

## THE STUDY OF CONSUMER LOYALTY SERVICES

<sup>a</sup>ELENA S. ROLBINA, <sup>b</sup>ELENA N. NOVIKOVA, <sup>c</sup>NATALYA S.SHARAFUTDINOVA, <sup>d</sup>OLGA V. MARTYNOVA

<sup>a</sup>Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya Street, Kazan, 420008, Russia

<sup>b</sup>Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya Street, Kazan, 420008, Russia

<sup>c</sup>Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya Street, Kazan, 420008, Russia

<sup>d</sup>Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya Street, Kazan, 420008, Russia

Email:<sup>a</sup>e.s.rolbina2015@gmail.com,<sup>b</sup>e.n.novikova2016@gmail.com, <sup>c</sup>natabell22@mail.ru, <sup>d</sup>ov.martynova2016@gmail.com

**Abstract:** Amid the existing competition in the market of medical services, the issues of assessing the customer satisfaction and loyalty management become especially topical. The paper presents the results of a study of consumers of a medical service organization. Market trends in the service sector are due to the introduction of a marketing approach within the framework of interaction with customers. The application of a client-oriented approach will allow service companies to establish long-term relationships and increase the loyalty of their customers. Based on the analysis of existing models of the study of loyalty and satisfaction with the authors, quantitative methods were chosen to determine the degree of customer satisfaction of the organization and the consumer loyalty index was calculated. This study uses quantitative methods for assessing customer satisfaction, which allow you not only to learn how consumers evaluate the company, but also to find out what you need to do to improve the satisfaction index and other important indicators of the organization's performance. Within the framework of the conducted research, the respondents made suggestions and wishes for improving the quality of the provided medical services in polyclinics. Based on the results of the analysis of the level of customer satisfaction, the authors developed recommendations for increasing the satisfaction and loyalty of consumers of the medical organization.

**Keywords:** customer loyalty, quality of medical services, customer satisfaction, Net Promoter Score.

### 1 Introduction

Amid the existing competition in the market of medical services, the issues of assessing the customer satisfaction and loyalty management become especially topical.

The volume of sales of service companies is largely determined by the level of customer satisfaction. Accordingly, the volume of profit and profitability of the company essentially depends on it. Without accurate estimates of the degree of customer satisfaction, companies cannot make effective decisions about what exactly needs to be improved first of all. Constant monitoring of the level of satisfaction of service consumers allows companies to form priority directions for improving their services.

The higher the level of customer satisfaction with the service is, the higher the probability of its repeated acquisition by the same customers is, that is, the formation of loyalty. Therefore, the study of factors that affect customer satisfaction is central to modern marketing research.

A significant contribution to the study of the effect of loyalty was made by Frederic Reichheld, who defined loyalty "as a quality inherent to the user of the value (goods, service) that returns to its source from time to time and transmits the given source by inheritance" (Reichheld, 2006).

Loyalty, as a rule, is based on a sense of satisfaction. Studies by a number of authors, including J. Bloomer, Co-de Reiter and P. Peters, have shown that satisfaction is a prerequisite for the formation of loyalty, but as loyalty develops, it loses its primary importance and other factors come into play (Bloomer, 2006).

The greatest attention to the quality of service in the service sector is given in the works by the following scientists: B. Berman (2006), OuY.-C., Verhoef P.C., WieselT. (2017),

Beloborodova A.L., Martynova OV, Novikova EN, Shafigullina A. V. (2017), Sharafutdinova N.S. (2016).

Studies in the field of assessing the quality of health services are found in the works by Calman M.W. and Sanford E. (Calman, 2004).

### 2 Materials and methods

In this study, the authors searched for ways to improve medical care, increase patient satisfaction and loyalty, based on marketing research conducted.

**Objective of research:** assessment and analysis of patient satisfaction of all subdivisions of the Medical-sanitary unit of Kazan (Volga region) Federal University (Novikova et al, 2017).

The objectives of the study in polyclinics are aimed at assessing:

- the convenience of arranging a visit to a doctor;
- the time and conditions for waiting in the queue;
- work of a local physician;
- waiting period for planned hospitalization;
- quality of diagnostic examinations;
- satisfaction with the doctor's visit;
- loyalty of patients and readiness to recommend the clinic to friends and relatives;
- completeness of the information on the official website;
- patient demographics.

The objectives of the study in hospitals are aimed at assessing:

- satisfaction with waiting conditions in the hospital reception room on the day of hospitalization;
- satisfaction with the attitude of doctors and nurses;
- satisfaction with the hospital conditions (food, quality of room cleaning, lighting, temperature regime);
- satisfaction with the organization and process of diagnostic studies;
- loyalty of patients and readiness to recommend the hospital to friends and relatives;
- completeness of the information on the official website;
- patient demographics.

This study uses quantitative methods of assessing customer satisfaction to solve the tasks outlined in the previous section, that is, not only to learn how consumers evaluate the company, but also to find out what needs should be done to improve the satisfaction index and other important indicators of the organization. As a method of research, a personal interview was conducted with patients who were staying either in the ward of the hospital or waiting for a doctor in a polyclinic.

A sample survey was conducted. The sample size (n) was determined by the formula (8). Statistics. Textbook for high schools. Edited by Eliseeva I.I. SP, Piter, 2016):

$$n = \frac{t^2 \sigma^2 N}{\Delta^2 N + t^2 \sigma^2}$$

where: N – number of the general population (according to data for 2015);

$\Delta$  - maximum sampling error (specified by the researcher);

$\sigma$  - dispersion (variance of estimates);

t - the value at which F(t) takes a given value.

The probability that the sample characteristics adequately reflect the characteristics of the general population is set at 95%, respectively  $t^2=1.96$ , the maximum sampling error is 10%. The conducted calculations showed that it is enough to interview 49 respondents for each subdivision. A simple random sample was used. In agreement with the customer, the number of questionnaires to be filled in stated in Table 1 was accepted.

To determine the statistical dependence of patients' loyalty to the main characteristics of medical facilities evaluated by patients, a multiple correlation analysis was performed using an SPSS statistical package.

Table 1: Statistical characteristics of the study

Subdivision	General population	Sample, plan	Number of questionnaires, actual
Policlinic of DCH, Chekhova Str. 1a	8244	49	50
Policlinic, Vishnevskogo Str. 2	15317	49	70
Maternity welfare center, Dostoevskogo Str. 44/b	9205	49	48
Total	32766	147	168

Thus, the most frequently used method of simple assessment of the level of satisfaction and loyalty of consumers of medical services was applied in the study.

The results of the study are shown in Table 2. 73 of 163 respondents are loyal to the investigated object. 43% are ready to recommend and 27% will not recommend it.

### 3 Results and discussion

Table 2: Overall evaluation of the main factors of loyalty to polyclinics

Polyclinic basic characteristics	Characteristic evaluation, %
Patients' loyalty (prefer DCH-2)	54
Ready to recommend DCH-2	43
No single answer yet	30
Will not recommend	27
Possibility to make an appointment during the first visit to the polyclinic	78
Polite and attentive doctor	81
Polite and attentive nurse	91
Explanation of the test results by a doctor	76
Assessment of the diagnosis by a doctor	78

The proportion of satisfied patients was calculated as the sum of positive ratings ("5" + "4" or "completely satisfied" + "partially satisfied", etc.)

years, therefore, it is for the staff to be more attentive and precautionary towards them (Fig. 2).

The most loyal patients are those aged 35 to 45 years and 25 to 35 years, the minimum loyalty is shown by patients over 60

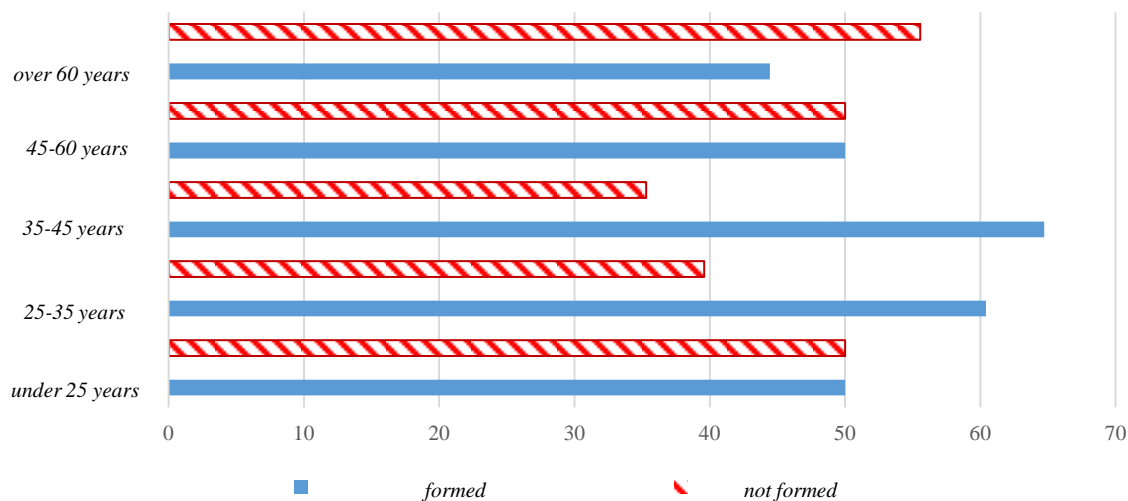


Fig. 1: Loyalty analysis of polyclinic patients by age categories

There is no significant dependence of loyalty on the social status of patients observed, although in general, the loyalty of all categories is characterized as high and ranges from 45 to 55%.

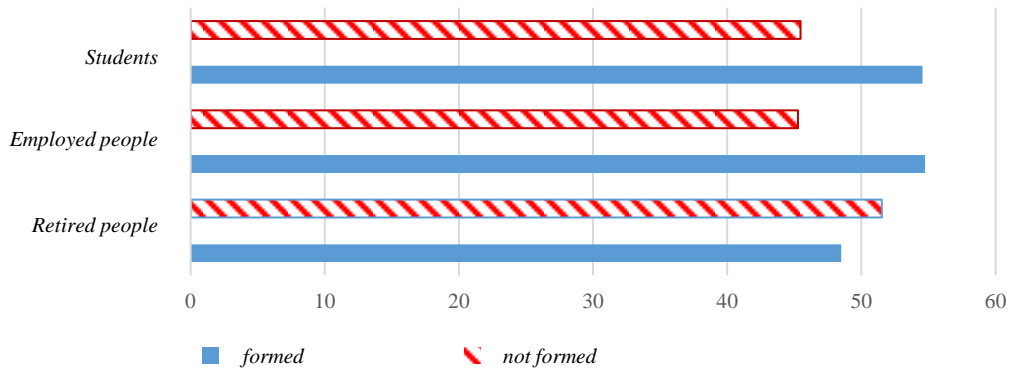


Fig. 2: Loyalty analysis of polyclinic patients by social categories

The patients highly estimate politeness and attentiveness of the doctor - in total 84% "excellent" and "good" (Figure 3).

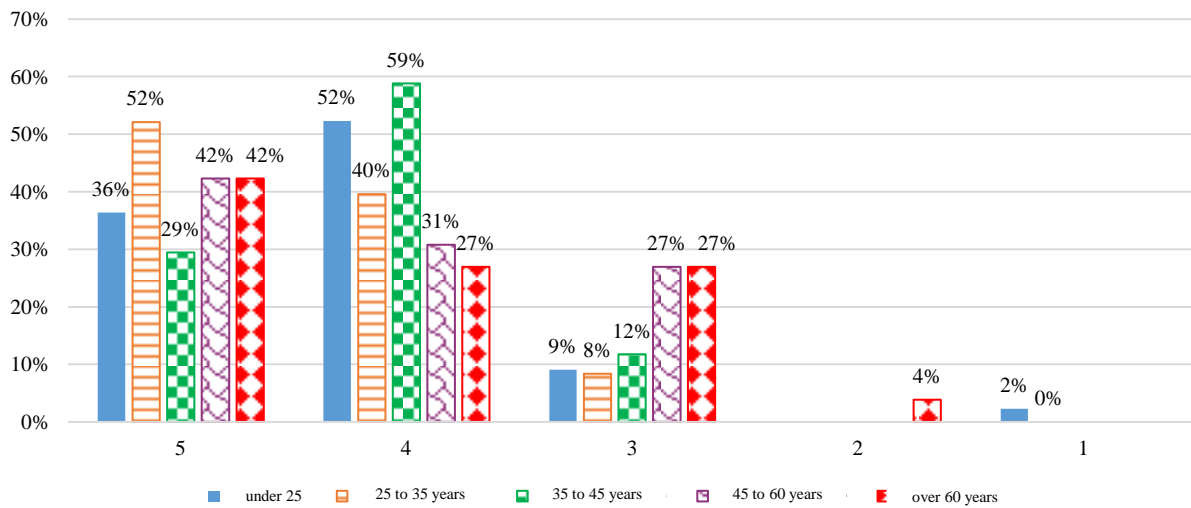


Fig. 3. Assessments of politeness and attentiveness of the polyclinic doctor by consumers of different age groups

Satisfactory estimates are 15%, unsatisfactory - 2%. Patients aged 25 to 35 years gave maximum number of "excellent" evaluations, minimum – patients aged 35 to 45 years. Unsatisfactory estimates in the amount of 1% are observed in patients under 25 years and older than 60 years.

Politeness and attentiveness of nurses were also highly assessed (Fig. 4).

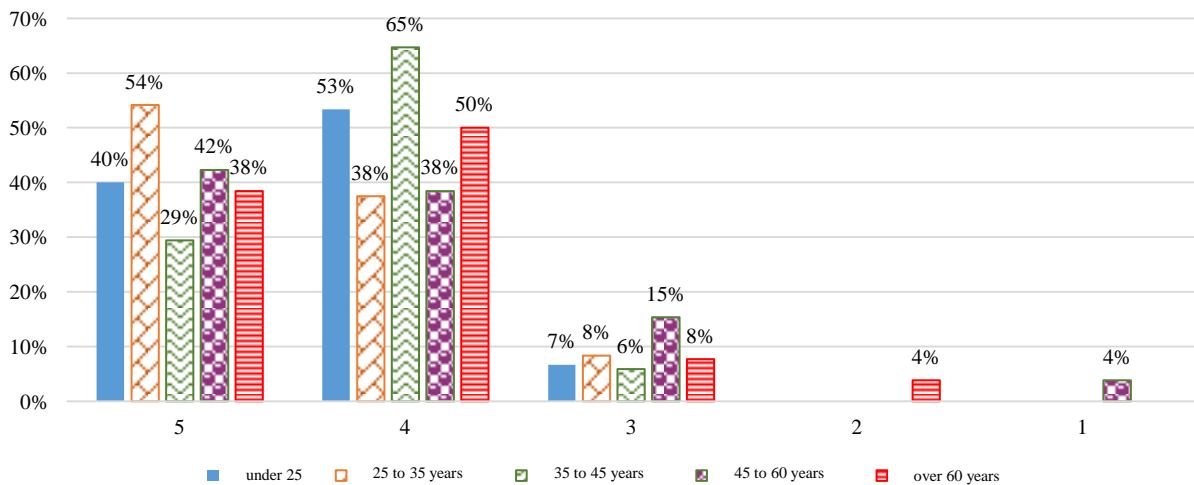


Fig. 4: Assessment of politeness and attentiveness of nurses

The maximum number of "excellent" estimates was made by patients aged 25 to 35 years, "good" – patients under 25 years. The shares of "satisfactory" estimates are 1-2% for all age groups, negative estimates are 1% for older age groups.

The results of the assessment of the doctor's explanation of the study and treatment are presented in Fig. 5

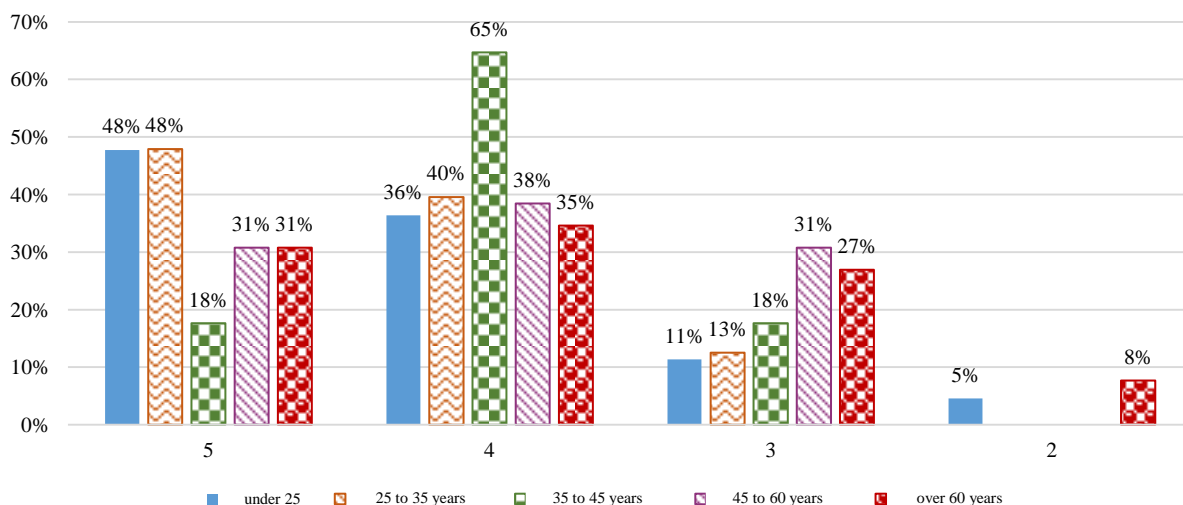


Fig. 5: Assessment of the explanation of the test results and management by a doctor

The concentration of responses was observed in the "excellent" and "good" assessment areas, while 31% of patients aged 45-60 years and 27% of patients older than 60 years gave "satisfactory", where 8% of the latter were not satisfied with the doctor's explanations.

The results of assessment of the identification of changes in the patient's health by doctors are shown in Fig. 6.

The number of excellent and good estimates is the highest for all age categories. "Bad" estimates were in the three older age categories equal to 4% to 8%.

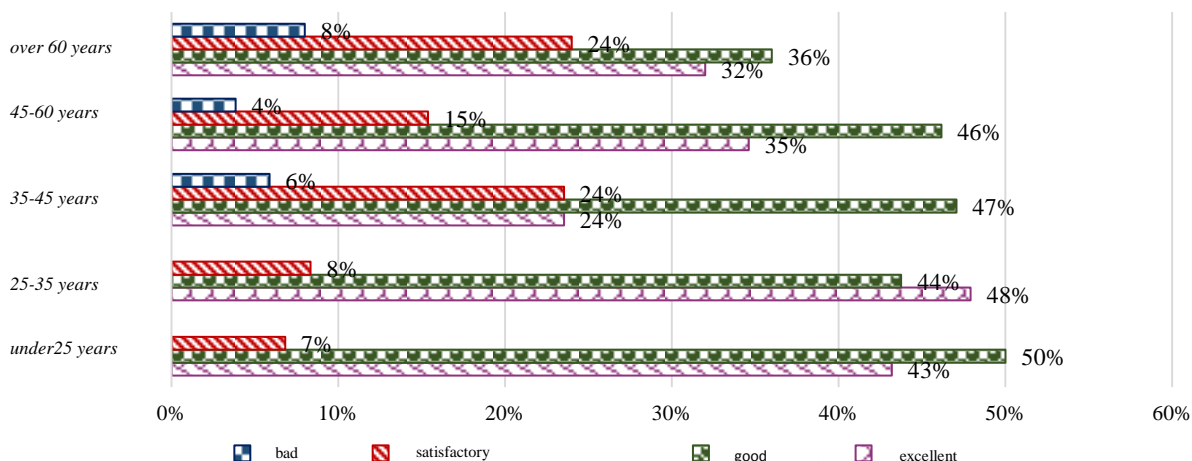


Fig. 6. Assessment of the identification of changes in the patient's health by doctors

The study of similar characteristics in the context of social status led to the following conclusions. Most of the patients appreciated the politeness and care of the doctors perfectly well and only 3% of the pensioners rated it "bad" and this category gives the maximum (24%) "satisfactory" estimates.

The work of nurses also received high patient ratings: "excellent" from 42 to 45%, "bad" – 2-3% by pensioners and workers, which again confirms difficulty to form loyalty in adult patient categories.

Table3: Correlation relationship analysis

Relationship	Value ranges	Correlation coefficient	P value	Indicators
Strong or close	over 0.70	0.7020	0.0000	Satisfaction with doctor's work – results of studies
		0.7292	0.0000	Satisfaction with the results of studies – statement of a diagnosis
Medium	0.50 - 0.69	0.6429	0.0000	Satisfaction with doctor's work – statement of a diagnosis
		0.6358	0.0000	Satisfaction with nurse's work – results of studies
		0.6042	0.0000	Satisfaction with nurse's work – statement of a diagnosis
Moderate	0.30 - 0.49	-0.1962	0.0126	Satisfaction with the results of studies – patient's age
Weak	0.20 - 0.29	-0.2337	0.0029	Satisfaction with the diagnosis statement – patient's age
		0.1637	0.0380	Satisfaction with doctor's work – employed patients
Very weak	less than 0.19	0.1594	0.0434	Satisfaction with the results of studies – employed patients
		-0.1646	0.0369	Satisfaction with the results of studies – retired patients

The evaluation of the doctor's explanations of test results and treatment is high in general, but 14% of the workers rated the explanations as "satisfactory", apparently, this category requires more detailed explanations. Attention is drawn to the clearly insufficient satisfaction with the diagnosis of retirees - 31% (22% C grades + 9% D grades).

Further analysis of correlation relationships showed that all correlation coefficients are not significant by loyalty, hence, loyalty is not related to the investigated indicators.

At the same time, the work of the staff can be characterized as stable, since correlation coefficients are significant, the degree of significance is close and the P value is less than 0.5 within 95% of the confidence interval for the following pairs of indicators (Table 3)

- satisfaction with doctor's work – results of studies;
- satisfaction with the results of studies – statement of a diagnosis;

There is a medium degree of relationship between satisfaction and the patients' age by the following indicators:

- satisfaction with doctor's work – statement of a diagnosis;
- satisfaction with nurse's work – results of studies;
- satisfaction with nurse's work – statement of a diagnosis;

Moderate degree of relationship is observed between satisfaction and the patients' age by the following indicators:

- satisfaction with the results of studies – patient's age;

Weak degree of relationship is between satisfaction and the patients' age by the following indicators:

- satisfaction with doctor's work – employed patients;
- satisfaction with the diagnosis statement – patient's age;

Very weak but significant relationship between satisfaction and social category is revealed by pairs of indicators:

- satisfaction with the results of studies – employed patients;
- satisfaction with the results of studies – retired patients.

#### 4 Summary

In the framework of the study, the respondents made the following suggestions and wishes for improving the quality of medical services provided in polyclinics:

- more competent and polite doctors and other service staff (at the registry office);
- increase the credibility to free medicine to avoid the need to apply at the same time to a fee-based medicine for analysis comparison;
- provide a sufficient amount of shoe covers;
- provide a space for strollers and bicycles;
- improve corridor ventilation;

- provide comfortable toilet rooms;
- organize and record visits by appointment;
- install a water dispenser;
- organize a parking area;
- reduce the time of blood sampling;
- relieve local physicians, so that there is always a permanent one;
- facilitate the process of getting an appointment with the specialists (ENT, neuropathologist, endocrinologist, cardiologist, ophthalmologist and neurologist);
- reduce queues to the registry office, for diagnostics and other tests;
- update the staff, as the therapists are retired people;
- conduct computer literacy courses for doctors as they spend much time at the computer;
- improve the appointment by phone;
- improve, simplify the website, since it is impossible to find information about the doctors' visits on the Internet;
- the time of the doctors' visits at the registry office differs from the time in the information leaflets near the doctors' offices;

#### 5 Conclusion

According to the results of the conducted research of the polyclinic patients, the authors summarized:

- The NPS indicator of the studied facility was 27 points.
- satisfactory and unsatisfactory estimates of politeness and attentiveness of the doctors and nurses are observed in patients under 25 and over 60 years;
- satisfactory and unsatisfactory estimates of the identification of changes in health status by doctors, listening to complaints and identification of symptoms of malaise are characteristic of patients aged 45 to 60 years and over 60 years, therefore, loyalty is more difficult to form in older categories of patients;
- There is a clear lack of satisfaction with the diagnosis among the pensioners.

Thus, in order to increase the level of satisfaction and loyalty, the following is required:

- Implement the NPS measurement methodology and work on increasing this indicator. Dynamic monitoring will require the construction of a marketing information system in the facility (Novikova, 2015).
- expand the powers of personnel, use the practice of calling former patients of clinics;
- focus on emotional and spiritual support of clients;
- introduce incentives for and emphasize the best employees on the basis of NPS;
- improve the doctors' qualifications,
- reduce the time between the studies and diagnosis,
- increase the trust in free medicine,
- facilitate the process of getting an appointment with the specialists (ENT, neuropathologist, endocrinologist, cardiologist, ophthalmologist and neurologist), reduce queues for diagnosis and other examinations;
- find possibilities to relieve local physicians.

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