

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Physical Access to Health Care at Outpatient Level.

G.D.Kuziyeva*, K.A. Tulebayev, and B.S.Turdaliev.

Kazakh National Medical University after S.D. Asfendiyarov, Almaty, Kazakhstan.

ABSTRACT

Physical access to health care is understood as the availability of appropriate health services within reasonable limits the reach of those who need them, and with the opening hours, appointment system and other aspects of the organization and services that enable people to receive services when they need them. It was conducted a sociological survey of the population of Almaty city and Almaty region for the period of two months. For the study used the lists attached polyclinics population. Especially for this study was designed instrument- questionnaire, which consisted of sociodemographic questions and issues relating to physical accessibility to health care in the outpatient level. If the missing questionnaire response to a question the main part of the questionnaire, this questionnaire was excluded from the database entirely. After eliminating with incomplete answers of questionnaires, 3290 questionnaires the respondents were processed, accounting for 82.2% of the planned number of respondents profiles. To assess the availability of medical services, we used the ranking method and used a scale from 1 to 4 and 1 to 3 with the following Range, where the best option corresponds to the maximum value, the worst- minimum. In this case the answer "do not know" and "not used" were not taken into calculation. In a comparative analysis of the uptake rate in outpatient organizations it found no large differences in the uptake of multiplicity residents of towns and villages. The majority of respondents are turning from 2 to 4 times a year, both in urban and in rural areas. General availability for the waiting time to see a doctor in the queue in the city of Almaty was higher by 0.1 points. Overall availability of outpatient organizations operating hours, which are attached to the respondents was higher in the city than in rural areas. Thus, the overall availability of GP, narrow specialists, laboratories, offices of functional diagnostics, physiotherapy and treatment rooms in Almaty region above in 1,1-1,3 times. The availability of free medical care, if necessary, the respondents in the city was rated higher by 1.1 times as compared to rural areas. Overall availability of records to the doctor on the phone was higher for the urban population of 0.2, recording through Internet - 0.1, and when you contact the registry - the general equation of availability was at the same level.

Keywords: accessibility, outpatient organization, medical care.

**Corresponding author*

INTRODUCTION

A special place in the strengthening and preservation of health of the Republic of Kazakhstan belongs to the health care system, whose main task today is to increase the availability of, first of all, primary health care, the quality and efficiency of medical care [1].

Two major health policy document adopted in 2009: Code of the Republic of Kazakhstan "On people's health and the health care system" [2] and the concept of creation of the Unified National System of Health [3], which involve the conduct of national measures to improve public health with a focus on disease prevention and the establishment of joint and several liability of the state and the health of citizens.

Primary health care [4, 5, 6] - the basic, accessible and free (in most countries) type of medical care, carrying out: treatment of the most common diseases and injuries, poisonings and other urgent states; prevention of major medical disorders; health education of the population; other activities related to the provision of health assistance to citizens in the community.

Improving primary health care is one of the main directions in the development of public health. As part of the program "Salamatty Kazakhstan" and "Densaulyk" to make the transition to a patient-oriented model of primary health care. [7, 8].

Physical access to health care is understood as the availability of appropriate health services within reasonable limits the reach of those who need them, and with the hours of work, systems, appointments and other aspects of the organization and services that enable people to receive services when they need them [9].

MATERIALS AND METHODS

It was conducted a sociological survey of the population of Almaty city and Almaty region for the period of two months: September - October 2015.

Inclusion criteria were: presence at the time of the survey at home, ages 18 and older, at least one treatment in outpatient organization during the past 12 months, to participate in the survey, the lack of psychological diseases.

The study was conducted among urban population attached clinics in the city of Almaty, Kazakhstan №7, and №17. The rural population attached district clinics of Almaty region (Zhambyl and Sarkand areas). Clinics were typical for the region and were selected by random sampling.

For the study used the lists attached clinics population. In each area of the population attached conducted door-round on the principle of territorial single-stage cluster sampling up to a complete set of sample up to 1000 people at each site. In total 4,000 people responded to the questionnaire. Especially for this study was designed instrument- questionnaire, which consisted of several parts. In the first part were the socio-demographic questions, in which it was necessary to specify the place of residence (urban, rural), gender, age, education level and social status of the respondents. In the second part of the questionnaire were questions relating to physical accessibility to health care in the outpatient level.

To study the physical accessibility of health care in the outpatient level, the study participants were asked about the frequency of uptake of the population and the possibility of making an appointment with a doctor in outpatient organization, to which are attached the respondents, satisfaction with public mode of operation specialists clinics, doctor's length of waiting reception as well as the confidence of people in receipt of free medical care.

The survey was anonymous. Each respondent was assigned a certain number. The conditions in which the case study was carried out, were the same for all respondents. The study was conducted at the home of the respondents individually. If there was no response to the questionnaire of any question the main part of the questionnaire, this questionnaire was excluded from the database entirely. After eliminating with incomplete answers of questionnaires, 3290 questionnaires the respondents were processed, accounting for 82.2% of the planned number of respondents profiles.

METHODS

To assess the availability of medical services, we used the ranking method and used a scale from 1 to 4 and 1 to 3 with the following Range, where the best option corresponds to the maximum value, the worst-minimum. In this case the answer "do not know" and "not used" were not taken into calculation.

Statistical analysis of data is performed by StatPlus program.

When calculating availability of medical care was used indicator of the overall level of availability (Overall level) for each indicator for the city and the village, which was calculated by the following formula:

Overall level: (Percentage of best estimates \times 4) + (Percentage of answers that are close to the best \times 3) + (Percentage of responses close to the worst-case \times 2) + (Percentage of the worst answers \times 1) / Total rating (percent) of total access to health services at outpatient organizations.

When evaluating the waiting time, we used the following of availability graduation: waiting for the doctor to 10 minutes was evaluated as the best option, up to 30 min-answer is close to the best, to 1 hours-answer is close to the worst-case and a the worst variant – more than 1 hour.

In other cases, the answer "yes" meant the best option, "more likely than not" - close to the best, "rather no than yes" - close to the worst, "no" - the worst. In assessing the of availability records to the doctor, we used a scale from 1 to 3 according to the degree of difficulty recording, where 1- is not able to registrar (the worst variant of the answer), 2- hard (answer close to the worst-case), 3- easy (best answer). Thus We used the following calculation procedure:

Overall of availability records to the doctor: (Percentage of best estimates \times 3)+ (Percentage of responses close to the worst-case \times 2) + (Percentage of the worst answers \times 1) / Total rating (percent) of the total of availability records to the doctor d outpatient organization. The maximum number of points for each type of record to the doctor was 3 points.

ETHICAL CONSIDERATIONS

The questionnaire and the study protocol was approved June 24, 2015 Local ethics committee at «The Kazakh National Medical University S.D Asfendiyarov", which is registered in the international system of Health and Human Services, and is guided by the applicable laws and regulations of the Republic of Kazakhstan, the Charter of the Kazakh National Medical University, international instruments and guidelines, the recommendations of the Health and Human Services, Regulations on the local ethics committee.

Also had to get permission from the Guidelines clinics to which were attached to the study participants. The research team reacted very carefully to all the information received, to maintain the rights of participants in accordance with the ethical principles of the Helsinki Declaration.

RESULTS OF THE STUDY

Analysis of the results of sociological research 3270 respondents was conducted, which appealed to the outpatient organization over the last 12 months. Of them 1497 (45.8%) of respondents resided in the city and in 1773 (54.2%) - in rural areas. More than half of the study participants were female 57.3%.

The fifth part of the number of participants in the study, applied for medical assistance in the outpatient organization, were in the age group 40-49 years (21.3%), and about the same number to 50-59 years (20.5%). At the age of 30-39 years were 18.4% of respondents, and 20-29 years-18.0%. 13.5% of participants aged 60 years and over, and 8.4% were in the age group 18-20 years.

The main part of respondents had secondary education: specialized secondary education - 32.7%, the overall average - 25.0% and incomplete secondary education - 5.2%. Higher Education noted 27.1% of respondents, and 10.0% - incomplete higher education.

The majority of respondents employees (in city-31.7%, in rural areas - 25.5%) and workers (27.2% and 36.9%, respectively). The proportion of seniors, respectively, 15.7% and 8.3% and 0.8% for persons with disabilities. Housewives make up 6.7% of the number of participants in the study of urban and 10.5% of the number of rural, students - by 8.2% and 4.9%; businessmen - 4.7% and 4.1% and the unemployed - 1.1% and 3.5%, and others who do not have their kind of activity- 1.9% and 3.1%. Data are presented in Table 1.

Table 1- Characteristics of respondents

	city [n (%)]	rural [n (%)]
the total number of respondents	1497	1773
Sex [n (%)]		
men	608 (40,6)	788 (44,4)
women	889 (59,4)	985 (55,6)
Age [n (%)]		
18-29	344 (22,9)	517 (29,2)
30-49	562 (37,5)	735 (41,5)
50 and older	591 (39,5)	521 (29,3)
Level of education completed [n (%)]		
incomplete secondary education	60 (4)	111 (6,3)
overall average	201 (13,4)	616 (34,7)
specialized secondary education	441 (29,5)	628 (35,4)
incomplete higher education	149 (10)	179 (10,1)
higher education	646 (43,2)	239 (13,5)
Social status [n (%)]		
working	982 (65,6)	1221 (68,8)
students	123 (8,2)	86 (4,9)
pensioners and disabled people	247 (16,5)	163 (9,1)
unemployed / other	145 (9,7)	303 (17,1)

We found that 37.43% of urban and 41.32% of rural respondents of the total number of participants in sociological research turned to the clinic once a year, from 2 to 4 times per year -41.21% of urban and half rural residents 50.25% and more than 4 times per year treated 21.35% of respondents in the city and 8.43% - in rural areas (Figure 1).

Thus, most of the respondents appealed to the outpatient organization from 1 to 4 times per year.

Table 2- Frequency of the population appeal ability in outpatient organizations in the last 12 months

rate of appealability	City	Rural
once a year [n (%)]	496 (33,2)	670 (37,8)
from 2 to 4 times per year [n (%)]	647 (43,2)	869 (49)
more than 4 times per year [n (%)]	354 (23,6)	234 (13,2)

The study showed that most of the respondents (42.6% in urban and 33.2% in rural areas) were expecting to see a doctor in the queue of up to 30 minutes. On the waiting time to receive a doctor 10 minutes reported 30.2% urban and 23.9% of rural respondents. 18.4% urban and 25.4% rural respondents sometimes had to wait for a more than 30 minutes and only an average of 6.0% of respondents said they expected the

reception of more than 1 hour. Thus, patients in rural outpatient clinics organizations expect to receive medical patients longer urban clinics (Figure 1).

Thus, the total availability for the waiting time was 3.0 in the city, in rural areas 2,9 of the 4 possible points.

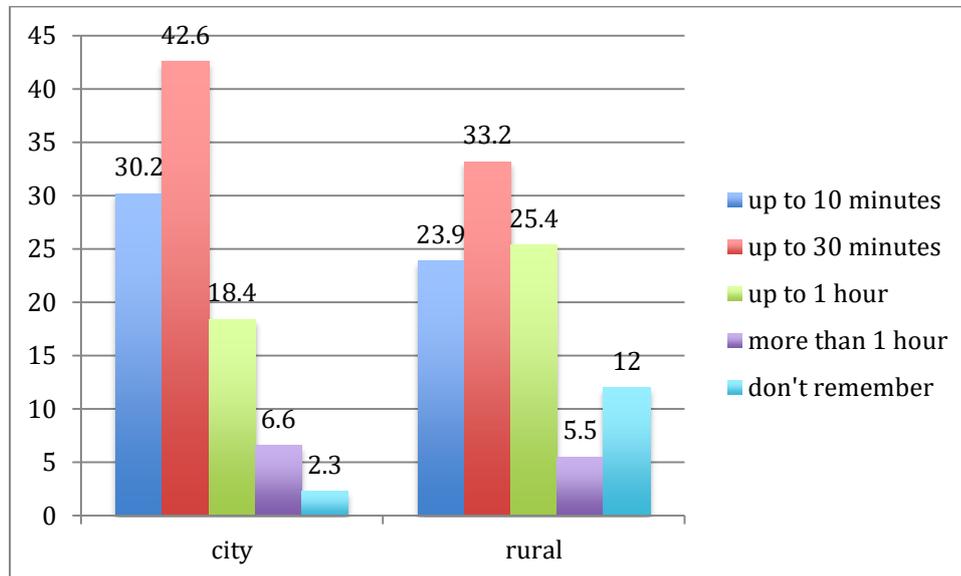


Figure 1 - The duration of waiting in the queue to see a doctor (%)

In the study of public satisfaction with the operation mode of outpatient organizations, which are attached to the respondents, it was found that in general, the population is satisfied with the work mode polyclinics. Hours GP satisfied 39.9% urban and 75.2% rural residents. 32.7% of urban respondents and 19.1% of rural said that GP mode satisfied them rather than not. The opposite option selected 15.9% of urban and 1.1% in rural areas. And only 8.6% of respondents in the city and 0.7% in rural areas said they were not satisfied with the mode of operation of GP (Figure 2). It was found that the mode of operation of narrow specialists satisfied 28.1% of urban residents and 66.2% rural. On the whole, satisfied (more likely than not) 37.8% and 23.7%, respectively. Variant of answer "rather no than yes," 23.0% of respondents chose the city, and 3.6% - in rural areas. And not satisfied with the reception time of narrow specialists, 8.4% of urban residents and 1.9% - rural (Figure 3). 37.3% of respondents satisfied the countryside operation outpatient laboratory organization to which they are attached, in the city this percentage was 66.0%. Rather satisfied than not 36.2% urban and 23.1% of rural respondents. Rather dissatisfied 19.6% of respondents in the city and 4.9% - in the village, not satisfied with the 2.1% and 1.4%, respectively (Figure 4). Modes of operation of functional diagnostics cabinet satisfied 39.7% urban and 55.6% rural residents. Variant of answer "rather satisfied than not" chosen 29.8% of urban respondents and 19.1% - in rural areas. Almost not satisfied were 13.6% of the participants in the city and 5.1% - in rural areas. And absolutely not satisfied with the 12.1% and 1.0%, respectively (Figure 5). Opening hours treatment room satisfied 43.1% urban and 66.9% rural residents. 35.4% of urban respondents and 18.5% of rural said that treatment room operation more satisfied them than not. The opposite option selected 11.6% of urban and 1.7% in rural areas. And 6.6% of the respondents in the city and 0.8% - in the village said they are not satisfied with the treatment room operating mode (Figure 6). Operating modes physiotherapeutic rooms satisfied, overall, 68.7% urban and 70.6% rural residents. Almost not satisfied were 11.6% of the participants in the city and 4.8% in rural areas. And absolutely not satisfied with the 10.1% and 1.1%, respectively (Figure 7).

Thus, the overall of availability outpatient organizations operating hours, which are attached to the respondents, out of a possible 4 points, was as follows:

- the overall level of GP availability in a city of 3.1 points, in rural areas - 3.8;
- the overall level of accessibility specialists in the city of 2.9 points, in rural areas - 3.6;
- the overall level of the laboratory available in the city of 3.1 points, in rural areas -3.6;

- the overall level of functional diagnostics rooms in the city is 3.0 points, in rural areas- 3.6;
- the overall level of accessibility treatment room in the city is 3.2 points, in rural areas- 3.7;
- the overall level of physiotherapy in the city is 3.0 points, in rural areas- 3.6.

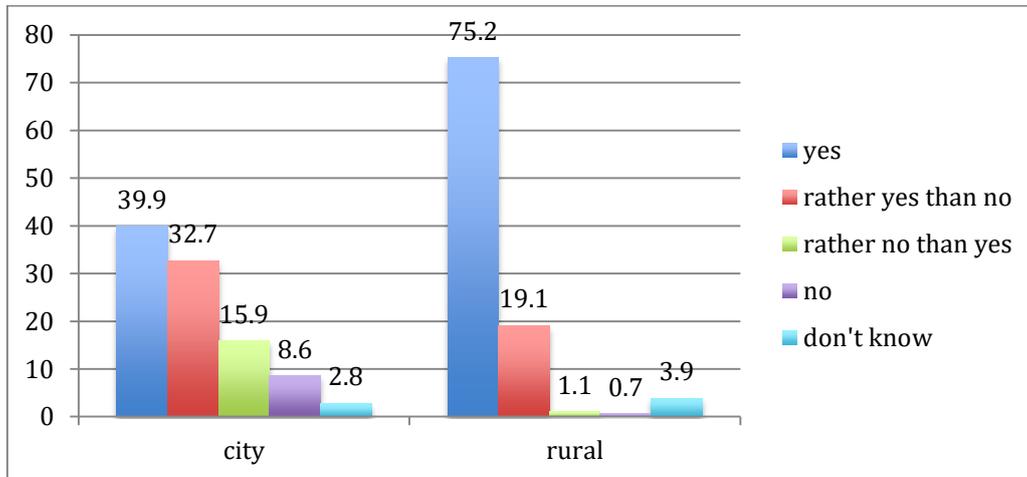


Figure 2- Satisfaction with public mode of operation GP in outpatient organizations (%)

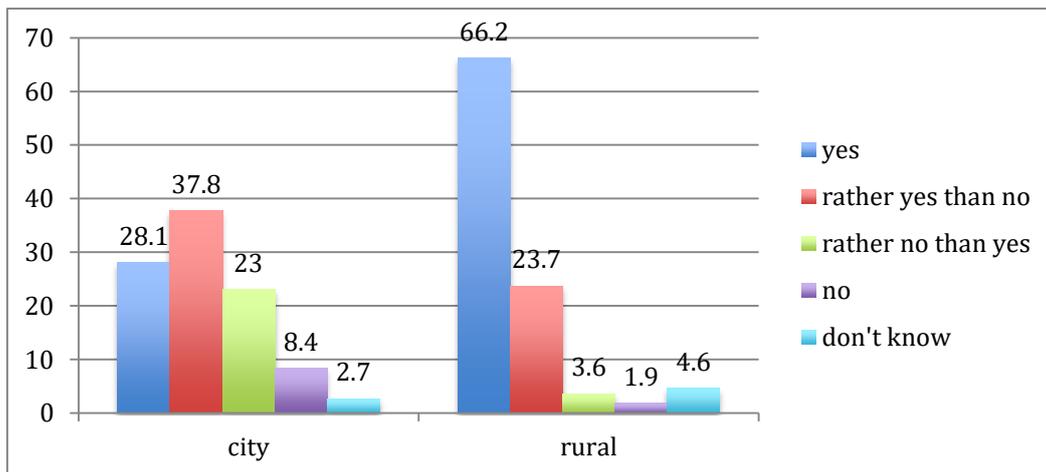


Figure 3 –Satisfaction with public mode of operation narrow specialists in outpatient organizations (%)

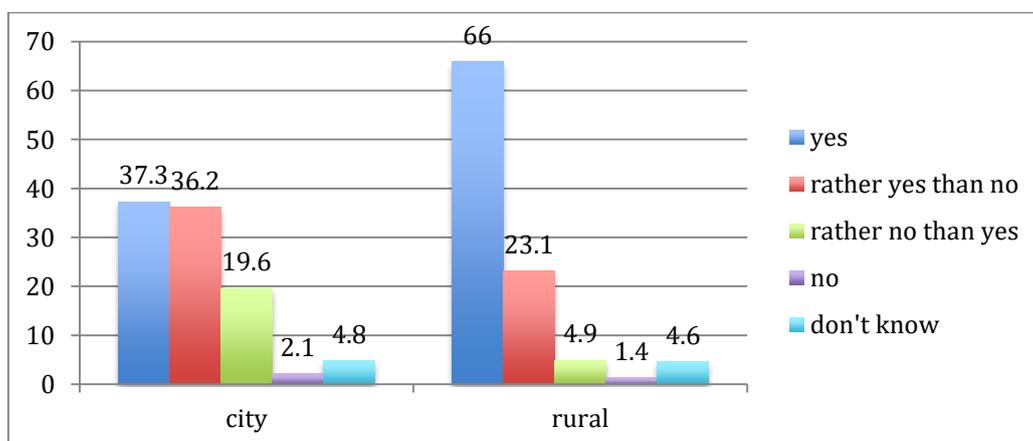


Figure 4 - Satisfaction with public mode of operation of the laboratory in outpatient organizations (%)

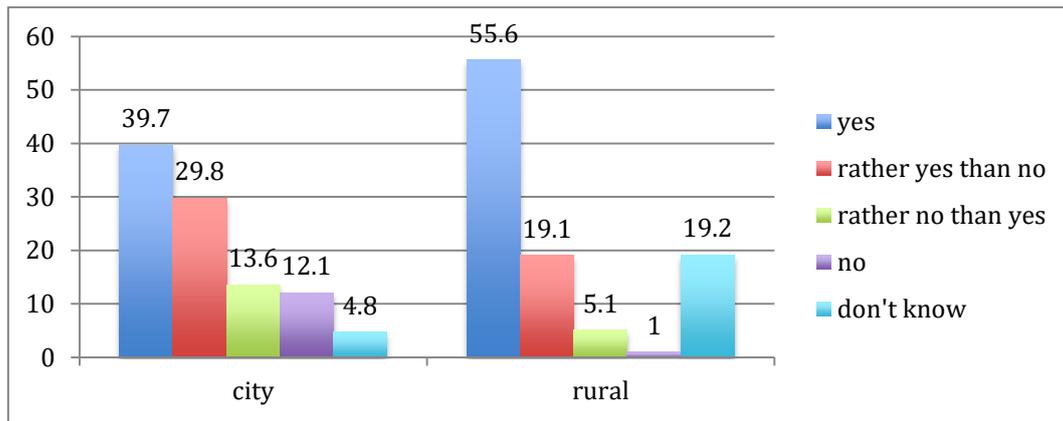


Figure 5 - Satisfaction with public mode of operation of the offices of functional diagnostics in outpatient organizations (%)

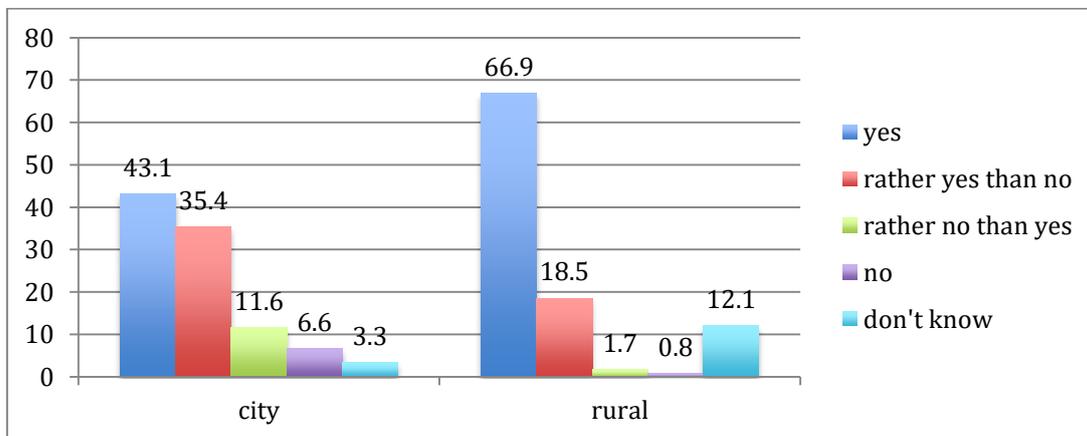


Figure 6 - Satisfaction of the population treatment room operating mode in outpatient organizations (%)

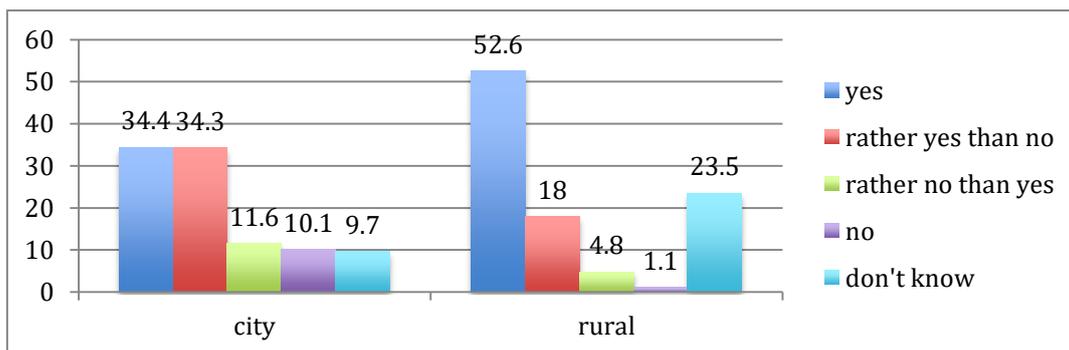


Figure 7- Satisfaction with public mode of operation physiotherapeutic rooms outpatient organizations (%)

The following results were obtained when considering the confidence of the respondents the possibility of obtaining free medical care whenever they need it. Positive answers ("yes" or "more likely than not") reported 69.6% of urban respondents and 56.4% - in rural areas. Part of the patients in the city, 16.1%, and in rural areas, 25.6% do not believe in the possibility of obtaining free medical care, if necessary, answer "no rather than yes" was chosen by 7.9% of respondents in the city and 1.6% - in the village (Figure 8).

Thus, the availability of free medical care, if necessary, in the city was estimated at 3.1 points, in rural - 2.9 points.

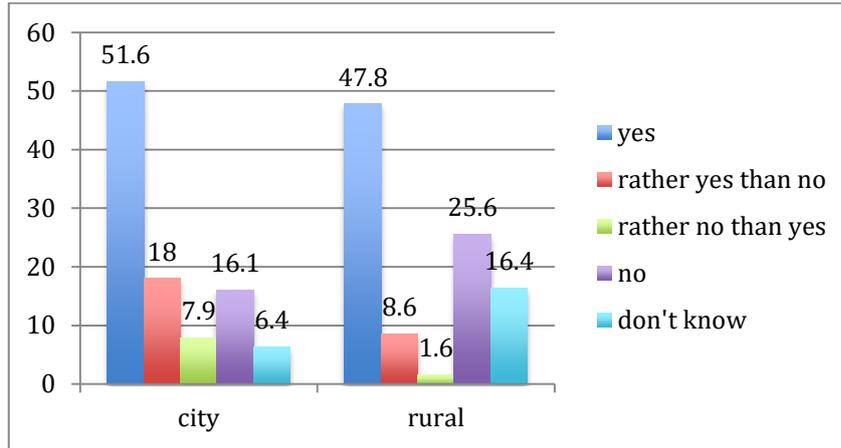


Figure 8- Respondents answer the question: "I can get free medical care whenever I need it" (%)

In the study of of availability public records to the doctor in different ways (by phone, by person appeal in the registry, by using the internet), it was found that, in the opinion of the majority of respondents in the city, 79.6%, as well as in rural areas, 70.4%, most accessible way to make an appointment to see a doctor is a personal appeal to the registry. Although there were those (average 1.3%), who failed to registrar in a similar way. The second place at the reception recording methods to doctors was recorded on the phone for 68.3% of the city and 62.0% - of the village. By Internet we were able to record 23.8% urban and 12.7% rural. Data are presented in figures 9, 10, 11.

Thus, the overall of availability records to the doctor for a population that has used the following methods for recording to the doctor was:

- way to make an appointment to see a doctor on the phone in the city of -2.8 points, in rural areas - 3.0 points.
- way to make an appointment with a personal appeal to the registry: in the city and in rural areas the same number - 2.9 points.
- way to make an appointment to see a doctor on the internet: in the city of -2.7 points, in rural areas - 2.6 points.

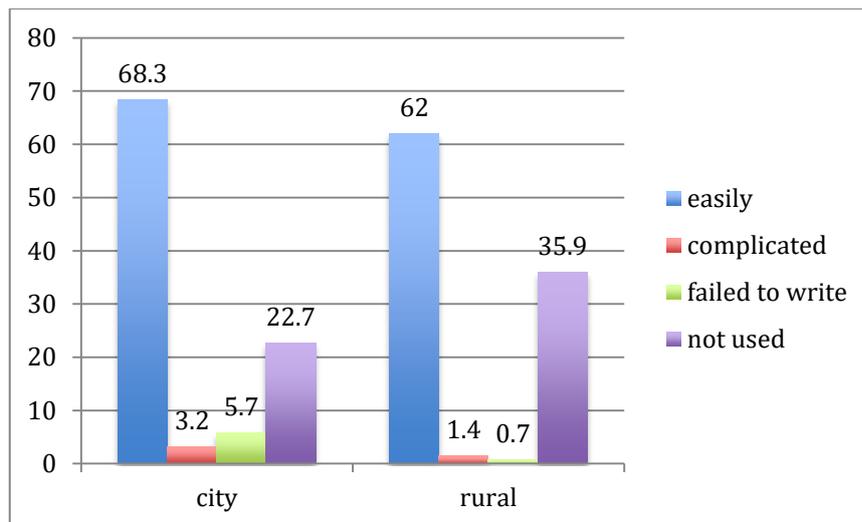


Figure 9 - Make an appointment to the doctor on the phone (%)

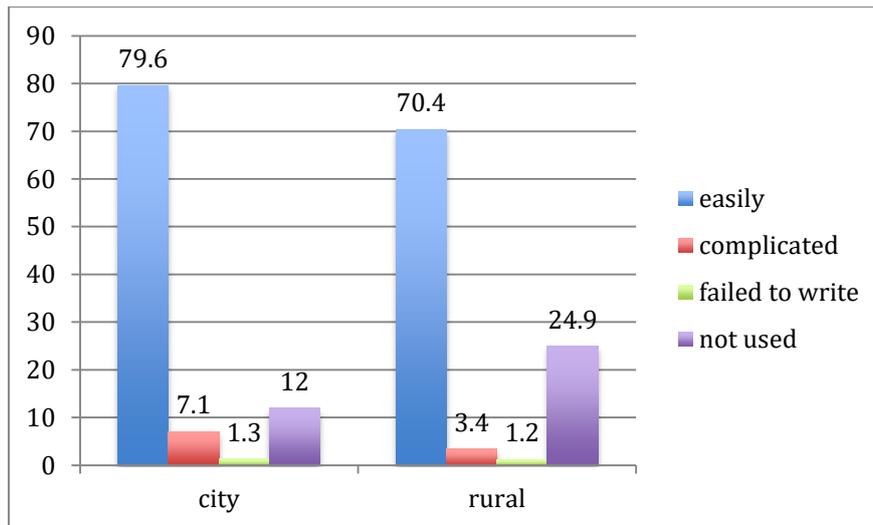


Figure 10 - Make an appointment to see a doctor in person contact the registry (%)

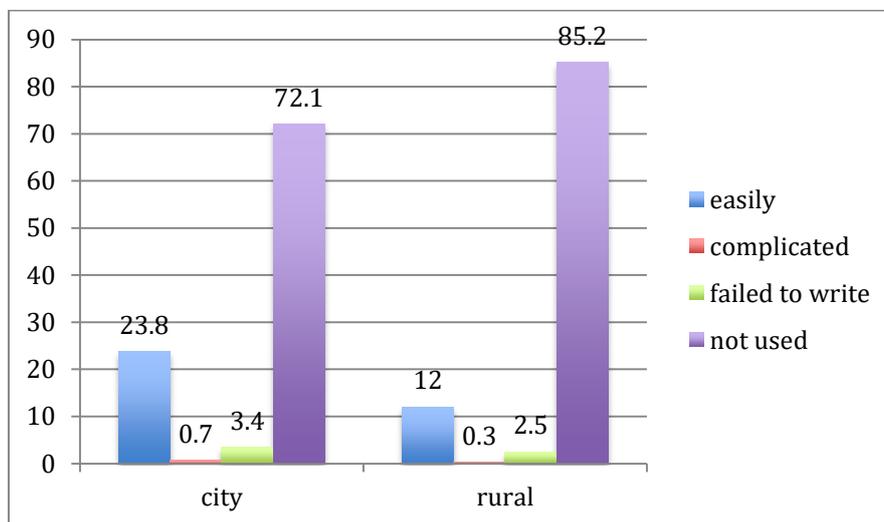


Figure 11- Make an appointment to see a doctor with the help of the Internet (%)

CONCLUSION

In a comparative analysis of the of appealability rate in outpatient organizations it found no large differences in the of appealability of multiplicity residents of city and village. The majority of respondents are turning from 2 to 4 times a year, both in urban and in rural areas.

General availability for the waiting time to see a doctor in the queue in the city of Almaty was higher by 0.1 points.

Overall of availability outpatient organizations operating hours, which are attached to the respondents was higher in the city than in rural areas. Thus, the overall of availability GP, narrow specialists, laboratories, offices of functional diagnostics, physiotherapeutic rooms treatment rooms, and in Almaty region above in 1,1-1,3 times.

The availability of free medical care, if necessary, the respondents in the city was rated higher by 1.1 times as compared to rural areas.



Overall of availability records to the doctor on the phone was higher for the urban population of 0.2, recording through Internet - 0.1, and when you contact the registry - the general equation of availability was at the same level.

REFERENCES

- [1] WHO: Health Systems in Transition. Health systems. Kazakhstan. - Volume 14 №4- 2012.- 184 p.
- [2] Code of the Republic of Kazakhstan on the health of people and the health care system on September 18, 2009 № 193-IV.
- [3] The decision of the Government of the Republic of Kazakhstan dated August 4, 2009 № 1174 On approval of the Action Plan for the implementation of the Unified National Health System of the Republic of Kazakhstan.
- [4] The decision of the Government of the Republic of Kazakhstan dated 15 December 2009 № 2136 On approval of the list of guaranteed volume of free medical care.
- [5] Resolution of the Government of the Republic of Kazakhstan dated November 19, 2009 № 1887 On approval of rules providing for citizens of the guaranteed volume of free medical care.
- [6] Order of Acting Kazakhstan Health Minister on January 5, 2011 № 7 Approval of the Regulations on the activities of health care organizations that provide outpatient care
- [7] Republic of Kazakhstan Decree of the President dated 29 November 2010 № 1113 On approval of the State Program for Health Development of the Republic of Kazakhstan "Salamatty Kazakhstan" for 2011 - 2015.
- [8] State health development program of the Republic of Kazakhstan "Densaulyk" on 2016-2019 years.
- [9] Bulletin of the World Health Organization 2013; 91: 546-546 A.