	40	313	54
AREA TYPE	Urban	%	16,6	20,4	9,0	36,2	39,2	66,8	15,2	5,9	49,2	8,1
		N	145	175	85	327	360	550	132	50	419	73
	rural	%	14,8	20,6	6,8	43,0	45,4	57,4	14,8	6,6	52,1	12,3
		N	73	101	42	213	241	286	85	3	273	60
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	16,9	24,2	13,3	38,4	36,9	49,3	16,0	4,5	46,4	8,2
		N	29	44	23	76	75	77	29	9	82	16
	1001–1500 UAH	%	14,8	15,3	11,2	35,6	49,5	63,0	15,4	8,6	47,1	6,5
		N	34	35	22	77	107	116	34	18	97	15
	1501–2000 UAH	%	14,0	17,8	4,7	40,2	49,3	55,2	15,3	5,1	51,9	10,8
		N	38	45	16	103	132	141	41	14	136	32
	2001–2500 UAH	%	16,0	18,0	8,0	36,2	39,0	72,1	16,5	7,9	58,8	4,7
		N	21	28	17	60	72	110	23	12	92	10
	More than 2500 UAH	%	19,8	24,7	9,7	38,9	37,0	70,1	13,8	5,2	45,2	11,9
		N	55	69	32	114	115	195	46	16	138	33

SECTION 4. ACCESS TO MEDICINES

Key results:

- Overall, 20.6% of out-patient care users participated in "Affordable Medicines" program in the previous year (18.4% in 2018). 81.6% of program participants report their doctor offering them to use it (86.0% in 2018). More than a half of program participants (57.5%) in 2019 report that medicines became more accessible (62.5% in 2018, no statistically significant difference).
- Proportion of respondents practicing self-treatment with medicines during their recent disease or injury is the lowest in 2019 if compared with 2016, 2017, 2018, and 2019 survey outcomes: 84.3% in 2019 vs 100.0% in 2017. However, mean cost of self-treatment during the most recent disease or injury in 2019 is the highest: on average 603.13 UAH – 698.51 UAH in 2019 vs 383.14 UAH – 473.30 UAH in 2018.
- In 2019, 96.8% of the surveyed out-patient care users who were prescribed medicines were able to purchase medicines, including 82.9% of those purchasing all medicines, and 13.9% – almost all. There is a gradual increase in the proportion of out-patients who mostly purchase all medications (in 2018 – 86.3%, in 2017 – 80.0%, and in 2016 – 76.4%).
- In 2019, on average 1039.99 UAH (45.25 – SD, 500 UAH – median) was spent for medications prescribed by doctors on an out-patient basis. 2019 score is higher than in the previous three years: 400 UAH – median in 2016 and 2018, 350 UAH – in 2017. The highest mean values are reported from Chernivtsy (1652.19 UAH), Vinnitsia (1642.32 UAH), and Rivne (1536.57 UAH) Oblasts, the lowest – in Zhytomyr, Volyn, and Zaporizzhya Oblasts.
- In total, 10.2% out-patient care users reported being reimbursed for medications fully or partially, and this proportion has increased three-fold in the previous four years. It is likely related to implementation of the National Affordable Medicines Program.
- Medications were prescribed to 96.7% of hospitalized patients, 88.5% of them paid for their medications on average 3793.30 UAH (259.90 UAH – SD, 2000 UAH – median). Compared to 2018, the median has not changed – 2000 UAH, however, the mean in 2018 was significantly lower – 2971 UAH (189 – SD).
- Overall, 79.6% purchased all medications prescribed during the most recent hospitalization, whereas in 2018 all medications were purchased by 94.5%, in 2017 – 85.0%, and in 2016 – 85.2%. Thus, 2019 value is the lowest of all four survey years. The key reason for not buying all the prescribed medications does not change during all four rounds – it is lack of money.
- On average, in 2019 in Ukraine 56.0% of respondents (vs 54.8% in 2018, 52.5% in 2017) report incurring expenditures for medications with mean expenditure in the previous 30 days being 704 UAH (572 UAH in 2018, 570 UAH in 2017, and 550 UAH in 2016). Consistently higher expenditures with the significant proportion of people with experience paying for medications in the previous 30 days are reported from Ternopil Oblast, in the previous year mean expenditure has increased 1.5-fold and differs a lot from the rest of the Oblasts: 1625 UAH in 2019 (61.8% of those incurring expenditures).

Out of total health care costs in Ukraine in 2016, (6.73% GDP) 54.34% are out-of-pocket costs (compared to the European Union – 15.69%, Belorus – 35.80%, Poland – 22.94%, Georgia – 55.60% or Armenia – 80.65%) [1], and medications for out-patient care rank the highest in the list of out-of-pocket costs for health care [2].

Significant out-of-pocket expenditures are due to multiple factors: over-the-counter pharmacy sales when any person without doctor's prescription can buy any drugs promoted through mass media, unsettled relations between doctors and pharma, uncontrolled prescription of drugs in terms of their quantities and evidence base, other drug policies (price control, income control,

1 Data from the World Bank website: https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS

2 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-evidence-onfinancial-protection-in-ukraine-2018

reference pricing) etc [3].

Ukraine is lacking fundamental studies on drugs and their specific use and prescription. However, the current studies focused on selected health care services provided to selected groups reveal financial barriers caused by use of medications. Thus, for example, the study on mental health of internally displaced people revealed that people seeking care had to pay for medications and not only (costs that were supposed to be covered by the state), and that led to a financial burden [4]. Study of strategies used by cancer patients to get better care also reports financial burden caused by expenditures for pharmaceuticals and absence of adequate drug distribution regulation [5]. The study does not only present patients' experience of fund-raising through social networks and charitable organizations, but lack of policies of correct drug distribution because the decisions about who gets what medications are made at doctors' discretion solely. Recent International Renaissance Foundation study showed that 26% of money spent for medications at pharmacies (which is 14 billion UAH), were spent to buy drugs without proven efficacy in 2017[6] Also, in Ukraine in 2003, out-of-pocket expenditures of angina patients equaled about 32% of household income per month, and, respectively, such patients very likely had to practice such survival strategies as selling property, valuables or borrowing resources [7].

Most often implementation of reimbursement for out-patient care medications leads to (a) decreasing out-of-pocket expenditures, and (b) more regulated medication use. So, in 2017, national drug reimbursement program was implemented in Ukraine. World Health Organization in 2019 published the report of Affordable Medicines program outcomes [8]. All in all, Affordable Medicines program was positively assessed, especially in terms of its implementation time and increased affordability of some medicines. However, several challenges were budding out requiring actions on part of the government, namely: program policy transparence and user awareness, budget for this program needs to be allocated and grow with time.

Sections of the report on medicines given below present survey outcomes in terms of user perceptions and participation in the national reimbursement program, prevalence and scope of out-of-pocket expenditures for medicines with different scenarios of health care use and non-use.

4.1. Experience and Perceptions of Affordable Medicines Program

Affordable Medicines program [9] was initiated by the government of Ukraine in 2017, and from April 1, 2019 Affordable Medicines program got a new format – it started to be administrated by the National Health Service of Ukraine (NHSU) and work exclusively based on e-prescriptions. It is expected that with this new format medicines will be more affordable to users. Currently, e-prescriptions allow NHSU to get and publish actual and reliable data about the number of prescriptions issued and redeemed in each region.

"Health Index. Ukraine" starting from 2017, studies experience of medicines consumption in view of Affordable Medicines program. Just to remind, in 2017 all respondents were asked this question but in 2018 it became part of Out-patient Care Use Section. As long as change in the order of questions in the survey might influence the results, namely, the rates, breakdown of answers we refrain from referring to 2017 data, however, 2018 and 2019 data are available for comparison. Also, as long as users get their prescription from a family doctor and by doing it this way they become out-patient care users, since 2018 the question about participation in the Affordable Medicines program was asked only in this category of respondents. This is in line with the design of Affordable Medicines program. Moreover, we do not expect changes in the

3 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.

4 Roberts, B., Makhashvili, N., Javakhishvili, J., Karachevskyy, A., Kharchenko, N., Shpiker, M., & Richardson, E. (2017). Mental health care utilisation among internally displaced persons in Ukraine: results from a nation-wide survey. Epidemiology and psychiatric sciences, 1-12.

5 Levenets, O., Stepurko, T., Polese, A., Pavlova, M., & Groot, W. (2019). Coping strategies of cancer patients in Ukraine. The International journal of health planning and management. https://doi.org/10.1002/hpm.2802

6 Fuflomitsini: Ukrainians spend a quarter of their money on drugs without proven effectiveness https://www.irf.ua/fuflomitsini/

7 Murphy, A., Mahal, A., Richardson, E., & Moran, A. E. (2013). The economic burden of chronic disease care faced by households in Ukraine: a cross-sectional matching study of angina patients. International journal for equity in health, 12(1), 38.

8 World Health Organization. (2019). Evaluation of the affordable medicines programme in Ukraine.

9 National reimbursement program Affordable Medicines http://liky.gov.ua "Reimbursement is a mechanism of complete or partial payment for medicines included to the detailed list from the budget".

implementation of the program (made in April 2019) to be reflected in data analysis because collection of data took place in May-June 2019.

The first question about Affordable Medicines[10] was about the program participation experience, and as a result – 20.6% of out-patient care users gave a positive answer to this question (as shown in Section 2, overall number of out-patient care users among all respondents was 39.3% (or 3886 respondents)). In other words, they participated in the Affordable Medicines program (Table 4.1). Proportion in 2018 was a little lower: 18.4% reported participating in the Affordable Medicines program. Just to remind, in 2018 7.6% of all respondents gave a positive answer to this question.

Sample size for each category is not sufficient to compare participation of different Oblasts in the program (the smallest size – in Kirovograd, Ternopil, and Kharkiv Oblasts (19 people each), the biggest (70 people) – in Zaporizzhya Oblast). However, since April 2019, the National Health Service of Ukraine at its online webpage[11] offers actual statistics of Affordable Medicines program where comparison of regions is possible.

As for the program participants in 2019, just like in 2018, there are more women who participate in the program (23.0% vs 16.5% of men), more older people (36.8% in 60+ and 18.2% in 45–59 age groups), more program participants with lower level of education (26.4% with incomplete higher education, 27.5% - complete high, and 22.6% - vocational vs 15.9% - complete higher education).

It is expected that people assessing their health as poor use Affordable Medicines program more often: 30.3% - very poor, 41.7% - poor, and 22.1% - average. However, in 2019 there is 10 percentage points (p.p.) less program users assessing their heath as very poor (in 2018 – 40.4%), whereas 5 p.p. more of those assessing their health as poor (35.9%) or very good (2,6%). Representation of urban and rural citizens in the program is practically equal: 21.1% and 19.2%, respectively (Fig. 4.1).

10 Question phrasing: "Now let's talk only about those medications that are included into Affordable Medicines reimbursement program". Have you had experience getting drugs under Affordable Medicines program?"

11 Electronic mapping of pharmacies participating in the National Affordable Medicines program. National Health Service of Ukraine. https://nszu.gov.ua/ogoloshennya-pro-ukladennya-dogovoriv/dostupni-liky/apteki-uchasniki-uryadovoyi-programi-reimbursaciyi-dostupni

Table 4.1.

Out-patient care users' experience of their participation in Affordable Medicines program: social and demographic section (proportion of those answering yes to the question "Have you had experience getting medications under Affordable Medicines program?")

	2019, %	**2018, %**
ALTOGETHER	20,6	18,4
SEX		
Men	16,5	13,5
Women	23,0	21,4
AGE GROUP		
18–29	7,0	3,1
30–44	8,7	5,4
45–59	18,2	18,0
60+	36,8	35,5
AREA TYPE		
Urban	21,1	18,1
rural	19,2	19,1
LEVEL OF EDUCATION		
Primary or incomplete high	26,4	26,9
Complete secondary	27,5	22,6
Vocational	22,6	20,3
Incomplete higher (college)	20,1	18,0
Basic higher (Bachelor)	12,3	10,0
Complete higher (Master)	15,9	15,1
INCOME		
Up to 1000 UAH	18,9	19,1
1001–1500 UAH	24,2	24,4
1501–2000 UAH	29,5	28,1
2001–2500 UAH	27,2	18,7
More than 2500 UAH	15,5	13,3
HEALTH STATUS		
Very poor	30,3	40,4
Poor	41,7	35,9
Average	22,1	19,4
Good	9,2	6,7
Very good	7,9	2,6

Since 2018, Health Index contains questions about details of Affordable Medicines program use like "Has your doctor offered you to use Affordable Medicines program, namely, has he issued a relevant prescription?" In total, 81.6% of respondents with program participation experience reported it to be doctor-initiated, 1.9% reported it to be self-initiated, and the rest (16.5%) reported their doctor not offering participation in such program (Fig. 4.1). There is no significant difference between 2019 and 2018 (81.6% in 2019, and 86.0% in 2018 indicate that doctors offer the program).

We got the following breakdown of answers to the question "Have you been able to get the medications prescribed under Affordable medicines program in a pharmacy?": 47.2% could get all medications under program in a pharmacy (43.8% in 2018), 29.7% got part of medications (37.3% in 2018), and 23.1% in 2019 reported not being able to get them. Besides, 44.5% got medications free-of-charge, and 55.5% – with copayment. Although there is some fluctuations in 2019 and 2018 values they are not statistically significant. We also do not see significant difference between various social and demographic groups in their answers to the above question. However, a larger proportion of people getting their medications free-of-charge belong to income subgroup "up to 1000 UAH" (49.5%) vs 38.1% with income "over 2500 UAH".

Among reasons for not getting medications under the program, respondents just like in 2019, and in 2018 report absence of relevant medication in a pharmacy (N = 74). The rest of the barriers are not as common: could not reach the pharmacy included into the program (N = 31), doctor did not have a special prescription form (17 persons), doctor refused giving a prescription for other reasons (25 persons), and pharmacy refused to provide medications (19 persons). 36 respondents more mentioned other reasons, and 32 people hesitated to provide any answer.

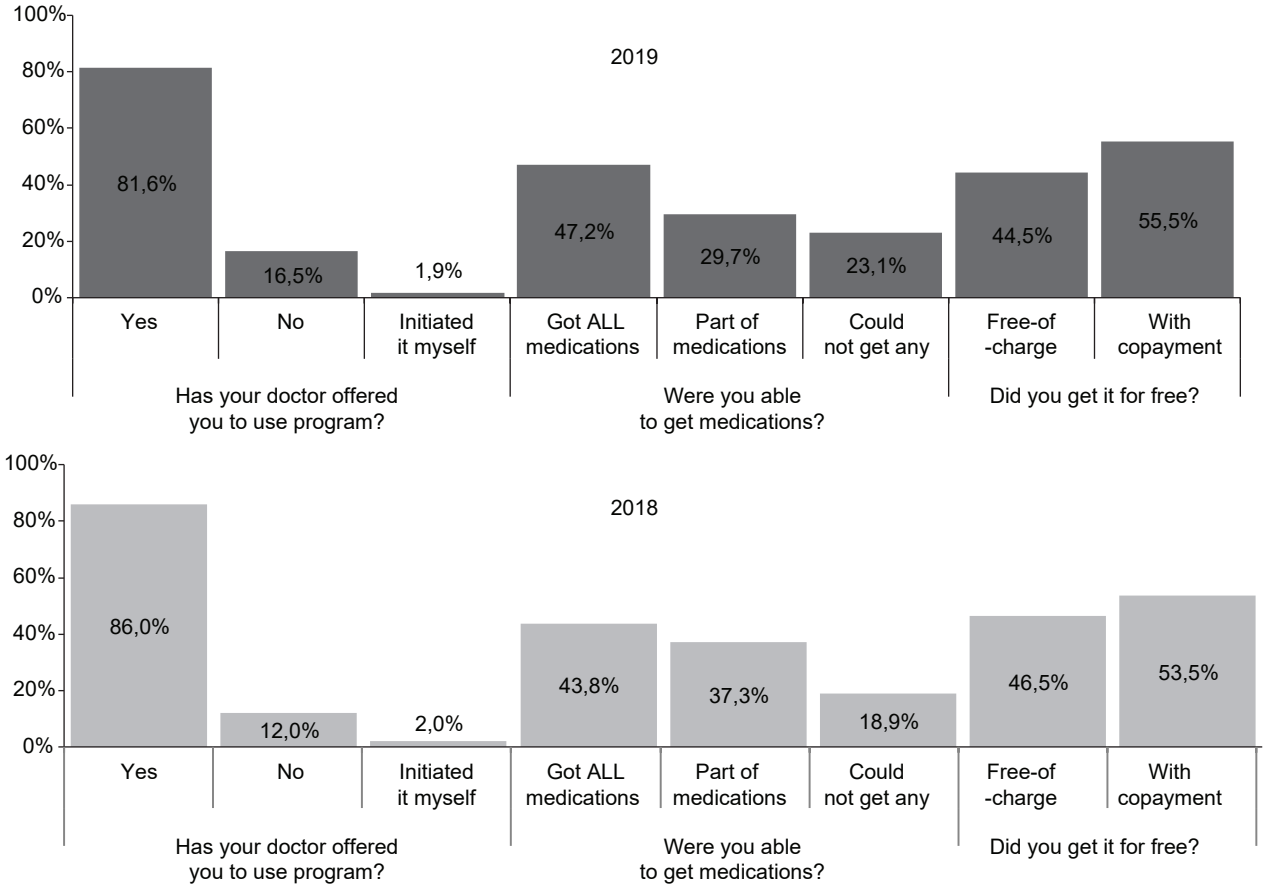

Fig. 4.1. Experience participating in Affordable Medicines program (among its users)

Respondents were supposed to assess the program efficacy from the perspective of increasing affordability of medications for patients who need them. Thus, a little more than a half (57.5%) of program users in 2019 believe that medications became more affordable (Table 4.2). In 2018, we see almost the same proportion (considering the bias) of answers (62.5%).

Table 4.2.

Perceptions about improved affordability of medications under Affordable Medicines program: comparison between years

	2019		2018	
	medicines became more affordable, %	**medicines DID NOT become more affordable, %**	**medicines became more affordable, %**	**medicines DID NOT become more affordable, %**
ALTOGETHER	57,5	42,5	62,5	37,5
SEX				
Men	54,3	45,7	68,6	31,4
Women	58,9	41,1	60,2	39,8
AGE GROUP				
18–29	47,8	52,2	32,4	67,6
30–44	48,7	51,3	74,4	25,6
45–59	58,6	41,4	65,4	34,6
60+	59,5	40,5	61,3	38,7
AREA TYPE				
Urban	60,1	39,9	62,2	37,8
rural	50,3	49,7	63,2	36,8
LEVEL OF EDUCATION				
Primary or incomplete high	68,7	31,3	64,9	35,1
Complete secondary	59,9	40,1	66,9	33,1
Vocational	52,4	47,6	60,4	39,6
Incomplete higher (college)	66,2	33,8	63,9	36,1
Basic higher (Bachelor)	57,4	42,6	52,6	47,4
Complete higher (Master)	46,5	53,5	58,8	41,2
INCOME				
Up to 1000 UAH	59,9	40,1	67,6	32,4
1001–1500 UAH	58,0	42,0	62,5	37,5
1501–2000 UAH	56,1	43,9	60,6	39,4
2001–2500 UAH	57,5	42,5	69,2	30,8
More than 2500 UAH	55,9	44,1	59,3	40,7
HEALTH STATUS				
Very poor	58,8	41,2	42,1	57,9
Poor	60,1	39,9	69,6	30,4
Average	54,6	45,4	60,4	39,6
Good	61,9	38,1	61,3	38,7
Very good	55,5	44,5	100,0	0,0

Analysis of differences between social and demographic groups shows that 54.3% of men report medicines becoming more affordable vs 58.9% of women (however, in 2018 the difference was reverse and bigger – 68.6% vs 60.2%). There is noticeable difference between perceptions about increased affordability of medicines between respondents from different area types (60.1% of urban, and 50.3% of rural area citizens) and of different education levels: in 2019, 46.5% of

respondents with complete higher education vs 68.7% - with incomplete higher education report medicines becoming more affordable. At the same time, the difference in 10–15 p.p. is seen for the youngest and the oldest respondents if we compare 2018 and 2019 (in 2018 32.4% of 18–29 age group and 61.3% of 60+ agreed that medications became more affordable vs 47.8% and 59.5% in 2019, respectively).

4.2. Consumption of Medicines Without Medical Prescription

"Health Index. Ukraine" looks at consumption of medications that were both doctor-prescribed and self-prescribed. First of all, we identified people who had disease or injury in the previous 12 months [12]: in 2019, 44.1% of respondents had such disease experience, and only two thirds of them (63.5%) sought medical care from a doctor or a feldscher (as Section 1 reports). Of those not seeking medical care, 17.7% report their main barrier being high cost of medications, services and transport.

Regarding expenditures for medication among people not seeking care in case of disease or injury, overall 84.3% of them purchased medications (Fig. 4.2). In the previous four years, this proportion varies in the range of 84.3% in 2019, 85.5% in 2018, 100.0% in 2017, and 95.6% in 2016.

Regionally, the highest expenditures for medications were reported by people from Cherkassy (95.5%), Mykolayiv (94.6%), and Kharkiv (90.8%) Oblasts. The smallest proportion of people spending money for medications for self-treatment or when seeking help from a folk medicine specialist lives in Poltava (77.1%) and Sumy (77.2%) Oblasts. Different Oblasts in different years have both maximum and minimum values except Poltava and Sumy Oblasts – in 2018 they continued to have the lowest values. It is important to emphasize that the difference between the mean value for the country and maximum and minimum vales is not statistically significant. Oblasts that were named above have adequate sample size whereas for some others we cannot provide regional values because of small number of respondents (like Volyn, Transkarpathian, Ivano-Frankivsk, Kirovograd, Ternopil, Rivne, Khmelnitsky, Chernivtsi or Chernihiv Oblasts).

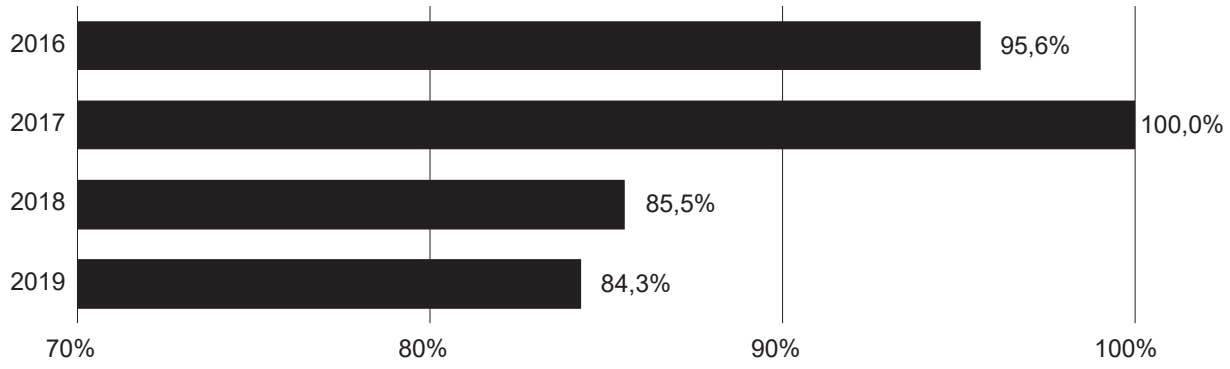

Fig. 4.2. Proportion of people spending money for medications in case of their recent disease or injury, among those not seeking care from a doctor / feldscher, according to 2016, 2017, 2018, and 2019 surveys

Social and demographic characteristics of taking medications without doctor's prescription are presented in Table 4.3, and it looks like social and demographic characteristics are not potential determinants preconditioning expenditures for medications used for self-treatment.

Regarding the amount of money spent for self-treatment, on average people spent more in 2019: from 603.13 UAH to 698.51 UAH (here and hereinafter the mean is (650.82 UAH) with standard deviation (47.69 UAH), or median 300 UAH), whereas in 2018 less money was spent: from 383.14 UAH to 473.30 UAH (mean) and median – 250 UAH (Table 4.4). Thus, annually we observe increasing amount of money that people spend for non-prescribed medications: in 2017, the mean was 342.50 UAH (median 200 UAH; SD – 478.3), and in 2016 the median was 150 UAH.

12 Wording of the question: B1.15 "Please, think of your most recent disease or injury that prevented you from working or doing your usual daily routine for 7 days, in the previous 12 months. Mention the month and year when it happened."

Table 4.3.

Proportion of people spending money for medications in case of their recent disease or injury, among those not seeking care from a doctor / feldscher, according to 2016, 2017, 2018, and 2019 surveys: social and demographic breakdown, %

	2019	**2018**	**2017**	**2016**
ALTOGETHER	84,3	85,5	100,0	95,6
SEX				
Men	81,0	82,9	100,0	92,5
Women	86,9	87,0	100,0	97,0
AGE GROUP				
18–29	88,6	82,1	100,0	94,4
30–44	84,7	88,8	100,0	95,1
45–59	84,8	87,1	100,0	97,5
60 +	80,6	83,6	100,0	95,0
AREA TYPE				
Urban	85,8	86,7	100,0	96,8
Rural	79,9	82,1	100,0	93,5
LEVEL OF EDUCATION				
Primary or incomplete high	53,0	80,6	100,0	94,0
Complete secondary	78,8	86,6	100,0	97,8
Vocational	81,1	80,3	100,0	94,5
Incomplete higher (college	85,1	86,5	100,0	98,4
Basic higher (Bachelor)	88,2	85,2	100,0	95,3
Complete higher (Master)	90,5	88,6	100,0	91,5
INCOME				
Up to 1000 UAH	82,1	81,9	100,0	94,4
1001–1500 UAH	89,7	79,1	100,0	96,2
1501–2000 UAH	86,3	84,0	100,0	95,4
2001–2500 UAH	87,2	89,6	100,0	94,8
More than 2500 UAH	83,1	88,6	100,0	95,3

Table 4.4.

Out-of-pocket expenditures of people practicing self-treatment

		2019			2018			2017			2016		
		mean expenditure, UAH	SD	median, UAH	mean expenditure, UAH	SD	median, UAH	mean expenditure, UAH	SD	median, UAH	mean expenditure, UAH	SD	median, UAH
Altogether		650,82	47,69	300	428,22	45,08	250	342,45	18,59	200	256,45	19,9	150
SEX	Men	738,71	84,69	300	497,37	119,26	200	371,58	34,6	250	261,91	38,42	150
	Women	584,34	53,87	300	389,93	23,36	300	324,54	21,17	200	254,07	23,19	150
AGE GROUP	18–29	664,77	144,64	300	348,31	32,91	250	308,19	43,51	200	223,68	37,55	150
	30–44	451,97	36,52	300	514,51	144,7	300	330,34	25,11	250	240,39	36,75	150
	45–59	703,10	108,70	300	442,14	72,27	250	331,87	38,84	200	269,27	46,74	150
	60+	817,42	98,44	350	388,26	39,69	250	380,23	38,8	220	277,3	33,01	150
AREA TYPE	Urban	548,74	37,06	300	447,56	57,77	270	320,94	18,65	200	278,63	28,76	150
	rural	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 high	1353,05	518,57	250	291,84	49,89	200	391,84	128,59	200	184,62	22,35	180
	Complete secondary	875,07	150,52	300	577,64	180,94	300	371,42	48,7	200	229,93	35,24	100
	Vocational	715,84	108,83	300	301,32	25,04	200	400,84	38,67	250	184,44	24,33	120
	Incomplete higher (college)	661,88	106,27	300	368,03	42,6	250	317,34	37,26	200	280,97	44,4	160
	Basic higher (Bachelor)	431,83	39,32	300	369,89	65,09	300	272,87	28,05	200	198,33	61,18	150
	Complete higher (Master)	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	729,88	91,52	400	404,64	73,43	250	317,07	43,58	200	264,05	58,73	150
	1001–1500 UAH	505,11	76,21	300	289,66	35,17	200	405,21	50,04	200	217,1	21,95	120
	1501–2000 UAH	768,64	123,59	300	364,91	52,0	230	294,73	25,49	200	239,37	48,49	150
	2001–2500 UAH	482,14	80,87	300	697,62	342,17	300	280,45	51,9	200	171,03	23,44	120
	More than 2500 UAH	656,04	104,76	300	426,86	26,51	300	298,34	34,52	250	186,48	22,1	150

Unlike 2018, we do not see difference in median values of expenditures between men and women, however, rural citizens spend more (380 UAH vs 300 UAH for urban citizens), and the least wealthy group of respondents (income up to 1000 UAH per person) spends 400 UAH (median) vs 300 UAH in other groups (Table 4.4).

4.3. Medicines Consumption During Out-Patient Treatment

As Section 2 reports, 39.3% of adult population sought out-patient care and frequency of visits on average was 2.3 visits per year. We asked about out-of-pocket expenditures both for health services and for medications. This Section is specifically about expenditures for medications and other expenditure-relevant features.

First of all, out-patient care users were asked: "How many names of medications has your doctor prescribed to you during your recent visit?" Thus, 93.9% report being prescribed one or more names. Same proportion was observed in the previous three rounds of survey.

As for the regional breakdown, the smallest number of respondents reporting medicines prescription (89.7–90.4%) is in Chernihiv and Zaporizzhya Oblasts (just like in previous years), the largest – in the city of Kyiv, Kharkiv and Zhytomyr Oblasts (Fig. 4.3). However, the difference 8 p.p. between the minimum and maximum values indicates absence of statistical difference between the mean for Ukraine and specific values for Oblasts. Likewise, there is no socio-demographic difference between different prescription scores. As Fig. 4.3 shows, the lowest value in Index is the value for Luhansk Oblast in 2016 – 74.4% (just like the biggest difference between years), and maximum – 100.0% in Sumy Oblast in 2017.

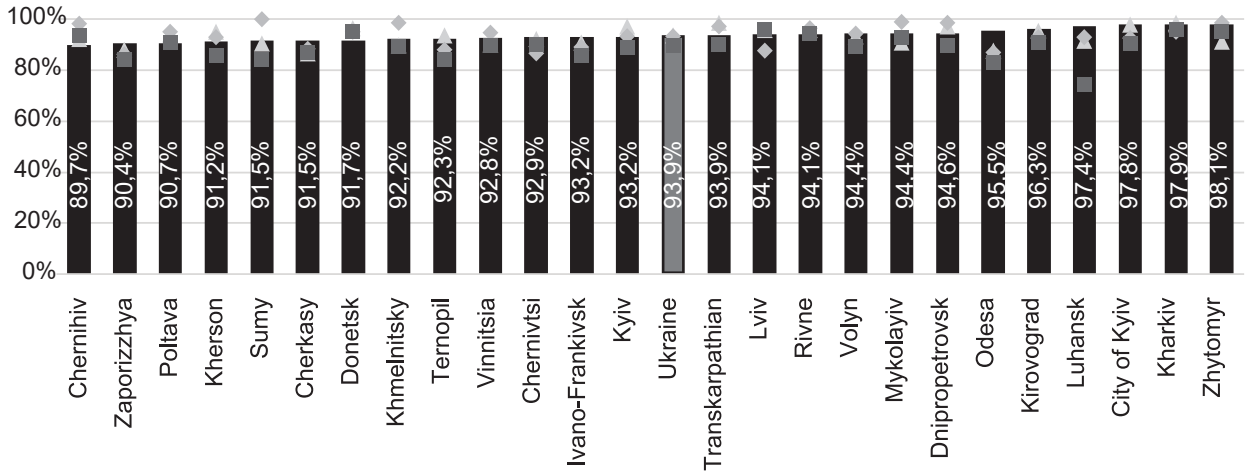

Fig. 4.3. Proportion of patients having been prescribed medications during their recent out-patient visit.

On average, patients were prescribed 4.1 names of medications during one visit (Fig. 4.4), the scores across years are pretty consistent: 3.6 names – in 2018, 4.2 – in 2017, and 4.0 – in 2016. The lowest score was reported from Transkarpathian (3.1), the highest – in Sumy (6.8) Oblast. The latter is the outlier among Oblasts and years – in previous years the Oblast scored from 3.5 to 4.2. In other words, in Sumy Oblast more than 40% of out-patient care users were prescribed six names of medications.

Of those who were prescribed medications, 43.9%, reported having been given a prescription in 2019, which is practically unchanged since 2017 (44.9% and 41.8% in 2018), however, in 2016 66.9% of respondents reported getting a prescription as indicated in Fig. 4.5. In 2019, most often out-patient care users report about getting a prescription in Luhansk (86.5% and 85.1% in 2018) and Zaporizzhya (78.3% and 62.8% in 2018) Oblasts, least often – in Khmelnitsky and Cherkassy Oblasts (in 2019 15.2% and 20.0% and in 2018 30.0% and 28.8%, respectively). In 2018, the lowest scores were reported by Donetsk and Ivano-Frankivsk Oblasts (16.2% and 15.7%, respectively), they are now on the bottom line three and four (21.6% and 24.7%, respectively). As

Fig. 4.5 shows, much more respondents reported in 2016 about getting a prescription compared to 2018 and 2019.

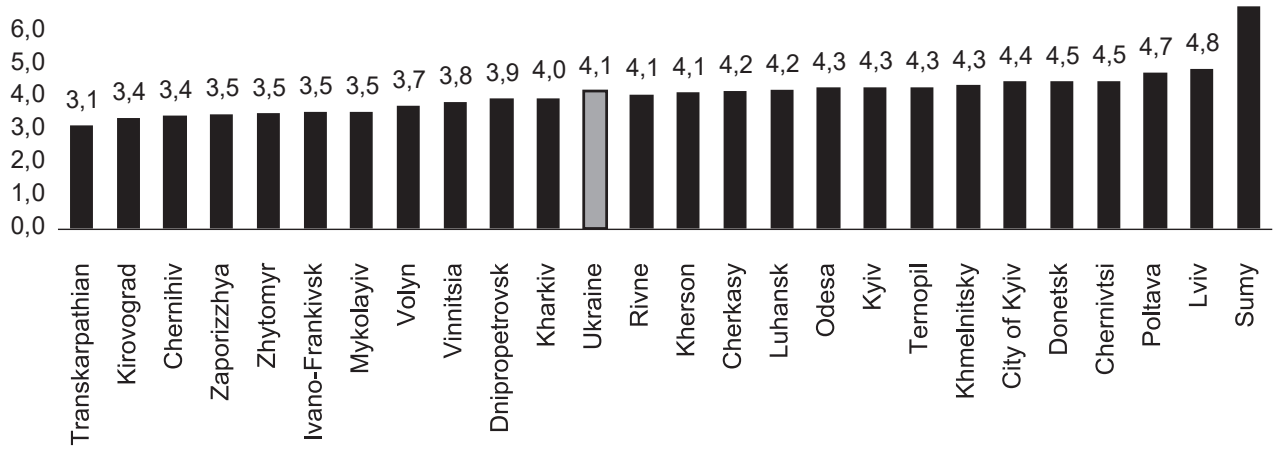

Fig. 4.4. Mean number of prescribed medication (of those out-patient care users who got prescriptions in 2019)

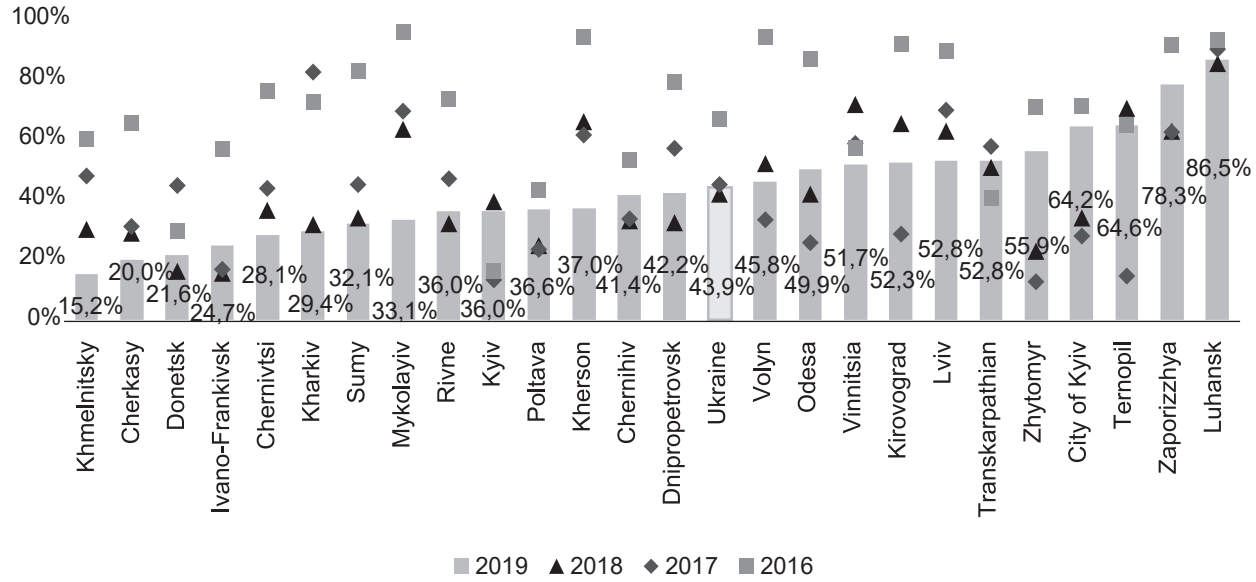

Fig. 4.5. Proportion of positive answers to a question "Have you been given a prescription that made it possible for you to get medications or get reimbursed?": breakdown by Oblasts 2016, 2017, 2018 and 2019

Regarding social and demographic characteristics, just like it was in 2018 older people get prescriptions more often (60 and older) – 52.1% vs younger respondents (34.% and 36.9% in age groups 18–29 and 30–44, respectively).

In 2019, 96.8% of respondents could purchasing medications including 82.9% of those purchasing all medications, and 13.9% – almost all (Fig. 4.6.). There is gradual increase in the proportion of out-patients who mostly buy all medications: in 2018 86.3%, in 2017 80.0% and in 2016 76.4% purchased all medications. There is no significant difference between the regions except the categories "purchased all medications" and "almost all". the smallest proportion of those buying all medications is in Zaporizzhya (61.3%), Sumy (65.4%), Poltava (75.0%), and Mykolayiv (75.2%) Oblast and the city of Kyiv (70.0%); the biggest – in Luhansk (96.6%), Ivano-Frankivsk (94.7%), Chernihiv (94.3%), and Transkarpathian (90.8%) Oblasts. It is of note that in Sumy Oblast in 2019 we observe the highest score for the biggest number of prescribed medications together with the decision not to buy all of them, so the latter might be related to the high number of drugs prescribed and users' refusal to buy all of them.

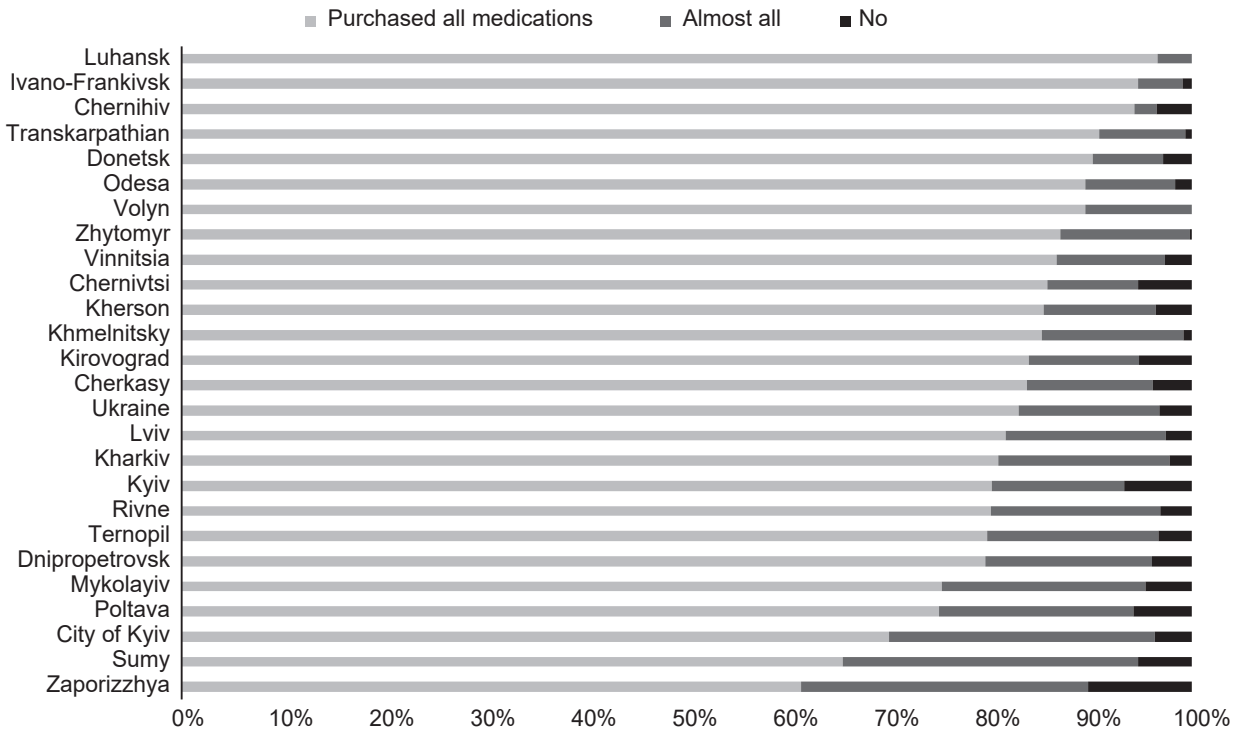

Fig. 4.6. Breakdown of respondents by proportion of medications purchased in 2019 for outpatient care by Oblasts.

In 2019, we do not see differences for answers to the question "Have you purchased all the prescribed drugs?" in terms of income (unlike in 2018), however, a bit less 60+ group respondents (79.4%) purchased all medications compared to 18–29 age group (87.0%). Also, less respondents with Bachelor degree (79.0%) and vocational education (78.7%), buy all medications vs other education level categories: complete high school (85.2%) and complete higher education (86.7%). This is the biggest difference among social and demographic groups.

We asked those not purchasing medications or purchasing not all medications about reasons for their behavior. It turns out that 42.5% (N = 263) did not believe it was necessary which probably means lack of trust between doctors and patients, another 44.3% did not but medications because of lack of money. Regardless of the high proportion of respondents reporting financial barriers, in 2016 51.5% did not buy medications because of lack of money, and in 2017 – 47.2%, in 2018 – 40.6%. Regarding reasons for not-purchasing medications, 17.2% reported that they could not find them (pharmacies did not have them, for example), and 2.7% mentioned other reasons.

In all four years, more women report unaffordability of medications: in 2019, 46.8% of women vs 39.3% of men reported lack of money (Table 4.5). Older people more often report lack of money as a reason for buying not all medications or not buying them at all: 58.1% in 60+ group vs 34.0% in 45–59 group, 40.1% for the youngest and 32.0% in 30–44 age group. People with lower level of education (74.2% vs 26.4%) and people with lower income (50–58% vs 26.5%) have more financial barriers.

The majority of respondents (97.6%) paid for their medications. By years, there is no significant regional and socio-demographic differences: values for Oblasts ranges from 92.2% in Kirovograd and Ternopill Oblasts up to 100.0% in Transkarpathian, Odessa, and Sumy Oblasts.

Table 4.5.

Proportion of out-patient care users who purchased not all of medications due to lack of money: social and demographic breakdown

			Purchased not all medication due to lack of money			
			2019	**2018**	**2017**	**2016**
Altogether		%	44,3	40,6	47,2	51,5
		N	298	195	333	435
SEX	Men	%	39,3	37,9	42,0	43,6
		N	60	46	75	86
	Women	%	46,8	42,5	49,8	55,6
		N	238	149	258	349
AGE GROUP	18–29	%	40,1%	22,4	42,9	36,3
		N	21	12	31	31
	30–44	%	32,0	31,4	32,8	41,0
		N	39	36	46	80
	45–59	%	34,0	51,1	49,2	61,1
		N	53	54	95	130
	60+	%	58,1	52,7	59,2	60,4
		N	185	93	161	194
AREA TYPE	Urban	%	44,3	42,2	46,6	47,9
		N	195	134	229	288
	rural	%	44,3	36,2	49,2	63,1
		N	103	61	104	147
LEVEL OF EDUCATION	Primary or incomplete high	%	74,2	81,1	69,6	60,7
		N	19	16	21	31
	Complete secondary	%	51,3	50,9	54,7	68,6
		N	66	47	73	106
	Vocational	%	62,4	39,8	49,7	60,9
		N	83	38	66	72
	Incomplete higher (college)	%	44,4	41,8	44,5	50,3
		N	85	54	91	126
	Basic higher (Bachelor)	%	16,8	32,9	43,8	34,8
		N	11	9	14	18
	Complete higher (Master)	%	26,4	27,0	40,0	39,2
		N	34	29	66	79
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	50,1	54,1	62,8	69,7
		N	37	19	49	102
	1001–1500 UAH	%	57,6	47,7	57,5	63,9
		N	68	42	106	168
	1501–2000 UAH	%	50,9	42,0	48,0	44,9
		N	59	48	63	65
	2001–2500 UAH	%	42,6	47,5	39,0	27,7
		N	30	25	18	21
	More than 2500 UAH	%	26,5	31,9	32,5	34,7
		N	43	25	26	14

In total, 10.2% out-patient care users reported being reimbursed for medications fully or partially, and this proportion has increased three-fold in the previous four years: in 2016 – 3.0%, in 2017 – 8.5%, and in 2018 – 7.6%. This is likely related to the National Affordable Medications programs being in place as well as better economic and financial climate in the country (compared to 2015). Larger proportion of respondents aged 60+ report having been reimbursed partially or fully by the state (14.8%) vs 5.7% and 5.5% in younger groups (18–29 and 30–44 years of age, respectively).

Regarding out-of-pocket expenditures, in 2019 out-patient care users spend for doctor-prescribed medications on average 1039.99 UAH (45.25 – SD, 500 UAH – median). 2019 score is higher than in the previous three years: 400 UAH – median in 2016 and 2018, 350 UAH – in 2017 (Fig. 4.7).

The highest mean values are observed in Chernivtsi (1652.19 UAH), Vinnitsia (1642.32 UAH), and Rivne (1536.57 UAH), the lowest – in Zhytomyr, Volyn, and Zaporizzhya. Regarding median values, the maximum – 800 UAH and 750 UAH is reported from Odessa Oblast and the city of Kyiv, respectively, and 320 UAH in Chernihiv Oblast (and this is almost twice as much as the lowest median of 2017 reported for Kharkiv Oblast).

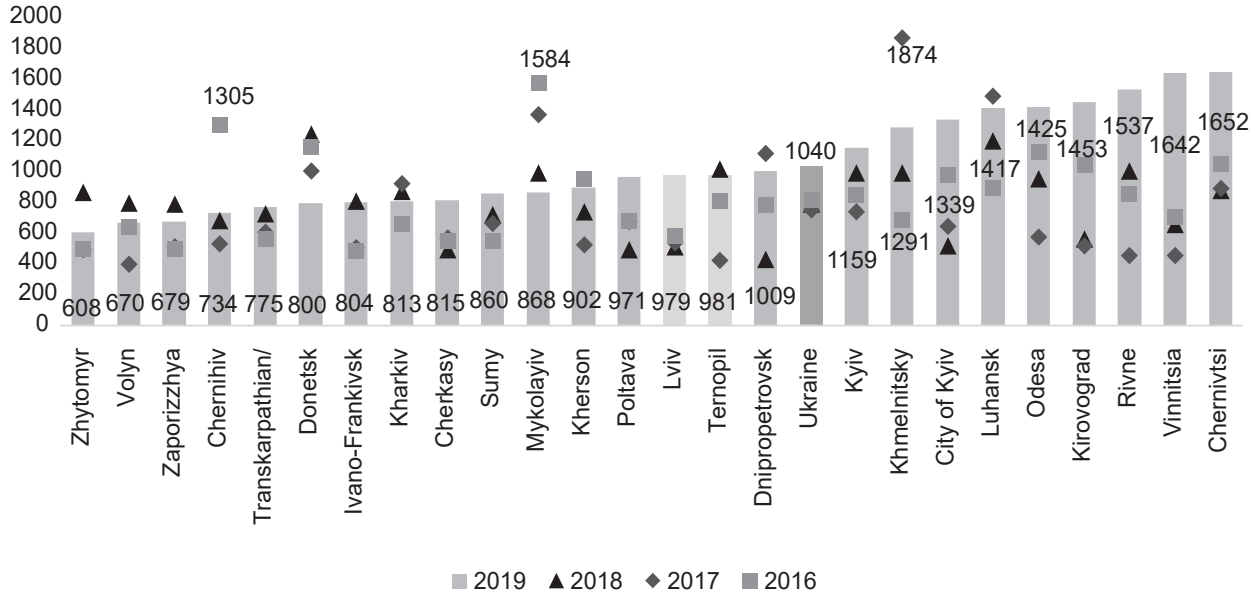

Fig. 4.7. Mean for out-of-pocket expenditures for medications prescribed during the most recent out-patient visit

With regards to social and demographic categories, we do not see significant difference in median values (for example, 450 UAH are spent by people with vocational education vs 370 UAH - with basic or high education).

Starting from 2017, we asked two questions about peculiarities of prescription of medications: "When prescribing medicines has doctor offered you both cheaper and more expensive options?" and "Has doctor prescribed an active substance, not a specific brand name?" In 2019, 30.3% (N = 866) of respondents like in 2018 (30.9%) report doctor offering both cheaper and more expensive options, and in 2017 this proportion was 40.4%. Because of small number of respondents in this category, comparison by regions is not feasible, and social-demographic categories do not show significant differences.

In 2019, 26.2% of out-patient care users report active substance being mentioned in the prescription which is no different from the previous years: 24.1% in 2018 vs 30.9% in 2017.

Table 4.6.

Breakdown of answers to the questions "When prescribing medicines has doctor offered you both cheaper and more expensive options?" and "Has doctor prescribed an active substance, not a specific brand name?": social and demographic breakdown

2019 2018			When prescribing medications has doctor offered you both cheaper and more expensive options? (yes)			Has doctor prescribed an active substance, not a brand name? (yes)		
			2019	**2018**	**2017**	**2019**	**2018**	**2017**
Altogether		%	30,3	30,9	40,4	26,2	24,1	30,9
		N	866	766	1014	585	457	678
SEX	Men	%	26,1	29,0	38,5	25,4	26,6	29,1
		N	185	171	254	136	110	168
	Women	%	32,6	31,9	41,4	26,6	22,8	31,8
		N	681	595	760	449	347	510
AGE GROUP	18–29	%	29,1	26,6	37,0	29,5	22,7	30,2
		N	104	69	110	80	49	86
	30–44	%	29,3	27,9	38,9	24,1	21,9	29,4
		N	202	150	206	146	87	146
	45–59	%	30,9	32,4	38,5	26,8	26,9	29,0
		N	210	221	260	150	146	157
	60+	%	31,2	34,0	45,1	25,7	23,9	34,0
		N	350	326	438	209	175	289
AREA TYPE	Urban	%	30,4	30,1	41,2	27,1	24,4	33,2
		N	557	468	679	394	310	494
	rural	%	30,0	32,7	38,4	23,5	23,3	24,6
		N	309	298	335	191	147	184
LEVEL OF EDUCATION	Primary or incomplete high	%	36,5	21,6	34,6	34,1	20,2	27,4
		N	31	21	36	21	14	17
	Complete secondary	%	28,9	32,1	38,9	25,0	22,1	30,5
		N	172	169	177	114	89	109
	vocational	%	32,6	26,6	35,7	24,7	22,9	30,3
		N	147	118	163	84	71	111
	incomplete higher	%	29,6	28,0	40,0	24,3	22,3	28,5
		N	256	230	303	165	135	195
	Basic higher (Bachelor)	%	37,7	35,1	34,8	40,2	26,8	23,5
		N	52	40	37	41	28	32
	Complete higher (Master)	%	28,1	37,2	45,7	25,6	28,7	34,9
		N	205	185	294	156	118	210
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	31,4	34,9	34,5	20,9	24,9	23,0
		N	121	70	117	62	39	65
	1001–1500 UAH	%	28,2	35,6	40,0	20,8	33,9	32,7
		N	119	109	260	76	77	169
	1501–2000 UAH	%	32,0	34,6	42,8	28,9	23,7	33,9
		N	156	171	205	102	88	143
	2001–2500 UAH	%	29,4	24,5	41,8	27,8	17,9	37,9
		N	93	81	86	69	46	68
	More than 2500 UAH	%	31,8	28,0	46,4	30,1	26,5	30,6
		N	238	149	153	169	113	111

4.4. Medicines Consumption During In-Patient Treatment

As mentioned in Section 3, 13.5% of respondents (N = 1386) has hospitalization experience in 2019, and 96.7% (N = 1354) of them got prescriptions. The least prescriptions of medications were received by in-patients in Donetsk Oblast (86.9%) and the most (100.0%) in Vinnitsia, Dnipropetrovsk, Zaporizzhya, Kirovograd, Mykolayiv, Poltava, Kherson, and Khmelnitsky Oblasts and the city of Kyiv (Fig. 4.8).

In 2019, just like in previous years, medications were more often prescribed to older people (99.5% in 60+ group vs 86.5% in 18–29 yo group).

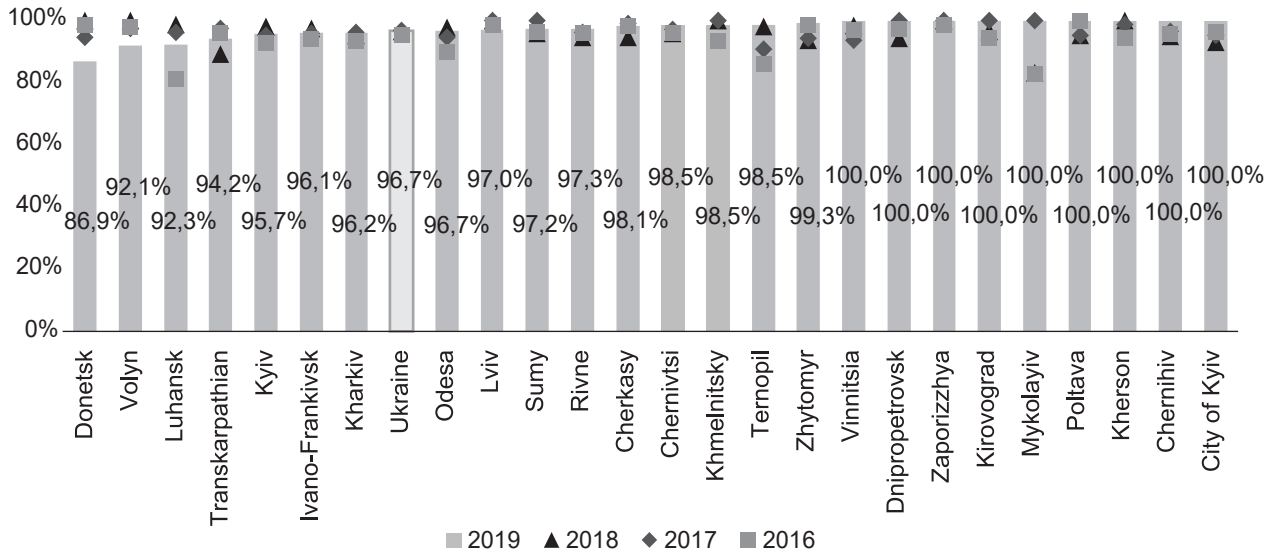

Fig. 4.8. Number of respondents who got prescriptions during their most recent hospitalization in the previous year: breakdown by Oblasts

On average, one respondent was prescribed 6.4 names of medications in 2019 (similar to survey outcomes of 2016, 2017, and 2018: 6.4, 6,.3, and 5.9, respectively). The smallest number of prescribed names is observed in Mykolayiv (4.5), Zhytomyr (4.8), Kirovograd (5.0), and Poltava (5.0) Oblasts, the biggest – in Kherson (10.4) and Sumy (13.2). As noted in Fig. 4.9, the fewest names was prescribed in 2018 in Kharkiv (3.8) and Luhansk (3.8) Oblasts.

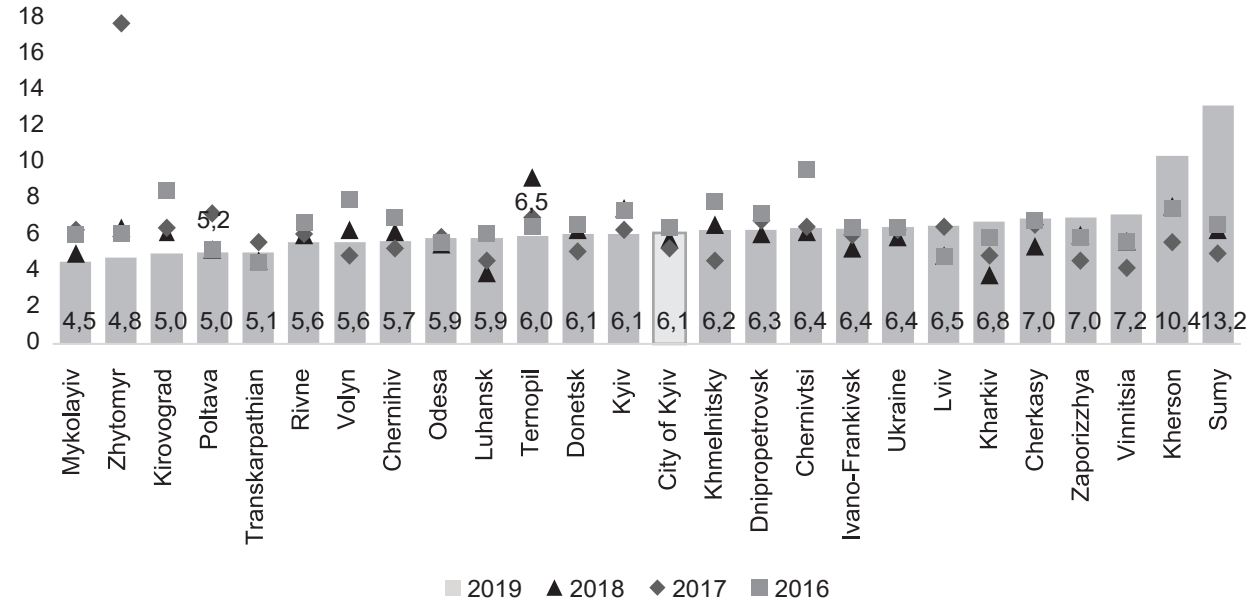

Fig. 4.9. Number of names of medications (mean) prescribed during the most recent hospitalization: breakdown by Oblasts

We do not see differences in mean number of prescribed medications by social and demographic characteristics of in-patients, except: (a) less mean number of medications prescribed to less well-off patients (5.8 "up to 1000 UAH" and 5.9 "1001–1500 UAH" vs 6.8 in other categories); (б) less mean number of medications prescribed to younger patients (5.8 names in 18–29 age group vs 6.7 in 45–59 age group).

Further survey questions were about experience of getting medications free-of-charge. Of those who was hospitalized and reported the amount of prescribed medications (N = 826) the majority (78.5%) reported not getting medications free-of-charge during their hospitalization, however 21.5% (N = 171) got them free-of-charge: on average 2.9 of names of medications were free-of-charge, or 25.7% got one name for free, 25.5% – two names, 21.1% – three names, and the rest 27.7% – from 4 to 15 names.

The next question was: "If you were provided with the medications in the hospital and you had to pay for them, how much did you pay?" This question was answered by people who were hospitalized, got prescribed and were eligible to get medications free-of-charge. Of them 60.5% (N = 59) reported not paying anything for medications provided in the hospital whereas 39.5% (N = 38) paid for these "free-of-charge" medications. Payment size varied from 5 UAH to 6000 UAH. On average, 839.32 UAH was spent for medications provided in the hospital (1024.81 UAH – SD; 720.28 UAH – median). In 2017 and 2018 the situation was similar: people had to pay for medication prescribed for their treatment course: in 2017 - 2311 UAH (SD – 3727, median – 1231 UAH); in 2018 – 2027 UAH (3186 UAH – SD; 1000 UAH – median).

Like it was for out-patient care, it was important for us to know whether the respondents bought all the prescribed drugs: 79.6% (N = 1051) bought all the prescribed drugs, however, in the previous years the proportion varied significantly: in 2018 94.5% bought all medications, 5% – almost all, and 0.5% – did not buy medications, and previously – 85% of respondents bought all the prescribed medications in 2017, in 2016 – 85.2%; almost all – 13.7% in 2017 and 11.5% in 2016. So, 2019 values are so far the lowest for all four years of survey.

Of those who did not buy medications or bought not all of them 144 reported not having money, 70 – did not think it was necessary to buy all of them, and 41 – did not find them in pharmacies. In 2018, 2017 and 2016 also, the biggest proportion was of those who did not have money for medications. The biggest difference in terms of social and demographic characteristics us observed for rural and urban populations (75.0% and 50.6% did not have money to buy medications, respectively).

We received 1309 answers to the question "How much did you pay for medications beside those provided in the hospital?", of them 88.8% paid for medications and 11.2% - did not pay. In 2018, proportion of those not paying was almost 4 times smaller (2.7%). Social and demographic breakdown is provided in Table 4.7.

In 2019, for medications besides those provided in the hospital respondents paid on average 3793.30 UAH (259.90 UAH – SD, 2000 UAH – median). Compared to 2018, median remained unchanged – 2000 UAH as well, however, the 2018 mean was significantly less: 2971 UAH (189 – SD), in 2017 – 2525.13 UAH (4265.5 – SD and 1450 UAH – median).

Additionally, please, pay attention to Fig. 3.8 (Section 3), where financial barriers to in-patient care use are provided – 83.1% of hospitalized respondents had difficulty covering hospitalization medication costs (and the proportion has not significantly changed over the four years) vs 56.7% for doctor services and 67.8% for lab tests and diagnostic work-up.

Table 4.7.

Proportion of in-patients who paid or did not pay for medications: social and demographic breakdown

			2019		2018	
			paid	did not pay	paid	did not pay
Altogether		%	88,8	11,2	97,3	2,7
		N	1175	134	1123	33
SEX	Men	%	89,4	10,6	95,9	4,1
		N	365	38	302	13
	Women	%	88,4	11,6	98,2	1,8
		N	810	96	821	20
AGE GROUP	18–29	%	85,1	14,9	96,8	3,2
		N	113	15	121	4
	30–44	%	84,3	15,7	95,9	4,1
		N	218	35	199	7
	45–59	%	91,5	8,5	97,8	2,2
		N	310	26	329	9
	60+	%	90,6	9,4	98,0	2,0
		N	534	58	474	13
AREA TYPE	Urban	%	86,8	13,2	97,3	2,7
		N	716	99	703	20
	Rural	%	93,3	6,7	97,3	2,7
		N	459	35	420	13
LEVEL OF EDUCATION	Primary or incomplete high	%	91,7	8,3	93,6	6,4
		N	65	6	45	3
	Complete secondary	%	87,1	12,9	96,8	3,2
		N	264	28	260	9
	Vocational	%	93,7	6,3	98,6	1,4
		N	204	16	208	4
	Incomplete higher (college)	%	88,6	11,4	97,3	2,7
		N	324	39	325	8
	Basic higher (Bachelor)	%	85,4	14,6	96,1	3,9
		N	65	11	54	2
	Complete higher (Master)	%	86,9	13,1	97,6	2,4
		N	247	34	229	7
HOUSEHOLD INCOME PER PERSON	Up to 1000 UAH	%	86,3	13,7	92,2	7,8
		N	146	16	82	9
	1001–1500 UAH	%	90,6	9,4	96,8	3,2
		N	182	21	174	6
	1501–2000 UAH	%	90,2	9,8	98,6	1,4
		N	225	21	250	5
	2001–2500 UAH	%	90,7	9,3	98,0	2,0
		N	138	15	124	3
	More than 2500 UAH	%	86,6	13,4	98,2	1,8
		N	240	34	221	3

4.5. Total Expenditures for Medicines

At the end of the survey there were a couple of summary questions asked in order to (a) find out treatment expenditures not related to own disease experience, but, for instance, were incurred because of other family member disease; (б) minimize recall bias. Also, we asked all respondents about expenditures for medications in the previous 30 days.

On average, in 2019 in Ukraine 56.0% of respondents (vs 54.8% in 2018, 52.5% in 2017) report incurring expenditures for medications as shown in Fig. 4.10. The mean expenditure in the previous 30 days is 704 UAH (572 UAH in 2018, 570 UAH in 2017, and 550 UAH in 2016). Couple of more Oblasts have medication expenditures close to overall Ukrainian mean: Sumy

(674 UAH and 64.4% payers), Odessa (660 UAH, with one of the smallest proportion of payers 28.2% in 2019 vs 561 UAH and 33.4% in 2018), Cherkassy (715 UAH with one of the biggest proportion of payers 70.8%), Ivano-Frankivsk (725 UAH and 66.1% payers), Chernivtsy (750 UAH and 62.1% payers).

The smallest expenditure is reported from Zhytomyr Oblast just like in the previous three years: 340 UAH (and 66.0% payers) in 2019, 381 UAH (and 55.1% payers) in 2018, 300 UAH and 238 UAH in 2017 and 2016, respectively. Kherson Oblast also demonstrates low expenditures in the recent years: 398 UAH in 2019 and 52.3% of those incurring expenditures, 55.0% of those spending money for medications in 2018 and mean expenditure – 356 UAH, 425 UAH in 2017 and 353 UAH in 2016.

Consistently higher expenditures with the significant proportion of people with experience paying for medications in the previous 30 days are reported from Ternopil Oblast, in the previous year mean expenditure has increased 1.5-fold and differs a lot from the rest of the Oblasts: 1625 UAH in 2019 (61.8% of those incurring expenditures), 1103 UAH in 2018 (75.8% of those incurring expenditures), 1118 UAH in 2017 and 916 UAH in 2016.

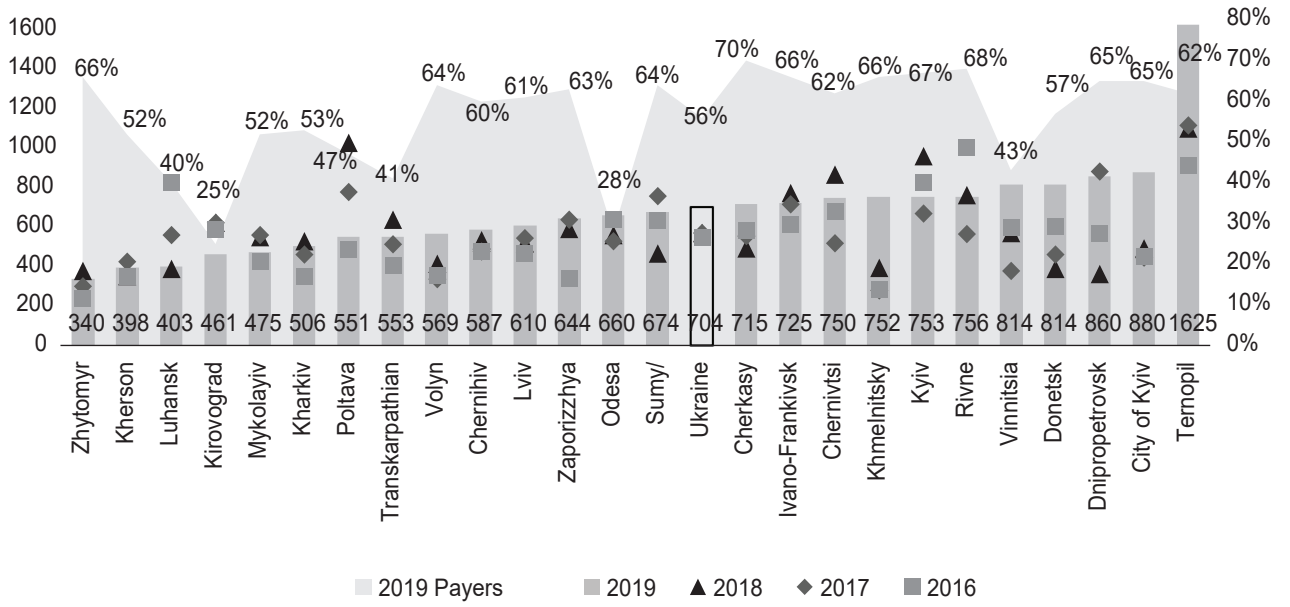

Fig. 4.10. Proportion of payers and amount of payment for medications in the previous 30 days (2016–2019): breakdown by Oblasts

Kirovograd Oblast reports the smallest proportion of respondents incurring medication costs in the previous 30 days – 25.2%, as well as one of the smallest mean expenditures for medications – 461 UAH (in 2018, proportion of users was also small – 31.6%, but the mean was a bit higher than in 2019 – 622 UAH). It is worthwhile to point out Odessa and Vinnitsia Oblasts with relatively small proportion of payers 28.2% and 42.7%, especially compared to their mean expenditures.

In the last four years when we looked at mean medication expenditures in the previous 30 days, the biggest variability was reported from Luhansk (825 UAH in 2016 vs 393 UAH in 2018, and 403 UAH in 2019), Poltava (1029 UAH in 2018 vs 551 UAH in 2019, and 487 UAH in 2016) and Dnipropetrovsk (364 UAH in 2018 vs 860 UAH in 2019, and 883 UAH in 2017) Oblasts.

Regarding the capital, the city of Kyiv demonstrates top two mean medication expenditure in the previous 30 days (880 UAH) and significant proportion of payers (64.5%). In the previous three years, mean expenditure was almost twice as low: 494 UAH in 2018, 446 UAH in 2017, and 452 UAH in 2016.

Thus, in 2019 "Health Index. Ukraine" offers a new cross-section for out-of-pocket expenditures in case of self-treatment, use of out-patient and in-patient care, overall for the previous 30 days, as well as experience of getting medications free-of-charge or with partial payment under Affordable Medicines program.

In general, we see that expenditures for medications increase with each year, but there are couple of directions noted with positive dynamics: there is increase in the proportion of out-patient care users who were reimbursed for medications; there is a decrease in the proportion of people buying medications for self-treatment.

Regionally, looking at out-of-pocket expenditures for medications in the last four years we can consistently see extremely high mean expenditures in Ternopil Oblast that should call attention of both Oblast level and national level senior health managers, whereas Zhytomyr and Kherson Oblasts have the lowest mean expenditures for medications in Ukraine.

Considering scheduled changes in funding of specialized and hospital care that need to be implemented in April 2020, it is expected to see both decreased proportion of payers and amount of expenditures for medications during in-patient care in 2021.

SECTION 5. SATISFACTION WITH HELTH CARE AND PERCEPTION OF HEALTH CARE REFORM

Key results

- According to "Health Index. Ukraine-2019" survey, in general the majority of population are satisfied with performance of different health care elements in Ukraine today. For example, people are the most satisfied (answers completely satisfied and rater satisfied) with pediatricians – 74.1% of respondents, GPs or family doctors – 73.1%, dentists – 73.5%. They are a bit less satisfied with specialists working on an out-patient basis – 61.5%, in maternity hospitals – 61.1%, and the least satisfied – in hospitals (51.9%).
- Respondents perceiving their health as good are more satisfied with medical care than those perceiving their health as bad. In 2019, the highest level of satisfaction with all health care components were reported by Volyn, Donetsk, and Ternopil Oblasts.
- In 2019, the survey showed that the vast majority of respondents believes that quality, affordability and geographical accessibility or working hours of the three levels of care (family doctor/GP, out-patient care doctors and in-patient care doctors) have not changed in the previous year.
- The highest level of concern of respondents in 2019 is caused by such health care problems as high price of medications (26.0%), corruption of the Ministry of Health (17.7%), and high treatment cost (12.1%).
- In 2019, the majority of respondents reported that they do not support the governmental policy of healthcare reform (completely unsupportive – 42.1%, rather unsupportive – 25.0%). At the same time, completely supportive of reforms are 9.5% of respondents, and rather supportive – 23.4%.
- At the time of "Health Index. Ukraine-2019" survey conduction, 87.1% of respondents reported that all their household members had their declarations signed, and only 6.0% – none of their household members signed their declarations. The highest proportion of households where all members signed their declarations was reported for Lviv (95.7%) and Mykolayiv (95.6%) Oblasts, the lowest – in Odessa (79.5%) and Ternopil (79.7%).

Satisfaction with health services is considered one of the most important indicators of quality of care as long as patient satisfaction is viewed both as an estimated integrated performance indicator for a given health care facility[13], and as a strategic goal of healthcare policy. Satisfaction

13 Gorachuk V.V. Medical and Social Substantiation of the Model of Health Care Quality Management System: author's ref. dis. d. med. n.: spec. 14.02.03 "Social Medicine"/Shupyk National Medical Academy of Postgraduate Education. Kyiv, 2015. 46 p.

level assessment can be an important principle of evidence-based management in order to make managerial decisions regarding healthcare quality improvement in the country and political decisions regarding health system transformation[14].

Another important direction of the study – looking at people's expectations of the reform and level of their support of the healthcare reformation ideas. These outcomes are important for political decisions, building efficient communication campaigns for stakeholders and population in general[15], understanding policy implementation processes.

Current health reform was launched in Ukraine in 2018, some of its elements (like hospital care reform) are scheduled to be launched in 2020, that is why this assessment of the reform by respondents can be considered preliminary. As part of the survey and outcome data analysis, special attention was given to assessing quality and accessibility of primary health care services (GP and family doctor) now being in the focus of the health reform.

The structure of questions about satisfaction is taken from the British values survey, the rest of the questions on the reform is developed by the Health Index researches. We were coming from the fact that "patient satisfaction" construct has multidimensional and differentiated nature[16] and is related to different healthcare subjects.

5.1. Satisfaction with Medical Care

Satisfaction with medical care was measured with help of a series of questions: "Based on your own experience visiting private or public health care facilities or known experience of your family members or people close to you, what is your level of satisfaction or dissatisfaction with health care provided today?" Answer options are placed on a scale from "1 – completely dissatisfied" to "4 – completely satisfied".

According to "Health Index. Ukraine-2019" survey, in general the vast majority of population are satisfied with performance of different health care elements in Ukraine today. For all line items satisfaction level exceeds 50%.

For example, people are the most satisfied (answers completely satisfied and rater satisfied) with pediatricians – 74.1% of respondents, GPs or family doctors – 73.1%, dentists – 73.5%. A bit less satisfied with care in hospitals – 51.9%, in maternity hospitals – 61.1%, out-patient care specialists – 61.5% (Fig. 5.1).

In 2016, the highest level of satisfaction was reported for ambulance – 73.2%, the lowest – in-patient care – 56.4%. In 2019, people are the most satisfied with pediatricians – 74.1%, the least, just like in previous years – in-patient care – 51.9%.

Comparison of satisfaction levels shows that people during all survey years have been least satisfied with hospital care (in-patient care). Services of family doctors and GPs demonstrated positive dynamics in assessments, although the last measurement showed some decrease. The most negative dynamics is shown for ambulance services. In general, overall level of satisfaction with all healthcare constituents in the last four years exceeded 50%.

14 Shkrobanets I.D., Biduchak A.S., Kardash E.V. Study of Public Opinion of Patients Concerning Availability, Satisfaction of Rendering Medical Services and Attitude to Reforming Public Health // Clinical and experimental pathology. 2013. T. XII, № 4 (46). p. 155–157.
15 Cavanagh, S.; Chadwick K. (2005). Health needs assessment: a practical guide. National Institute for Health and Clinical Excellence (NICE), London, UK.; McGregor, J. A., Camfield, L., & Woodcock, A. (2009). Needs, Wants and Goals: Wellbeing, Quality of Life and Public Policy. Applied Research in Quality of Life, 4(2), 135–154.
16 9 Singh, J. (1989).The Patient Satisfaction Concept: a Review and Reconceptualization. Advances in Consumer Research, 16: 176–179. Retrieved from: http://acrwebsite.org/volumes/6900/volumes/v16/NA-16

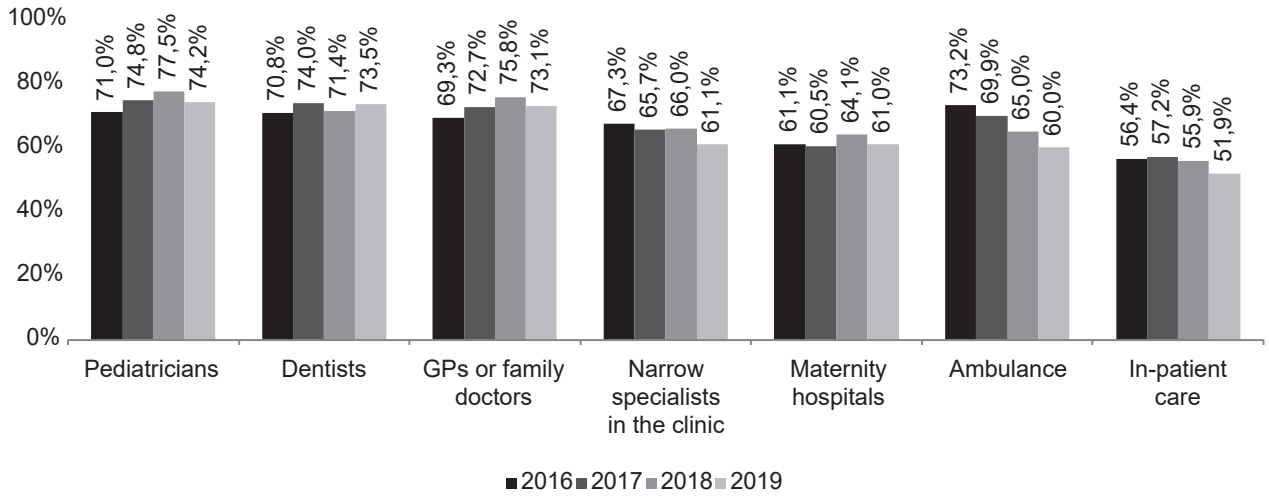

Fig. 5.1. Overall satisfaction of people with health services (answers rather satisfied and completely satisfied) by years

Comparison of satisfaction levels of representatives of different social and demographic groups reveals the following differences (Table 5.1):

- for women there was a bit higher level of satisfaction with the majority of health care aspects than for men;
- rural citizens are a bit more satisfied with health services than urban citizens with exception of ambulance;
- young people (18-29 years of age) are the most satisfied with health services except ambulance and in-patient care (people over 60 are the most satisfied with these aspects of health services);
- respondents perceiving their health as good are more satisfied with medical care than those perceiving their health as bad (the biggest difference in health services assessment is reported for maternity hospitals).

Table 5.1.

Breakdown of respondents satisfied with health services (answers rather satisfied and completely satisfied) by several social and demographic characteristics, %

	District GPs/family physicians	Pediatricians	Dentists	Out-patient care specialists	Ambulance	In-patient care	Maternity hospital care
Ukraine	73,1	74,1	73,5	61,1	60,8	51,9	61,0
SEX							
men	71,8	71,3	72,8	60,9	59,5	50,8	57,6
women	74,1	76,1	74,1	61,2	61,7	52,7	63,0
AGE GROUP							
18–29	76,0	79,1	79,6	68,5	59,9	51,5	65,8
30–44	71,8	75,8	73,6	59,8	59,8	49,2	61,6
45–59	72,3	70,7	73,2	58,0	57,9	52,3	58,1
60+	73,3	67,1	68,4	60,8	64,4	54,3	53,3
AREA TYPE							
Urban	72,2	73,1	72,5	59,3	62,0	50,3	59,7
rural	75,1	76,3	75,8	64,8	58,3	54,9	63,6
LEVEL OF EDUCATION							
Primary or incomplete high	74,9	77,7	73,5	68,7	71,8	64,5	71,3
Complete secondary	74,7	76,4	71,5	63,5	61,9	55,0	60,7
Vocational	73,3	74,4	67,7	58,9	55,3	48,4	61,2
Incomplete higher (college)	74,3	75,0	75,6	61,8	65,0	54,3	60,6
Basic higher (Bachelor)	67,0	69,4	70,9	54,0	52,8	43,4	52,7
Complete higher (Master)	71,6	72,8	76,9	60,8	60,0	49,9	63,0
Degree (PhD, Doctor of Sciences)	78,0	73,1	83,2	93,0	20,0	71,5	89,7
HOUSEHOLD INCOME PER PERSON							
Up to 1000 UAH	74,2	77,2	74,8	66,2	63,4	57,3	66,6
1001–1500 UAH	73,4	75,3	73,5	61,0	56,7	50,8	60,5
1501–2000 UAH	71,8	72,0	68,6	61,7	62,7	47,5	56,8
2001–2500 UAH	71,6	68,7	69,1	58,9	57,0	47,8	53,8
More than 2500 UAH	75,0	74,0	75,2	59,5	64,7	53,5	62,7
HEALTH SELF-ASSESSMENT							
Very poor	62,2	52,2	45,3	54,4	60,5	48,9	26,0
Poor	68,8	63,0	59,7	57,2	59,4	49,1	49,7
Moderate, not bad, but not good	69,7	66,6	69,0	55,4	59,8	49,7	48,3
Good	76,2	78,4	77,8	64,9	60,9	52,6	66,8
Very good	81,9	86,3	85,5	77,8	67,6	65,4	77,1

Comparison of the situation in regions (Table 5.2) leads to the conclusion that in 2019 the highest level of satisfaction with all health care constituents were reported by Volyn, Donetsk, and Ternopil Oblasts (whereas Kharkiv Oblast that was one of the top for 2018 survey, showed quite low scores almost in all health care aspects in 2019).

Table 5.2.

Breakdown of respondents satisfied with health services (answers rather satisfied and completely satisfied) by regions, %

	District GPs/family physicians	Pediatricians	Dentists	Out-patient care specialists	Ambulance	In-patient care	Maternity hospital care
Ukraine	73,1	74,1	73,5	61,1	60,8	51,9	61,0
Vinnytsia	76,8	70,1	72,9	67,3	62,9	55,5	56,5
Volyn	86,3	87,5	86,8	84,0	73,3	73,3	78,9
Dnipropetrovsk	62,9	72,7	57,1	49,2	70,8	53,7	55,6
Donetsk	78,2	86,7	85,3	67,0	79,9	69,0	87,0
Zhytomyr	84,6	89,2	76,6	64,6	71,6	48,5	74,7
Transkarpathian	74,1	79,1	68,2	50,2	45,9	30,9	46,2
Zaporizzhya	57,3	61,9	63,1	39,1	52,9	38,5	42,3
Ivano-Frankivsk	80,5	83,2	81,3	56,9	64,6	52,4	65,2
Kyiv	74,7	83,3	79,4	74,8	67,9	62,7	80,3
Kirovograd	66,3	60,2	61,7	59,9	25,3	33,7	72,7
Luhansk	80,2	70,1	67,8	57,5	66,8	58,6	67,3
Lviv	73,6	73,2	81,3	70,1	46,5	59,2	69,0
Mykolayiv	60,4	72,0	64,7	66,0	60,9	43,5	59,6
Odessa	78,3	76,0	73,5	57,1	50,7	37,8	44,4
Poltava	64,5	65,1	74,4	52,1	61,7	55,3	62,1
Rivne	79,9	78,8	83,4	71,3	60	67,1	78,9
Sumy	81,8	85,4	88,4	67,6	66,6	51,8	63,1
Ternopil	83,9	89,9	88,5	77,4	72,4	57,9	72,9
Kharkiv	60,4	39,9	49,6	38,9	30,6	23,2	20,9
Kherson	84,9	87,6	76,3	77,4	74,3	54,2	65,6
Khmelnitsky	79,5	82,2	87,6	79,1	69,8	69,2	84,6
Cherkasy	71,5	77,6	71,8	70,3	68,4	68,2	68,1
Chernivtsi	79,3	80,3	81,6	73,2	70,4	61,3	68,4
Chernihiv	75,2	87,1	84,3	73,0	64,4	57,7	89,4
City of Kyiv	65,3	60,0	72,7	48,6	54,6	37,2	46,0

In some Oblasts level of satisfaction with different health care components appeared to be nonuniform. Thus, in Kirovograd Oblast there was quite a high level of satisfaction reported for maternity care (72.7%) and GPs / family doctors (66.3%), but low level of satisfaction for ambulance (25.3%) and in-patient care (33.7%). In Odessa Oblast, people are quite satisfied with GPs / family doctors (78.3%) and less – with in-patient care (37.8%).

Regional differences between the highest and the lowest levels of satisfaction with individual health care components on average amount to almost 50 percentage points (p.p.):

- in Volyn Oblast people are the most satisfied with GPs / family doctors (86.3%), in Zaporizzhya – the least (57.3%) (Fig. 5.2);
- Ternopil Oblast is the most satisfied with pediatricians (89.9%), Kharkiv Oblast – the least (39.9%) (Fig. 5.3);
- as for dentists, the most satisfied are in Sumy Oblast (88.4%), the least – in Kharkiv Oblast (49.6%);
- as for out-patients care specialists, the most satisfied are in Volyn Oblast (84%), the least – in Kharkiv Oblast (38.9%);
- as for the ambulance, the most satisfied are people in Donetsk Oblast (79.9%), the least – in Kirovograd Oblast (25.3%);
- Volyn Oblast is the most satisfied with in-patient care (73.3%), Kharkiv Oblast – the least (23.2%) (Fig. 5.4);
- as for maternity care, the most satisfied are people in Chernihiv Oblast (89.4%), the least – in Kharkiv Oblast (20.9%) (Fig. 5.5).

Thus, despite of the fact that the overall level of satisfaction with health care is relatively high, we can observe regional differences in assessing different health care components as well as significant difference is perception of care by people who perceive their health as very good and those perceiving as very bad (the higher is the level of health self-assessment, the higher is the level of satisfaction with care).

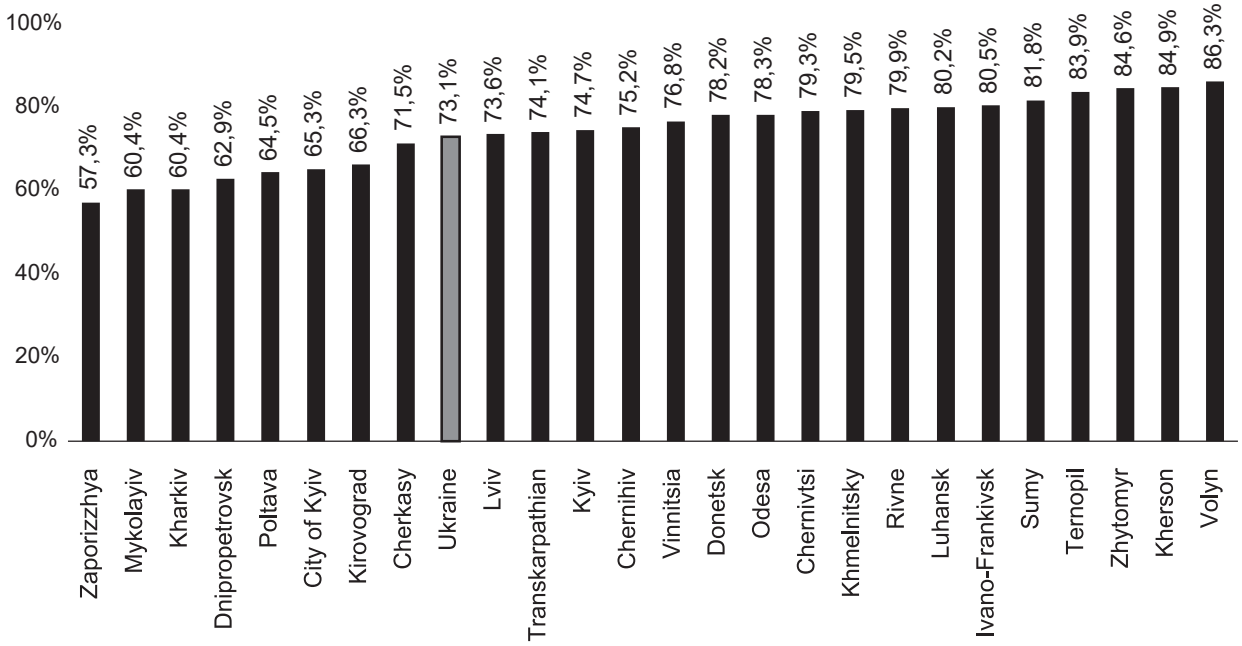

Fig. 5.2. Satisfaction with health services provided by GPs / family doctors: breakdown by Oblasts (answers rather satisfied and completely satisfied)

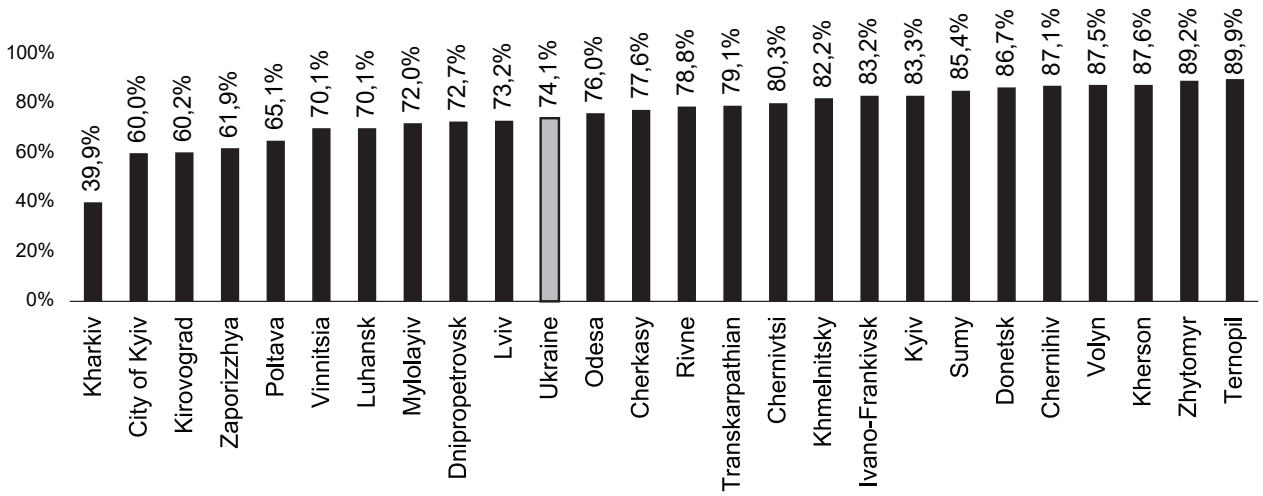

Fig. 5.3. Satisfaction of people with health services provided by pediatricians: breakdown by Oblasts (answers rather satisfied and completely satisfied)

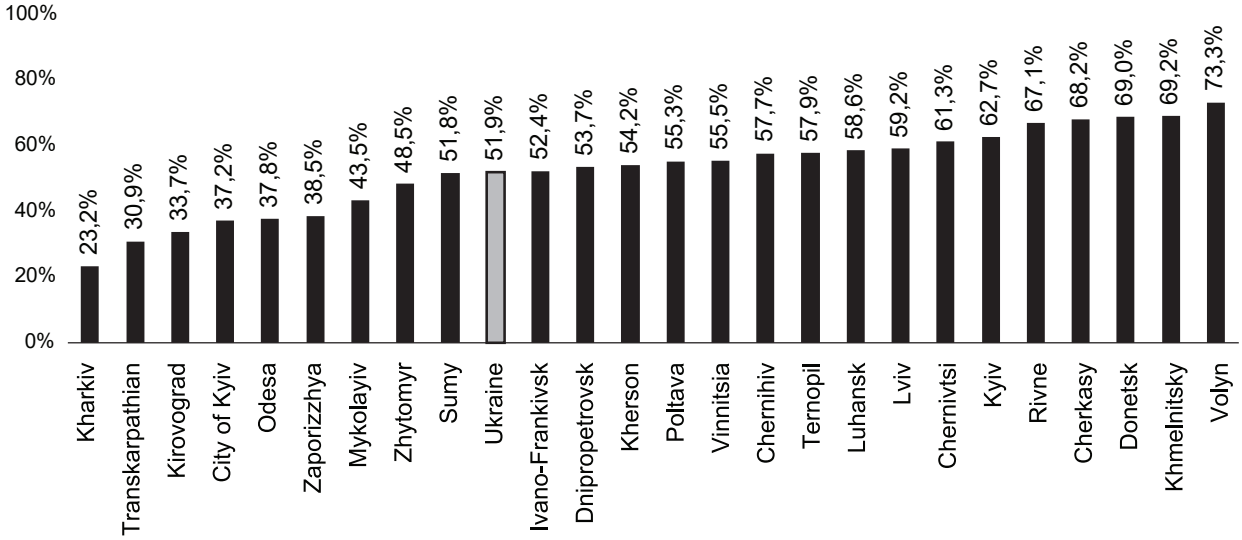

Fig. 5.4. Satisfaction of people with in-patient health services: breakdown by Oblasts (answers rather satisfied and completely satisfied)

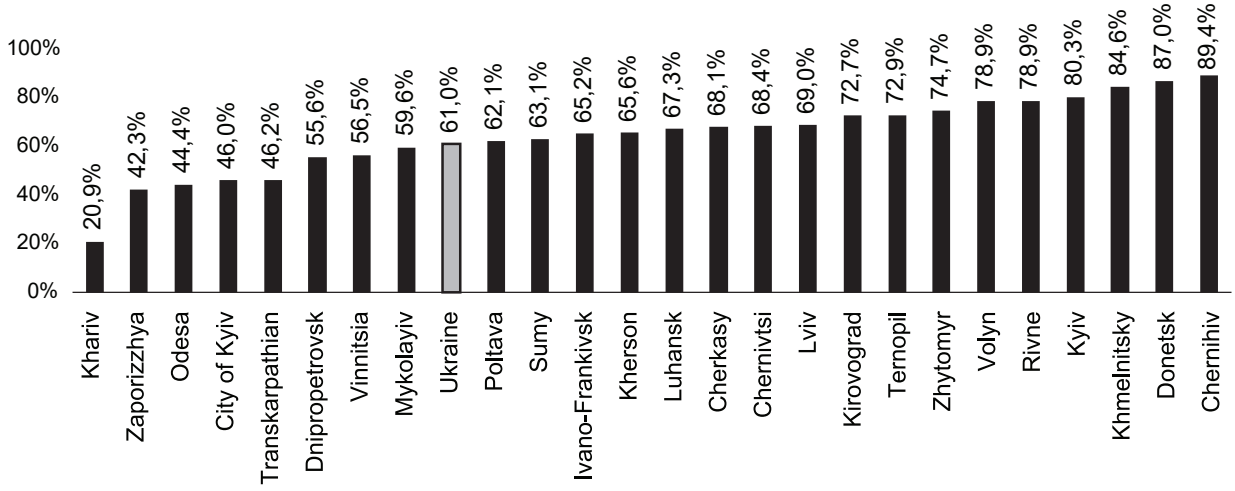

Fig. 5.5. Satisfaction of people with maternity hospital care: breakdown by Oblasts (answers rather satisfied and completely satisfied)

5.2. Perception of Changes in Health Care Services Provision

In the course of the survey respondents were offered to assess changes in three healthcare aspects that they observed in the previous year (quality, affordability and geographical accessibility or working hours) for the three levels of care – family doctor/ GP, out-patient specialists and in-patient care (hospital).

Thus, the 2019 survey revealed that 14.3% of respondents believe that quality of care provided by a family doctor/ GP or pediatrician has improved. At that, 69.7% of respondents believe that quality has not changed, and 16.0% chose the option has worsened. Regarding changes in affordability of care provided by a family doctor/ GP or pediatrician, improvement was reported by 5.8% of respondents, worsening – 26.4%. With that 80.8% of respondents also believed that geographical accessibility of such care has not changed.

In general, according to respondents, geographical accessibility or working hours of different levels of care has undergone little improvement in the previous year. The worst situation is with care affordability – of all the aspects of care this one has got the highest score for worsened, and this pertains to all levels of care being assessed.

Overall perception of changes in care at all levels is provided in Fig. 5.6.

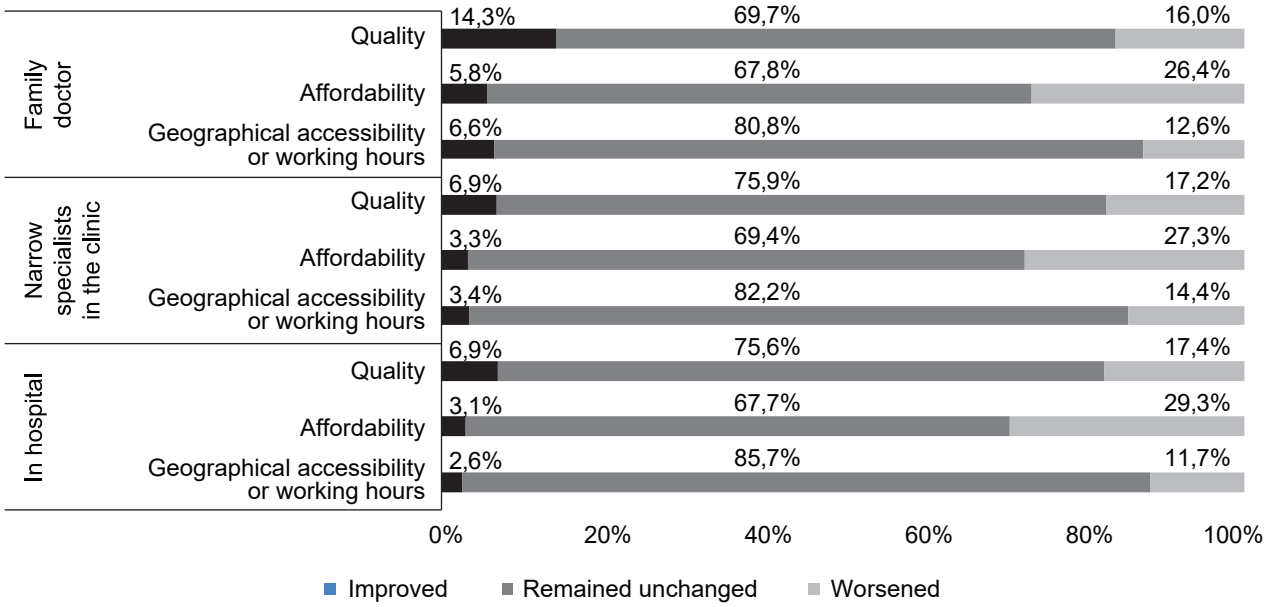

Fig. 5.6. Assessment of changes in quality and accessibility of different levels of care

Of those who in 2019 believed that quality of care provided by a family doctor/ GP or pediatrician has improved, 73.3% report improvement in doctors' attitudes towards patients. Of those who believe that quality has worsened, 55.7% reported worsening of effectiveness of treatment (Fig. 5.7).

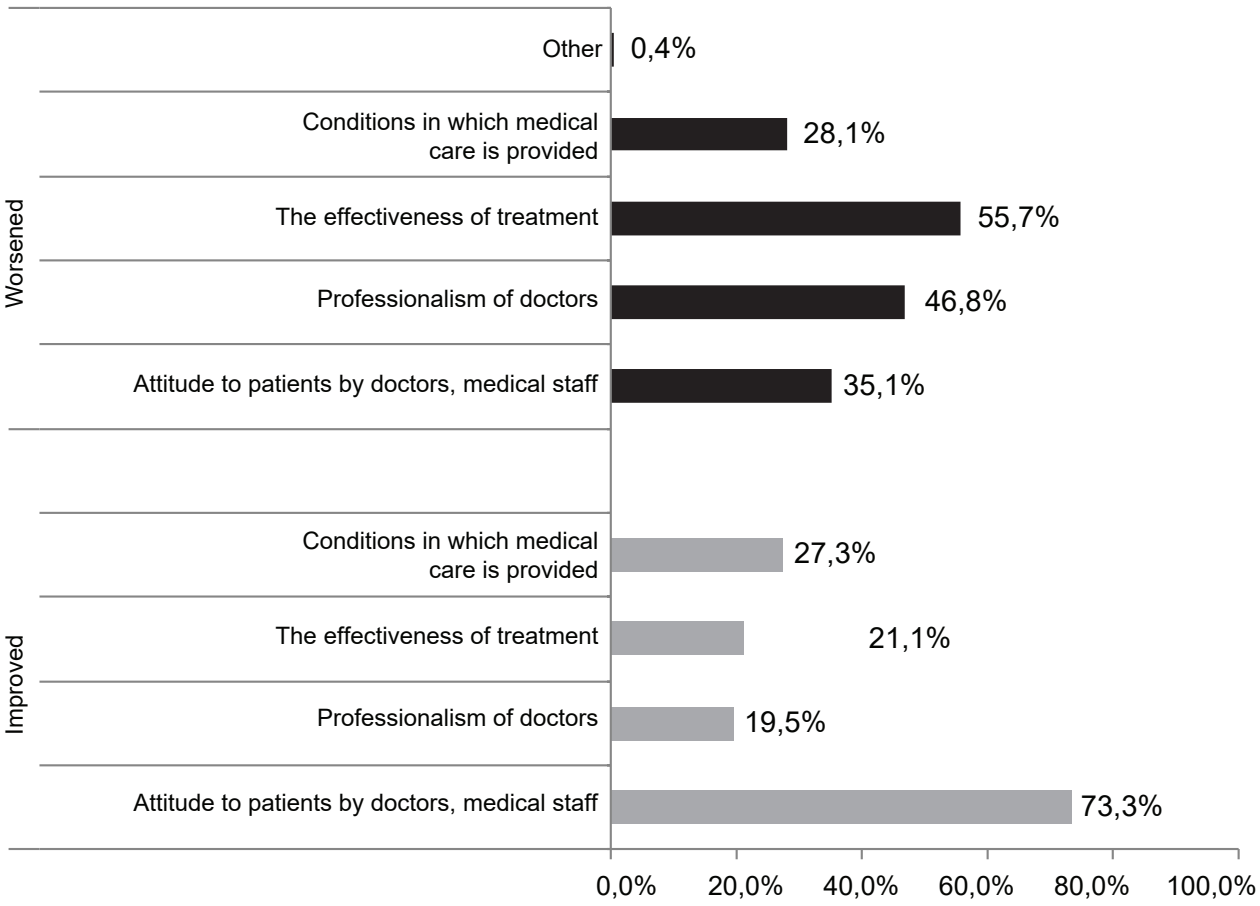

Fig. 5.7. Breakdown of answers to the question "What exactly has improved/ worsened in care quality provided by a family doctor/ GP or pediatrician in the previous 12 months" (respondents had a multiple choice), proportion of all respondents reporting relevant change in service

Also, respondents reported improvement in attitudes on part of doctors and healthcare workers when assessing changes in care provision by out-patient and in-patient care specialists.

Fig. 5.8 provides dynamic changes in perceptions of quality of care provided by a family doctor/ GP or pediatrician: in 2018, the proportion of positive answers was 5.4%, in 2017 – 7.4%.

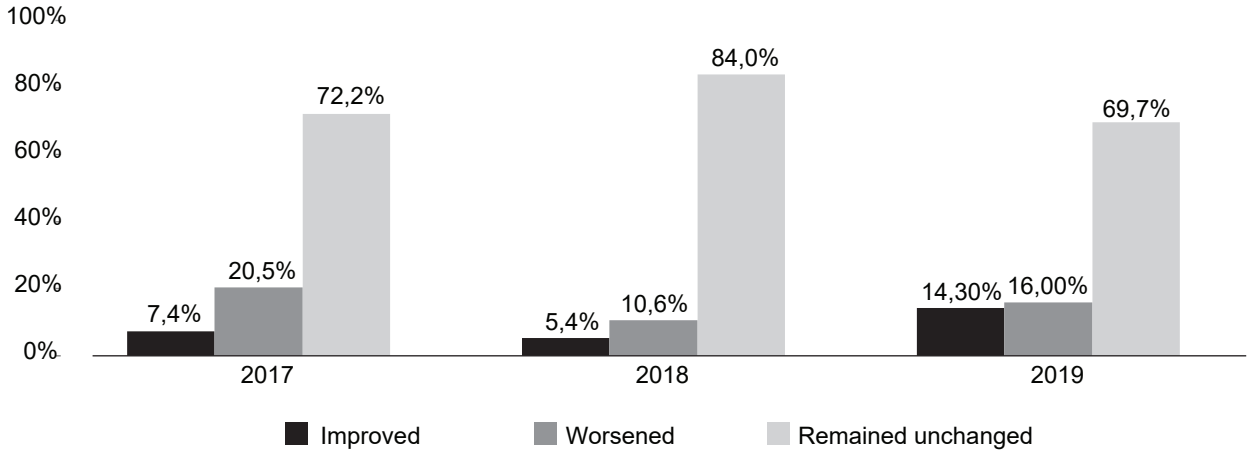

Fig. 5.8. Breakdown of answers to the question "In the previous 12 months, to your opinion has the quality of care provided by a family doctor/ GP or pediatrician (which in general practice/ family medicine clinic or primary health care center) improved, worsened or remained unchanged"

It is worth looking at assessment of affordability of care provided by a family doctor/ GP or pediatrician: in 2017, almost half of respondents reported worsening of affordability, in 2019 – 26.4% (Fig. 5.9).

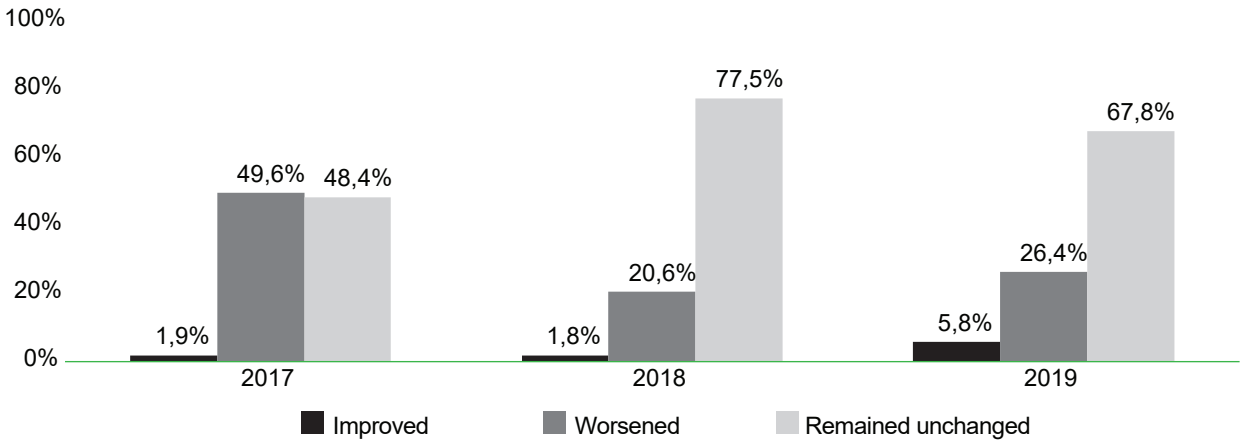

Fig. 5.9. Breakdown of answers to the question "In the previous 12 months, to your opinion has the affordability of care provided by a family doctor/ GP or pediatrician (which in general practice/ family medicine clinic or primary health care center) improved, worsened or remained unchanged"

5.3. Perception of Challenges of Health Care System and Responsibility for Improvement of Its Performance

During the survey respondents were asked to provide their answers to the question "To your opinion, what are the main challenges in health care system? Name up to three starting from the main one."

If we look at the top health care system challenges, people are the most concerned about: high cost of medications (21.9% in 2017, 21.0% in 2018, and 26.0% in 2019). Respondents were also concerned about corruption at the Ministry of Health (20.2% in 2017, 20,3% in 2018, and 17.7% in 2019), high cost of treatment (12.1% in 2019) (Fig. 5.10).

Respondents who assessed their health as very bad or bad reported high cost of medications and high cost of treatment being the biggest problems (in 2018, these were high cost of medications and informal payments to doctors). High cost of medications is also of most concern to people over 60 (38.6% of respondents of this age group reported it to be the main problem).

Analysis shows significant regional differences in assessments of different healthcare system problems. Thus, high cost of medications is believed to be the main problem in Chernihiv (45.6%), Donetsk (45.2%), but only 10.1% in Transkarpathian Oblasts. Corruption at the Ministry of Health bothers 32.3% of respondents in Kherson Oblast, this is their top priority problem, and 8.9% – in Sumy Oblast. People living in the city of Kyiv are concerned with high cost of treatment (20.6%), whereas last year 23.7% of respondents reported their biggest problem being lack of professionalism and competencies of health care workers.

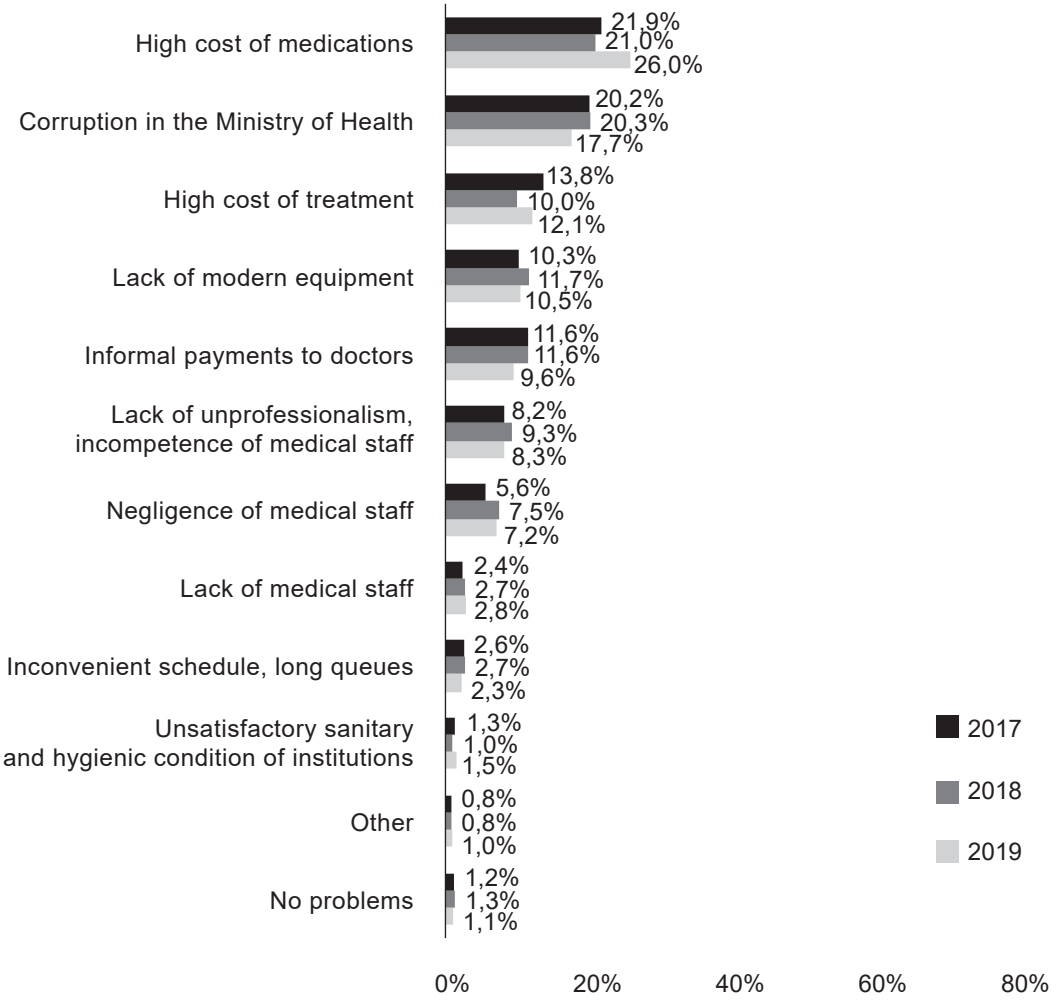

Fig. 5.10. The most important problem in heath care: breakdown by survey years

In 2019, just like in previous years almost three quarters (75.6%) of respondents believe that Minister of Health is the one responsible for improvements in healthcare facilities performance (Fig. 5.11). At the same time, according to the respondents it significantly depends on a Head Doctor of a healthcare facility (37.7%). Proportion of people who believe that improved performance of health care facilities depends on the President of Ukraine decreases and it is 23.8%. Role of local governments, according to respondents, remains insignificant.

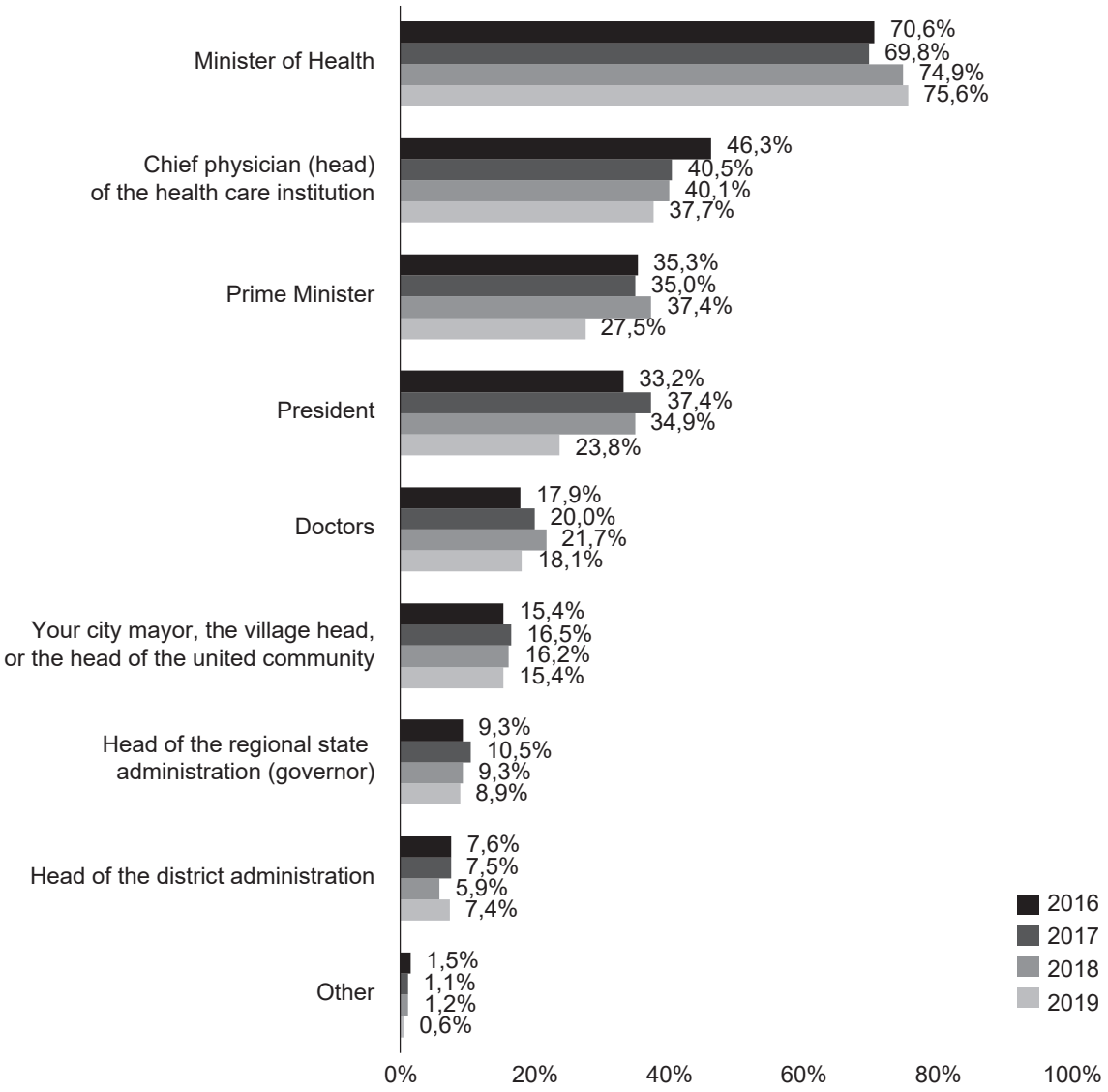

Fig. 5.11. Responsibility for improved performance of health care facilities: breakdown by survey years

In 2019, the survey included a new question about perceptions of health care reform, in particular: "Are you supportive of healthcare reforms that are being implemented currently by the government or not?" Almost two thirds of respondents reported that they are not supportive of the reforms (completely not supportive – 42.1%, rather not supportive – 25.0%). 9.5% of respondents are completely supportive and 23.4% -rather supportive (Fig. 5.12).

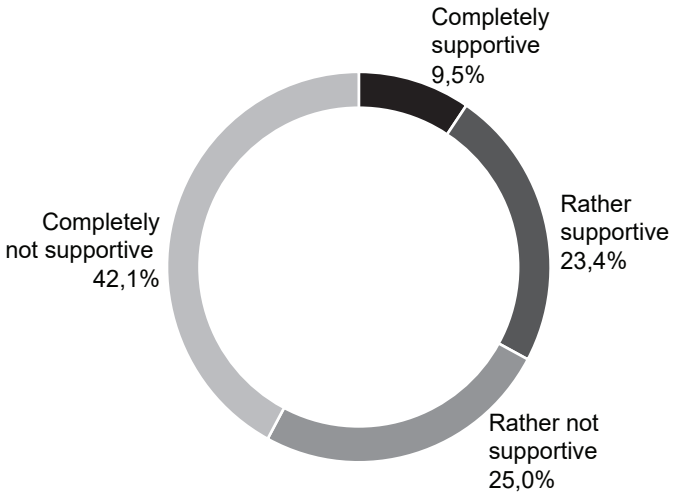

Fig. 5.12. Support of the healthcare reform implemented by the government

There is not much difference in support of the governmental healthcare reform policy by sex and type of area. Although, higher level of support is declared by young people and people with high self-assessment of own health and better financial situation in their family, the lowest – by people over 60 and those who self-assess their health as poor. Regional differences are significant. The highest levels of reform support were demonstrated by respondents from Khmelnitsky (71.7% of completely supportive and rather supportive answers), Rivne (69.1%), and Ternopil (59.8%) Oblasts. As for the highest level on non-support, it was demonstrated by respondents from Kirovograd (93.3% of rather unsupportive and completely unsupportive answers), Luhansk (91.2%), and Chernihiv (87.8%) Oblasts (Table 5.3, Fig. 5.13).

In the previous years, respondents were asked about the need to reform healthcare, and the level of support for this need was high although with a tendency to decrease: in 2016–2018, subjectively perceived need in healthcare reforms has decreased from 92.9% to 73.1%.

Table 5.3.

Breakdown of answers to the question "Are you supportive of healthcare reforms that are being implemented currently by the government or not?" by regions, %

	Completely supportive	**Rather supportive**	**Rather unsupportive**	**Completely unsupportive**
Ukraine	9,5	23,4	25,0	42,1
Vinnytsia	20,3	22,5	18,4	38,8
Volyn	15,2	41,3	24,8	18,7
Dnipropetrovsk	12,7	23,0	32,5	31,7
Donetsk	4,2	11,1	8,9	75,8
Zhytomyr	4,9	41,5	29,3	24,3
Transkarpathian	6,8	20,8	35,7	36,7
Zaporizzhya	1,8	13,5	37,7	47,0
Ivano-Frankivsk	13,7	36,1	28,8	21,4
Kyiv	10,0	31,9	27,9	30,2
Kirovograd	0,7	6,0	55,7	37,6
Luhansk	3,9	4,9	17,5	73,7
Lviv	10,2	47,1	22,4	20,4

Mykolayiv	3,1	13,3	26,5	57,1
Odessa	3,9	18,9	24,2	53,0
Poltava	3,3	20,9	30,6	45,2
Rivne	18,8	42,3	19,8	19,1
Sumy	9,6	34,9	30,3	25,1
Ternopil	31,1	28,8	19,0	21,2
Kharkiv	3,3	11,5	36,1	49,2
Kherson	8,4	31,8	24,1	35,7
Khmelnitsky	40,9	30,8	14,4	13,9
Cherkasy	17,6	20,7	18,8	43,0
Chernivtsy	13,4	24,0	16,8	45,8
Chernihiv	0,7	11,5	15,5	72,3
City of Kyiv	5,1	26,7	28,0	40,2

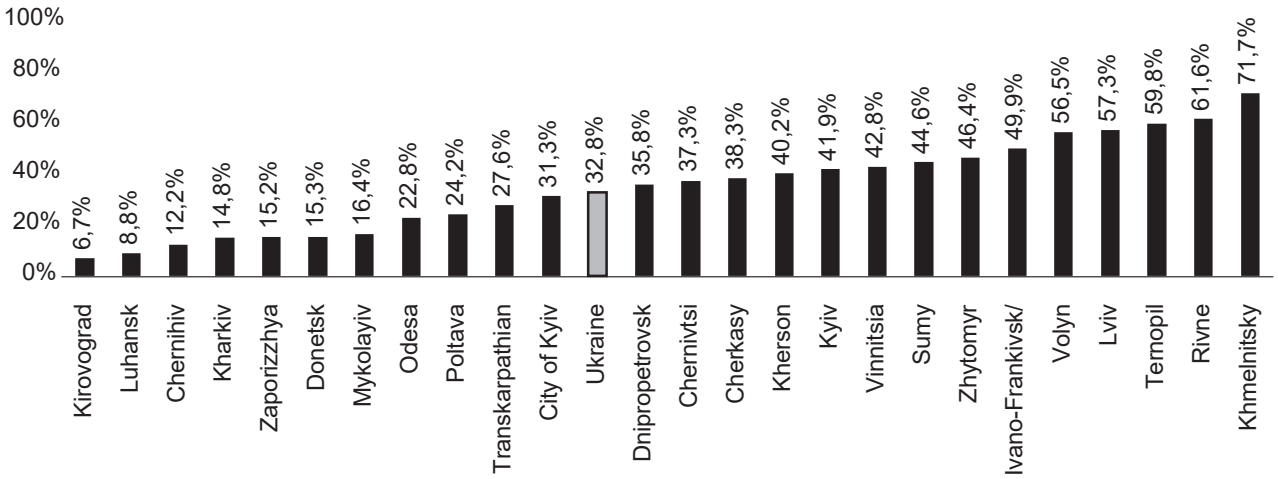

Fig. 5.13. Support of the healthcare reform implemented by the government: breakdown by Oblasts (answers rather supportive and completely supportive)

5.4. Experience Choosing a Family Doctor

In 2018, campaign to sign declarations with family doctors was launched. At the time of "Health Index. Ukraine-2019" round four conduction, 87.1% of respondents reported that all their household members had their declarations signed, and only 6.0% – none of their household members signed their declarations (Fig. 5.14). At the same time, 82.4% of respondents gave positive answer to the question "Do you personally have such declaration signed?", another 4% - don't have it signed but made attempts to sign it, and 13.5% did not attempt to sign.

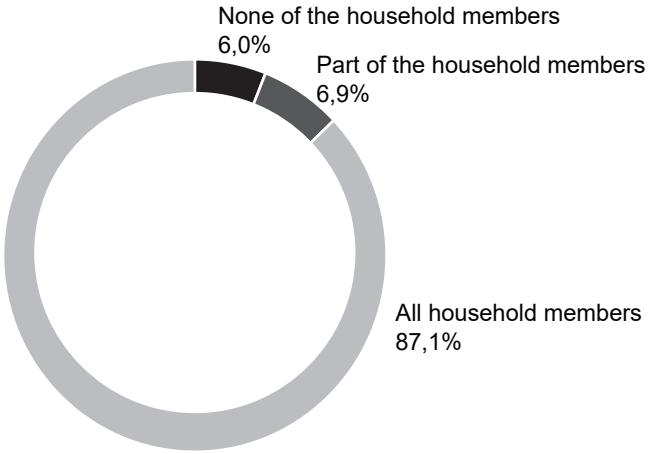

Fig. 5.14. Proportion of household members who have their declarations with a family doctor signed

Comparison of declarations signature status between different social and demographic groups (Table 5.4) demonstrated that more frequent reports about all household members signing their declarations were made by people with higher income, people over 60, and those who perceive their own health as poor. At the same time, the lowest declaration signature status was reported by respondents with a higher education degree or incomplete high education.

No differences in declaration signature status was found between rural and urban population. At the same time, comparison of this situation in different regions shows that the difference is almost 20 p.p.: the highest proportion of households where all members signed their declarations was reported for Lviv (95.7%) and Mykolayiv (95.6%) Oblasts, the lowest – in Odessa (79.5%) and Ternopil (79.7%) (Fig. 5. 15).

Table 5.4.

Breakdown of answers to the question "How many adults and children in your household including you have their declarations signed with a family doctor?", by different social and demographic parameters like sex, age, area type, and health status, %

	None	**Part**	**All**
Ukraine	6,0	6,9	87,1
SEX			
Men	7,6	7,1	85,2
Women	4,7	6,7	88,6
AGE GROUP			
18–29	7,5	9,9	82,6
30–44	5,5	9,0	85,5
45–59	5,4	5,9	88,7
60+	6,2	3,9	89,9
AREA TYPE			
Urban	6,0	6,9	87,0
Rural	6,0	6,8	87,2
LEVEL OF EDUCATION			
Primary or incomplete high	14,4	6,4	79,2

Complete secondary	7,2	6,0	86,8
Vocational	6,2	6,7	87,1
Incomplete higher (college)	4,8	7,0	88,2
Basic higher (Bachelor)	5,0	6,6	88,4
Complete higher (Master)	5,0	6,6	88,4
Degree (PhD, Doctor of Sciences)	34,2	8,5	57,3
HOUSEHOLD INCOME PER PERSON			
Up to 1000 UAH	6,1	10,1	83,8
1001–1500 UAH	5,1	7,8	87,1
1501–2000 UAH	6,2	6,5	87,4
2001–2500 UAH	5,3	5,5	89,2
More than 2500 UAH	5,3	4,2	90,5
HEALTH SELF-ASSESSMENT			
Very poor	9,0	3,8	87,2
Poor	4,0	4,5	91,5
Moderate, not bad, but not good	6,0	6,0	88,0
Good	5,7	8,1	86,2
Very good	8,4	8,7	82,8

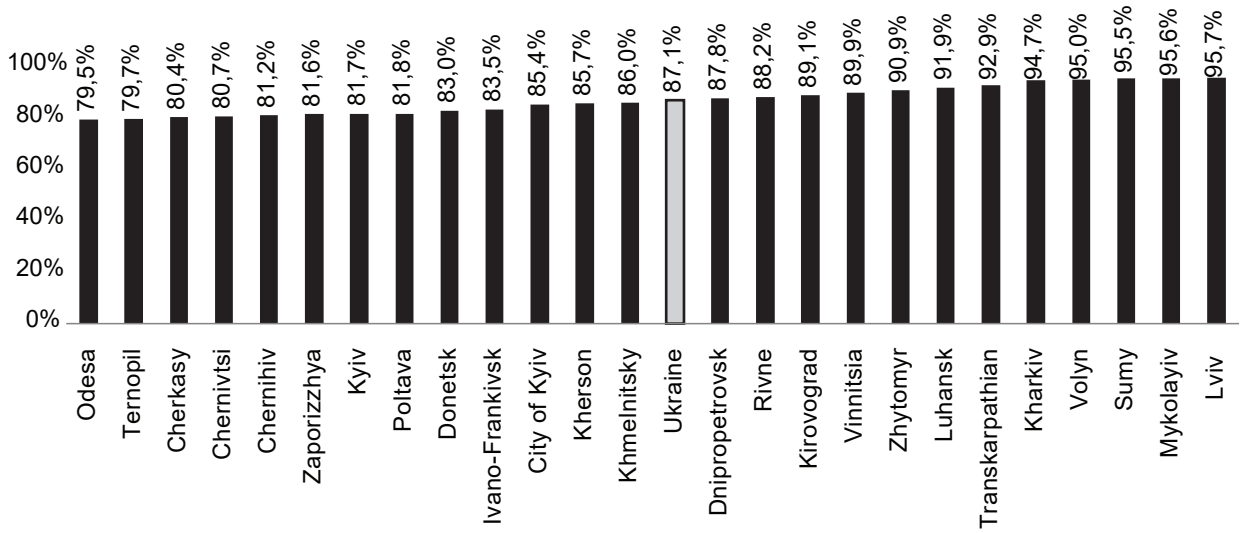

Fig. 5.15. Proportion of households where all adults and children have their declarations signed with a family doctor: breakdown by Oblasts

Between 2018 and 2019, proportion of people who can get remote consultation by a family doctor or a nurse using different means (telephone or other means of communication) has increased from 46.3% to 96.3% (Fig. 5.16). It should be noted that lack of possibility to get remote consultations is relatively more often reported by people with low self-assessed health (45.4%). Regional analysis shows that people living in Mykolayiv and Kirovograd Oblasts also more frequently report lack of possibility to get remote consultations – 55.9% and 53.5%, respectively.

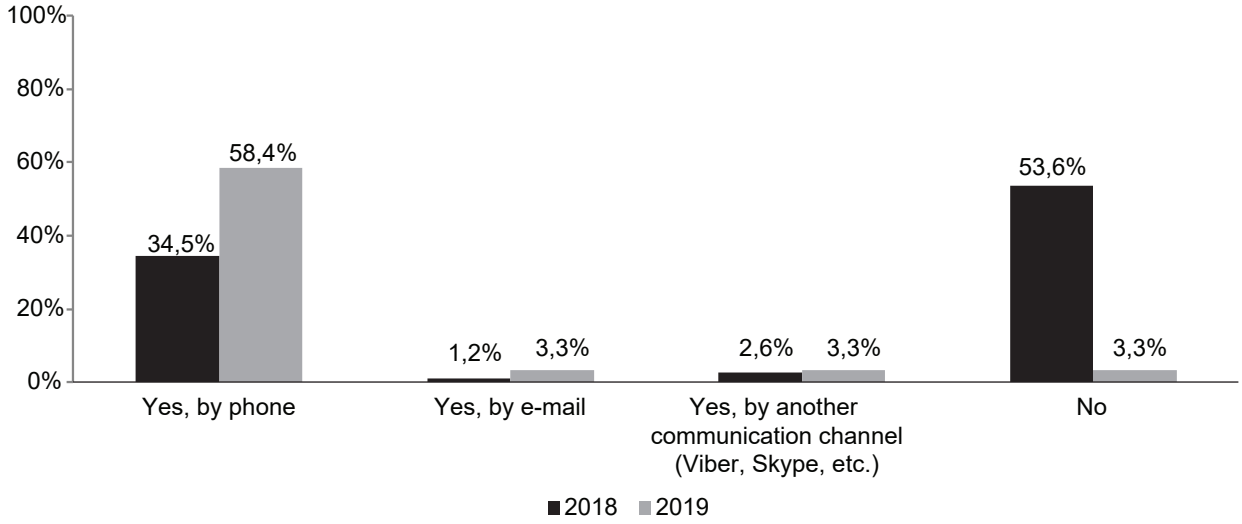

Fig. 5.16. Getting family doctor's or nurse's agreement about remote consultations

The survey shows that during 2016–2019 people were mostly satisfied with all health care components. In 2019, respondents were most satisfied with pediatricians, the least – with in-patient care. This tendency remains practically unchanged during all four rounds of survey except assessment of services provided by ambulance (this has significantly worsened).

Of the problems faced by health care system, respondents were most concerned about high cost of medications and treatment as well as corruption at the Ministry of Health. At that, respondents just like before believe that the Minister of Health is the key person responsible for implementation of changes in healthcare.

In 2019, respondents were very active signing their declarations with family doctors, however, they mostly do not see improvements in services provision and are quite critical about healthcare reforms launched by the government as the process is supposed to be step-by-step. Results of the survey show critically low level of health reform support. Higher level of support is declared by young people and people with high self-assessment of own health and better financial situation in their family, the lowest – by people over 60 and those who self-assess their health as poor. The biggest difference in attitudes towards and perceptions of the health reform is between different regions and the possibility to use such aspect of it as remote consultation by a family doctor.

Identified in 2019 subjective non-perception of launched health reforms and dissatisfaction with them is seen together with quite high level of satisfaction with specific elements of health care on one hand, and still high cost of medications and treatment in hospitals (where reform is supposed to start in 2020) on the other hand. It catches attention that health reform issues are used as a key element of confrontation during pre-election political campaigns. Negative public political narrative and negative assessments of the reform in TV political advertising could likely influence such a public opinion.