



**VOLUME OF OUTPATIENT AND POLYCLINIC SURGICAL CARE  
PROVIDED IN THE PRIMARY HEALTH CARE**

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**Abstract**

The protection of public health is one of the urgent and most significant problems not only of health care, but also of the state as a whole. Negative changes in the social and economic spheres of society, high rates of morbidity and mortality of the population lead to a deterioration in public health and numerous problems in healthcare system, which increases the population's need for medical care (4, 7, 12,17). Outpatient care is the most widespread and accessible type of medical care; it is received by about 80% of all patients who apply to healthcare organizations (5, 8, 10, 13). The availability of outpatient care is provided by a wide network of institutions. In 2012, more than 1,100 outpatient clinics operated, providing medical care to more than 10 million people. The problem of improving outpatient care for the population is a priority, strategic direction of healthcare reform at the present stage. It is outpatient care that should be a mass public form of providing medical care to the population.

**Keywords:** optimization, organization, surgical care, population, employees, lifestyle, social status.





## Introduction

A special place in the structure of PHC is the provision of surgical outpatient medical care, which is one of the most accessible, effective and cost-effective for patients (1, 3, 6, 11, 15). Currently, modern techniques and high technology have greatly pushed the boundaries of outpatient surgery, but there is a discrepancy between the modern methods of treatment used by outpatient surgeons and the outdated organizational base. In accordance with the "Concept of long-term socio-economic development until 2030" for the development of healthcare and medical science, in order to optimize the use of federal budget funds, improve the activities of healthcare institutions, develop and introduce high-tech medical care, healthcare institutions are being merged, this is especially true for large cities, such as the city of Tashkent. According to the adopted program, a new multi-level system of medical care is being built in the city, which allows the patient to receive high-quality consultations and treatment. In this regard, there is a need to develop and scientifically substantiate ways to optimize the activities of both the outpatient service as a whole and its individual components, including improving the provision of the most demanded outpatient surgical medical care.

A large number of scientific studies of recent years (2, 9, 14) have been devoted to improving the organization of outpatient care (2, 14, 16,18), however, the assessment of the provision of outpatient surgical care in the existing multi-level system for the provision of primary care and the development of ways to improve the provision of outpatient surgical care in polyclinics of the first level of a large cities have not yet been the subject of scientific research.

## Methodology and Research Methods

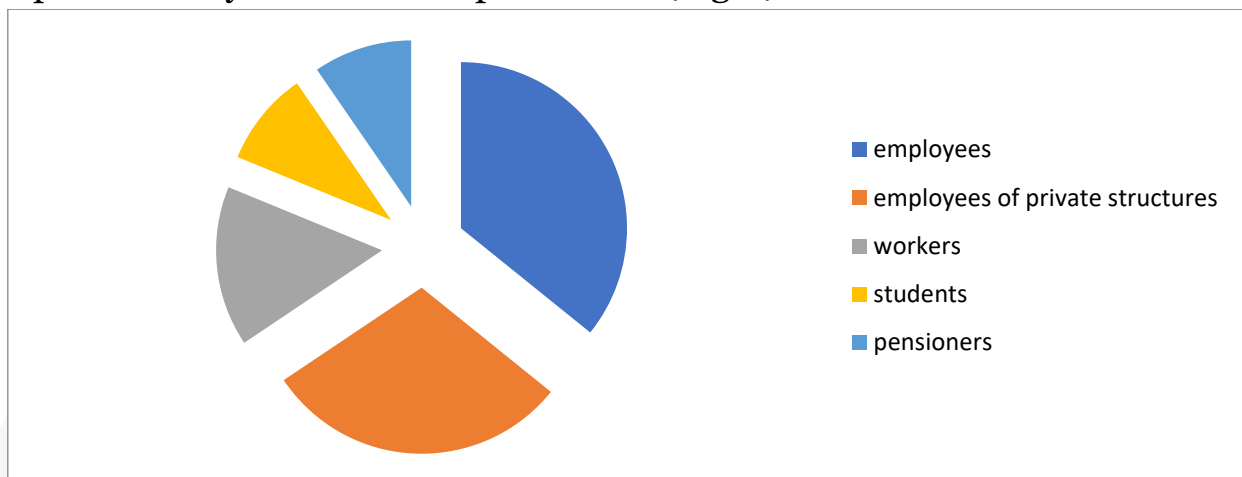
In the course of the study, a comprehensive research methodology was used, including the following methods: study and generalization of experience, statistical and sociological (questionnaire), expert method of comparative analysis, medical and economic methods, etc. Primary information was collected by methods of non-formalized interviewing and questioning of a group of surgical patients. Analysis of the results of the study was carried out using statistical methods of research, such as the calculation of intensive and extensive indicators, analysis of the reliability of differences in indicators, analysis of variance. The object of the study were surgical patients who received surgical outpatient medical care. The unit of observation was a surgical patient over the age of 20 years. The scope of the study was to study the outpatient surgical morbidity of 570 patients who received outpatient surgical care in basic health facilities for the period from 2021 to 2022, for a comprehensive





assessment of the health status of the role of lifestyle factors in shaping health and identifying risk factors for the development of surgical morbidity. The study of the flow of patients who received outpatient surgical care, taking into account their place of residence, revealed that the largest share in the structure falls on patients permanently residing in the city of Tashkent, Yakkasaray district.

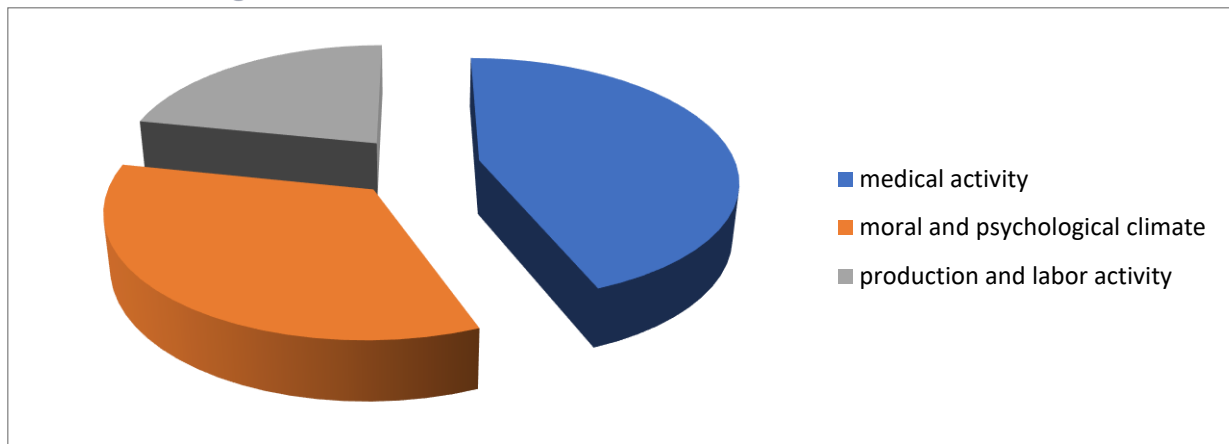
The distribution according to the social affiliation of the respondents is as follows: employees - 35.8%; employees of private structures - 29.8%; workers - 15.6%; the rest was represented by students and pensioners (Fig. 1).



**Fig. 1. The structure of the distribution of surgical patients by social status (in % of the total).**

Differences in the frequency of detected surgical pathology depending on professions were revealed. Most often, employees and employees of private structures turned to a surgeon (35.8% and 29.8%, respectively). It has been established that the place of work and the position held by 54.6% of men and women of both observation groups corresponds to the education received. The results of measuring the socio-hygienic characteristics of the surveyed contingent showed that their average age was  $46.8 \pm 0.5$  years.

The study of the social and hygienic aspects of the lifestyle of the study group based on a one-way ANOVA for qualitative characteristics made it possible to establish that the largest share in the formation of pathological conditions in surgical patients is occupied by a low level of medical activity (33.8%), the following places are distributed in rank order as follows: a tense moral and psychological climate in the family and work collective (26.2%); production and labor activity (16.7%); out of work activity (11.6%) (Fig. 2).



**Fig. 2. Distribution of patients depending on lifestyle factors (in % of the total).**

At the same time, the main trend of a higher incidence rate among women compared to men (2231.7‰ and 1914.4‰, respectively) was noted. At the same time, if among men the incidence rate increases from 1015.9‰ (20-30 years old) to 3122.6‰ (50 years and older), then among women this indicator increases only from 1158.4‰ (20-30 years) to 3435.9‰ (50 years and older). In other words, the incidence rate depending on age in men is higher than in women, the growth rate, respectively, was 207.4% versus 196.6%. An increase in diseases of the circulatory system by 250.9%, the genitourinary system by 262.1%, the musculoskeletal system by 55.5%, injuries by 18.8% and neoplasms by 18.6%.” At the same time, there were practically no additional diseases of the digestive system and diseases of the skin and subcutaneous tissue. In the structure of medical care in surgical morbidity, postoperative wound dressings of 1 and 2 categories of complexity accounted for the largest share (31.2 and 28.5%, respectively), followed by the treatment of purulent-inflammatory processes of various categories of complexity, i.e. every sixth patient was at the doctor about this disease.

When studying the structure of general morbidity, it was noted that the first seven places in men and women among all identified pathologies are represented by diseases of the digestive system, neoplasms, diseases of the circulatory system, musculoskeletal system, genitourinary system, mental disorders and injuries. The listed classes of diseases account for from 84.0% in women to 86.9% in men.

Chronic morbidity of the surveyed contingent ranges from 932.4‰ to 1861.7‰ depending on age. The proportion of long-term and frequently ill patients (DCH) among the examined patients was 19.1%. The combination of several chronic diseases was noted in the majority of patients (76.8%) with chronic pathology. Among men, the most common chronic diseases of the digestive system, which is the 20th main reason for receiving outpatient surgical care and is combined with coronary heart



disease, arthritis, arthrosis and spondylosis, the consequences of previous injuries, among women - with hypertension, gynecological diseases included in the class diseases of the genitourinary system, mental disorders. In the group of female patients, the combination of pathology was observed significantly ( $p < 0.01$ ) 1.4 times more often than in men. The use of objective and subjective criteria for assessing the health of the surveyed contingent and the results of personalized patient surveys made it possible to form 4 health groups. It has been established that, according to objective data on the distribution into health groups, most patients have the 3rd health group (44.2%) and almost every fourth-fifth (23.9%) patient is assigned to the 4th health group, which is associated with features of the selection of the statistical population. At the same time, the patients themselves significantly ( $p < 0.001$ ) 1.6 times more often considered themselves to be persons with a satisfactory state of health (or the 2nd group of health) and less often ( $p < 0.01$ ) 1.4 times assessed their health as unsatisfactory. An analysis of the distribution into health groups according to objective and subjective criteria revealed that men are more suspicious about their health assessment compared to women. Thus, in 43% of men who consider their health "bad" or "unsatisfactory", according to an objective assessment, they were assigned to the 1st or 2nd health groups. At the same time, 44.1% of women with 3rd or 4th health groups rated their health as "good" or "satisfactory". In this regard, it is advisable to use patients' self-assessment of their health to determine their psycho-emotional state, which affects the course of existing somatic diseases, therefore, timely registration of these conditions, the implementation of health-improving measures of a general strengthening nature, can prevent the occurrence of a pathological process and its complications. As part of the study, lifestyle factors that contribute to the reduction of surgical morbidity in the surveyed population were studied. In order to determine the role and influence of lifestyle, both in general and its individual aspects, on the health status of the surveyed contingent, representative statistically uneven complexes were compiled for qualitative indicators of labor and medical activity, and a full correlation analysis and multivariate analysis of variance were carried out. With the help of the above methods of analysis, the degree of relationship between various features characterizing the lifestyle and health status, as well as the share of lifestyle factors in the formation of health, was calculated and evaluated. Considering that the influence of the studied lifestyle factors is almost identical among men and women who are patients of surgical departments, the analysis of health status in connection with lifestyle factors is considered for the entire selected statistical population.





The largest share in the formation of both pathological processes and optimal health indicators is taken by medical activity (33.8% -36.5%). Further, in rank order, in accordance with the share of positive or negative impact on the health of the surveyed contingent, follow such factors as; moral and psychological climate in the family and work collective (26.2% -24.6%); production and labor activity (16.7% -15.8%); extracurricular activities (11.6%-12.1%) and socio-cultural activity (6.8%-5.9%). Factors that were not taken into account in the study ranged from 4.9% to 5.1%. The distribution of lifestyle factors in rank order, depending on the strength of influence on the formation of adverse health indicators of patients in surgical departments, is reflected in Table 1.

**Table 1 Distribution of the main characteristics of the lifestyle that influence the formation of adverse health indicators in surgical outpatients**

Characteristics of lifestyle	Power of Influence $Y \pm$	Reliability criterion "p"
Low level of medical activity	0,723 + 0,0024	<0,001
Unsatisfactory moral and psychological climate in the family and at work	0,568 ± 0,0024	<0,001
Low level of production and labor activity	0,472 + 0,0026	< 0,001
Low level of household activity	0,378 ± 0,0028	< 0,001

The data obtained indicate that the strongest influence on the formation of unsatisfactory and poor health indicators has a low level of medical activity, the strength and influence of which is reliable and determined by the correlation ratio ( $Y = 0.723, \pm 0.0024, p < 0.001$ ).

Of particular interest is the analysis of the health status of patients in connection with the assessment of their lifestyle. The data presented in Table 2 indicate that in the group of patients leading a healthy lifestyle, persons with the first (68.2%) and second (57.4%) health groups predominate, and among those who have an unhealthy lifestyle - patients with the third and fourth health groups (33.1%). Between the health indicators of patients and the nature of the lifestyle, a significant correlation was established, equal to  $r \sim +0.736, \pm 0.0022, p < 0.001$ .



**Table 2. Distribution of patients by health groups depending on the assessment of their lifestyle (in %)**

Healthgroups	Lifestyleassessment			Total:
	Healthy lifestyle with minor deviations	Healthy lifestyle with significant deviations	Unhealthylifestyle	
First	68,2	28,4	3,4	100,0
Second	57,4	37,2	5,4	100,0
Third	3,5	63,4	33,1	100,0
<b>Total</b>	48,1	40,5	11,4 1	100,0

Thus, using the analysis of variance of single-factor complexes for qualitative traits, the most significant lifestyle factors influencing the formation of unsatisfactory health indicators of the studied contingent were identified. Considering that more than 60% of the total influence of lifestyle factors falls on medical activity and the moral and psychological climate in the family and at work, the main emphasis in developing a health program among the surveyed patients was placed on optimizing these factors. Among the indicators characterizing the above types of activities, the performance of which depends only on the desire and conviction of the patients themselves in the need to maintain their health and consists in activating the positive and leveling the negative characteristics of the lifestyle prevails. An assessment of the activities of outpatient surgeons is given and the results of patients' assessment of the quality of outpatient surgical care provided are presented. Outpatient appointments take up most of the working time of polyclinic surgeons. The average annual planned number of visits to the surgical office (per 1 medical position) is 6498 visits, and over the past three years, these figures have been constantly growing. Among all visits related to the disease, 47.9% are primary visits, 37.5% - visits in connection with the continuation or completion of treatment, 5.6% of visits are made to open (close, continue) a sick leave, 4.4% - for registration of documents for MSES, 2.2% are scheduled visits by a dispensary group, and 0.8% - visits for registration of sanatorium-and-spa treatment. Among preventive visits, 27.9% are visits in connection with a preventive examination of a dispensary group, 19.2% - in connection with an examination upon admission to work (study), 7.8% - to obtain various certificates and 45.1% - other preventive visits. The surgeons of the office annually perform an average of 654 outpatient surgical interventions and manipulations, including: opening of purulent formations (34.7%), removal of fibromas, lipomas, hygromas (21.0%), various types of blockades (15.0%), removal of an ingrown nail (9.9%), treatment and suturing of wounds,



treatment of hematomas (5.1%), manipulations with bursitis (4.2%), removal of warts (2.9%) and other operations and manipulations (7.2%). A number of diseases lead not only to temporary, but also to permanent disability. In 2012, the rate of primary disability for diseases of the surgical profile was 0.8 per 10,000 populations. Among persons recognized as disabled for the first time, 10.7% were recognized as disabled of the first group, 57.1% - of the second and 32.2% - of the third group. The main disabling diseases were oncological diseases (35.7%), obliterating atherosclerosis of the lower extremities (32.1%), consequences of injuries (25.0%) and varicose veins (7.2%). The timing showed that, on average, at an outpatient appointment, the surgeon spends 26.79 minutes per patient, which significantly exceeds the planned figures. The longest duration is the initial visit due to the disease - 28.56 min. and a visit regarding registration at MSEK - 28.03 min. A follow-up visit due to an illness takes an average of 25.21 minutes, and a preventive visit takes 25.39 minutes. It takes more time (on average by 2.56 minutes) to receive women for all visits (on average by 2.56 minutes) than men, this difference (9.47 minutes) is especially significant for visits in connection with registration for MSEC. Most of the time an outpatient surgeon spends on paperwork - 16.1 minutes, or 26.8% of the appointment time, and on giving advice and recommendations - 9.5 minutes, or 15.8% of the appointment time. Taking an anamnesis from a doctor takes on average 25.5% of the time of admission (15.3 minutes), examination - 9.3% of the time (5.6 minutes), therapeutic measures - 9.8% (5, 9 minutes), and unproductive costs (telephone calls, absences from the office, etc.) - 19.8% of the time (11.9 minutes). An expert assessment of the validity of visiting a surgeon showed that most of the visits were fully (87.2%) or partially (12.4%) justified. Only 0.4% of the visits could be considered unfounded. However, according to experts, 6.6% of visits could be served by a local therapist, 5.4% by a doctor of another specialty, and 0.8% by a paramedical worker. Thus, with a more rational organization, it would be possible to reduce the amount of admission to the surgeon by 12.8%.

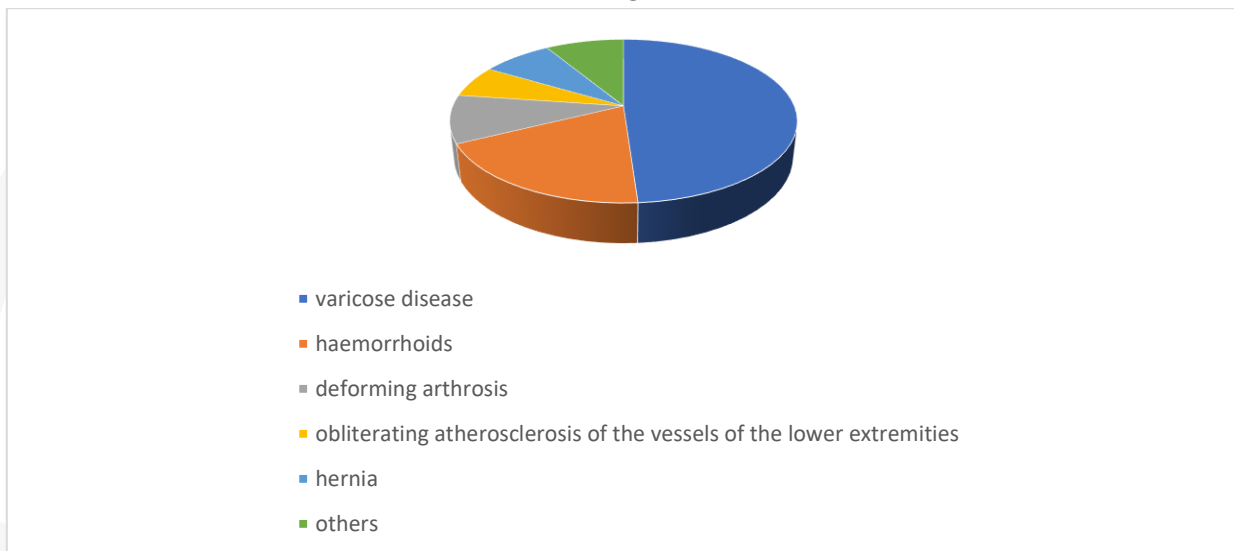
The most complete information about all chronic and acute diseases with clinical manifestations available at the time of examination, as well as about subclinical forms that occur without violations of the functions of systems and organs, is provided by medical examinations. Periodic medical examinations are aimed at dynamic monitoring of the state of health of workers, timely detection of initial signs of general and occupational diseases that impede the continuation of work in the specialty, and their prevention. As a result of medical examinations performed by the surgeon, diseases or abnormalities were detected in 26.4% of those examined, including 2.3% - two diseases, 1.2% - three diseases or more. The proportion of women with diseases







identified during a medical examination was higher than that of men - 30.2% versus 21.3%. The level of morbidity identified as a result of medical examinations amounted to 295.1%. Moreover, the pathological incidence of women was 1.8 times higher than that of men (378.6% vs. 210.9%). Such a high level of pathological involvement is mainly due to the older age groups of those examined. So, if the incidence rate of the population under the age of 30 was only 118.5%, then by the age of 30-39 years it increases to 188.5%, by the age of 40-49 years - up to 421.9%, and in the age group of 60 years and older, it was already 679.1%. The list of diseases detected during medical examinations is very limited. In the structure of morbidity, almost half is varicose disease of the lower extremities (Fig. 3), which accounts for 48.9% of all diseases. In second place is hemorrhoids (18.8%), in third place is deforming arthrosis (9.5%), followed by hernias (7.8%), mainly umbilical, and obliterating atherosclerosis of the lower extremities (6.3%).



**Fig. 3. The structure of the distribution of surgical patients by social status (in % of the total).**

As a result of the examinations, it was found that 25.9% of those examined were subject to dispensary observation due to chronic surgical diseases, 5.9% required inpatient and 5.1% outpatient treatment, 4.9% needed to clarify the diagnosis. 10.0% of patients needed planned surgical treatment.

When forming the image of a medical institution of different levels of subordination, which plays an important role in marketing activities, a special role is played by the level of patient satisfaction with the quality of medical services received.



The degree of satisfaction with medical care, the impression that the institution and medical staff make during treatment on the patient determines both their re-appeal, if necessary, to this health facility, and the nature of information about it that the patient will distribute among relatives and friends. Patient satisfaction with the quality of medical care provided is determined by a whole range of factors: the effectiveness of medical and diagnostic measures, the availability of medical care, the degree of compliance by medical personnel with deontological norms, etc. The survey showed that 25.6% of outpatients find it inconvenient to get to the clinic, and with age, the proportion of such respondents increases (up to 30 years old - 19.7%, 60 years and older - 37.8%). This is understandable, since young people, in comparison with the elderly, firstly, feel more comfortable in public transport, and secondly, they use personal transport more often to visit the clinic. According to the vast majority of respondents (97.3%), the work schedule of surgeons is convenient for patients, and only 2.7% consider it inconvenient. 69.1% of respondents note that getting an appointment with a surgeon is always easy.

In addition to the availability of outpatient appointments, an important element of quality is the availability of laboratory and instrumental studies. 9.5% of the respondents indicated difficulties that arose during the tests and examinations prescribed by the surgeon. Patients most often noted that it was difficult for them to perform ultrasound (39.5% of those who indicated difficulties), ECG (23.4%), X-ray examination (20.8%), 4.7% had problems when conducting FGDS and a biochemical blood test, in 6.4% - when conducting other laboratory and instrumental studies (Dopplerography, FLS, etc.).

The survey showed that 65.6% of patients were familiar with the list of paid services provided by the polyclinic, while 34.4% were not familiar with such a list. More than half of patients (51.1%) believe that the additional paid services provided are too expensive for them, and 4.5% answered that the existing cost of additional services is simply unaffordable for them, and only 44.7% consider their cost acceptable. Patients aged 30-39 years (63.4%) and 40-49 years (26.9%) consider the cost of services acceptable more often, i.e. precisely those age groups that most appreciate the financial situation of their families.

Despite the fact that, as mentioned earlier, most patients do not have to wait long to see a surgeon, there are queues for an appointment with a surgeon, however, 44.8% believe that this problem in the clinic is not very acute, and 55.2% in general they don't see the problem. At the same time, it is quite difficult to call a surgeon at home. Of all respondents, 7.4% indicated that this problem is acute in the polyclinic, 16.8% - that it is not very acute, and 7.5% - that there is no such problem. However, 60.2% found



it difficult to answer this question, which is quite understandable, since not all patients are faced with the need to call a surgeon home. Therefore, we considered it appropriate to evaluate this problem, excluding those who found it difficult to answer. In this case, the picture is quite different. Of those who were faced with the need to call a surgeon home, only 25.7% do not see this as a problem, and 24.7% believe that this problem is acute, and half (50.4%) believe that there is such a problem, although it is worth it and not very sharp. Thus, 76.7% of those who faced the need to call a surgeon at home see this as a problem. The most important indicator of problems in the healthcare industry is patient satisfaction with the industry. Questioning of outpatients with surgical pathology showed that the quality of the medical care provided to them, the attitude of doctors towards them and their trust in the doctors of health facilities at their place of residence are assessed by patients as low (average scores on a 5-point system - 4.15, 4.2 and 4.0, respectively), table 3.

**Table 3 Satisfaction of patients with the provided medical services for surgical care.**

Options	Averagerating	
	Obtaining free medical care in public healthcare facilities	Paid services in public healthcare facilities
The quality of medical care provided	4,15±0,21	5,0±0,20
Attitude of doctors to the patient	4,2+0,18	5,1±0,19
Trustinthedoctor	4,0+0,21	4,2±0,22

The quality of medical care provided in the considered health facilities and the attitude of the doctors of these clinics to them were rated higher by surgical patients ( $p < 0.01$ ), and the trust in doctors when receiving both free medical care and when receiving paid services in the same clinics under consideration was low.

The calculation of the index of patient satisfaction with the quality of surgical care showed its very high level - 89.9%)0, and the level of satisfaction of men was slightly higher than that of women (91.4% versus 88.3%). The value of the satisfaction index in all age groups up to 60 years did not differ significantly and was over 90%, however, the satisfaction of patients aged 60 years and older was significantly lower - only 81.5%.



## Conclusions

1. The study of the flow of patients who received outpatient surgical care, taking into account their place of residence, revealed that the largest share in the structure falls on patients permanently residing in Tashkent, Yakkasaray district (79.8%). Most often, employees and employees of private structures turned to a surgeon (35.8% and 29.8%, respectively); the average age of surgical outpatients was  $46.8 \pm 0.5$  years.
2. The largest share in the formation of pathological conditions in surgical patients is occupied by a low level of medical activity (33.8%), which indicates the need to fix risk factors for surgical pathology in patients and conduct antifactor therapy in an outpatient setting.
3. In the structure of surgical morbidity, postoperative wound dressings of 1 and 2 categories of complexity accounted for the largest share (31.2 and 28.5%, respectively), followed by the treatment of purulent-inflammatory processes of different categories of complexity, i.e. every sixth patient was at the doctor about this disease.
4. Polyclinic surgeons work with a big overload, which is connected both with exceeding the plan of visits. Most of the appointment time is spent on paperwork - 22.6%, dressing and undressing the patient - 21.1%, giving advice and recommendations - 16.7%, which indicates the need to reduce the workload of the surgeon at the reception and more rational organization surgical admission.
5. Despite the general high assessment by patients of satisfaction with the quality of surgical care, it is quite difficult for patients to call a surgeon at home, it is inconvenient for many to get to the clinic, it is not always easy for some patients to conduct laboratory and instrumental studies, additional paid services are not available.

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