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The perception of outpatient care quality by healthcare users in Ukraine

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ABSTRACT

Background: Ukraine has been improving the quality of health care by reforming the health care system. Evidence on healthcare users' perceptions of quality is important for future system changes. This paper aims to analyze the aspects of quality that outpatient care users find most important.

Methods: Data from a longitudinal household survey 'Health Index. Ukraine' in 2016–2019 were used. The survey had a sample size of over 10,000 participants per wave. Data were analyzed using descriptive statistics as well as binary regression analysis.

Results: Our results showed the importance of quality attributes as 'effectiveness of treatment' and 'qualification of medical personnel' as well as changes in the perception of quality attributes connected with payment policies and general management of the facility (like working hours, setting and hygiene ensuring by medical personnel).

Conclusions: Our study provides new insights into the importance of healthcare quality attributes for outpatient healthcare users in Ukraine, showing the need to develop in future a national policy on quality and a national quality strategy for health care that incorporates quality aspects important to patients to make the healthcare system more responsive to the needs and expectations of healthcare users.

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1. Introduction

Since 2017, Ukraine has been reforming its healthcare financing to improve health and to reduce the financial burden for patients. The healthcare system has been modernized and access to good quality medical services has been improved. In 2017–2018, the financing of the primary care system was changed from fixed line-item budgeting (central budgets by the state, that specifies on what outlays health care facilities are allowed to spend the items stated in the budget) to per-capita financing (financing based on a fixed amount per patient) [1]. As a result of these reforms, patients can choose their family doctor of any form of ownership (public or private) and regardless of the place they live. Patients also need a referral from their family doctor to visit a medical specialist. Medical facilities changed their legal entity from state-owned (direct subordination to the Ministry of Health, managerial decisions taken at a central level) to community-owned (subordination to the local government, the managerial decision taken at the local level) as a result of a decentralization process. This enabled agreements with the national payer National Health Service of Ukraine, which purchases care at predefined rates. A more competitive and higher-quality system of medical care is supposed to be the result of the reform [2].

Competition between health care providers and free choice of provider by patients can contribute to the improvement of quality of health care. The perception of quality among healthcare users creates expected quality [3]. It is important here as it influences the choice of provider [4]. On the stage of interaction between the provider and the patient, interpersonal relationships matter. And after the service has been used, assessment of the results is also important [3]. The difference between expected quality and perception of the services used constitutes patient satisfaction. Thus the perception of quality predisposes patient satisfaction and creates loyalty to the provider [5], creating the need to integrate patients' understanding of quality in the service design and provision policies.

Quality is often defined and assessed by attributes depending on the context, the type of health care (preventive, acute, chronic, or palliative care), and the stakeholder involved (medical professional, patient, policy maker) [6]. For primary healthcare patients, the most important attributes appear to be a short

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waiting time, respectful providers who are responding to patients' needs [7], the appearance of personnel, a peaceful atmosphere, honesty, behavioral attitudes, and communication skills of both medical doctors and support staff [7], availability of services, availability, and quality of drugs and medical equipment [4]. Whereas for hospital care, quality attributes also include food, nursing care, room characteristics, hospital costs [8], hospital atmosphere [9], the so-called 'servicescape' [10].

Another issue is that socio-demographic characteristics such as marital status, socioeconomic circumstances, and cultural background predispose the perception of quality [8, 11]. Nevertheless, assessing the satisfaction of healthcare users and identifying their needs are the most significant steps in quality improvement [12].

Studies on patient perception of the quality of healthcare services in Ukraine are rare. In the early 2000s, Kressens et al. [13] performed a series of patient evaluations of the healthcare system responsiveness through the Quote (Quality of care Through patients' Eyes) instrument in 12 countries, including Ukraine. Patients gave importance and performance ratings on 10 items about their general practitioners' respect for persons and client orientation. Ukraine's health care system was found to be the least responsive among the 12 countries (Italy, Norway, Portugal, Greece, the Netherlands, the United Kingdom, Ireland, Israel, Finland, Denmark, Belarus) included in the study.

Another study (Luck et al.) [14] analyzed the patient and provider perspectives on the quality and effectiveness of the health system in Ukraine. Household representatives (adults), physicians, and clinic patients took part in data collection in 2009 and 2010. The participants described quality through physician training, the amount of time spent with patients, and accessibility and affordability of care.

In addition, Stepurko et al. [15] studied the level of satisfaction of healthcare users and access to services in six Central and Eastern European countries, including Ukraine. Nationally representative data were collected in 2010 through uniform surveys and became the subject of multi-country analysis. The most important attribute of quality was found to be the reputation and skills of a doctor (physician and surgeon). The relatively least important attributes were the travel time and waiting time both for inpatient and outpatient services.

Ahiyevets et al. [16] measured satisfaction with primary healthcare quality in May 2019 via face-to-face interviews. Satisfaction with family doctor was rated by Humanities students in three countries (Belarus, Poland, and Ukraine). Among the quality attributes, politeness and attentiveness of medical doctors were rated highly, whereas medical confidentiality was rated comparatively low.

A cross-sectional study by Paryi et al. [17] reported an increase in satisfaction with primary healthcare services in Kyiv from 75.5 ± 0.5 in 2017 to 85.9 ± 0.4 in 2019. The data were collected among 402 respondents using EUROPEP questionnaire in 2019.

We also found studies focusing on satisfaction with a definite type of care. For example, the study of perceived quality of HIV care (Hailemeskal et al.) [18] showed a high level of satisfaction with HIV services. The lack of evidence on the perception of health care quality means that less account is being taken of the views of health care users on the quality of the health care system [13]. This study aims to examine the perception of outpatient care quality by healthcare users in Ukraine. Our analysis adds to the literature by identifying and comparing attributes important to outpatient healthcare users as well as by comparing any changes in importance during a 4-year period. We are thus able to identify changes in the importance of quality attributes that might have been provoked by the reform.

2. Methods

We used data from the household survey 'Health Index. Ukraine'. Data collection has been supported by the International Renaissance Foundation since 2016. The objective of the survey was to identify and examine people's satisfaction with health care, attitudes towards health care reforms, health behaviors and experiences in seeking health services, and health expenditures.

The survey is longitudinal. The first wave of the survey was conducted in May–June 2016, the second – in May–June 2017, the third – in June–July 2018 and the fourth in June–July 2019. The survey has a large sample size (over 10,000 participants per wave) and is representative for the country. A multi-stage sampling technique, random at each stage, is used. First, in each oblast (administrative-territorial unit), inhabited locations are chosen proportionally to oblast's population size. Then areas, streets, buildings, and apartments are chosen using the random route method. As the last stage, one individual from a household is interviewed. If a respondent could not be reached twice, this information is included in the field report and another respondent is chosen following the same approach. More information can be found at the 'Health Index. Ukraine' webpage at http://health-index.com.ua/reports.

Household representative surveys using individual interviews are used because of their maximum representation of all population strata, which is not possible in Ukraine in the case of telephone or online surveys. It also has the benefit of tracking spontaneous respondents' feedback and their attitude towards the problem and question asked, more prolonged

communication as compared to other methods and more outspokenness of respondents when talking directly to a survey person.

The EuroHealthConsumerIndex (2014–2018) [19] and access to the health data provided by the Government of Canada (2022) [20] with similar surveys were used by the researchers of 'Health Index. Ukraine' to design the questionnaire. The study survey was validated by expert discussions and approved by the International Scientific Board developed for the purpose of 'Health Index. Ukraine'.

The questionnaire is pretested annually by surveying 25 respondents (24 in 2016) from Kyiv city and Oblast. In 2017, the following question was added 'What does the quality of care mean for you as a patient or a relative of a patient? You can choose two answers, starting with the most important' (for the detailed wording, see Appendix A). These questions provided the main source of data for this study (see Appendix C).

In 2018, the questionnaire was modified and in 2019, it was shortened considerably (130 questions out of 200 were left). However, the wording of the questions chosen as the data source in this study stayed the same (for the exact wording, see Appendix A and Appendix E).

The data were collected via face-to-face interviews by 238–303 trained interviewers (303 in 2016, 253 in 2017, and 238 both in 2018 and 2019). Depending on their personal experience, the respondents were asked up to 200 closed questions about the importance of different aspects of medical care, satisfaction, assessments of health care problems, behaviors in case of illness and assessments of some lifestyle features, experience in seeking outpatient and inpatient care. Several questions about respondents' diagnoses were open-ended.

Overall, more than 10,000 respondents were surveyed in each wave. There were 10.178 interviews in 2016 (response rate 47.1%), 10.184 in 2017 (response rate 49%), 10.194 in 2018 (response rate 41%), and 10.222 (response rate 45.2%) interviews in 2019. The response rate significantly differed between Oblasts, from 28% to 30% in the city of Kyiv and Sumy Oblast and up to 92% in Ternopil Oblast in 2017. Field activities were performed in 476 inhabited locations in Ukraine (on territories controlled by the government of Ukraine) in each wave.

Ethical considerations. Ukraine has no obligatory requirement to obtain ethical approval before data collection for non-clinical research. At the time when the first data collection took place, ethical committees were not common and had no well-defined requirements. Thus the International Scientific Board of the household survey 'Health Index. Ukraine' decided not to obtain ethical approval. Participants were free to withdraw their participation at any time without a negative impact on their involvement in future studies or professional relationships. All data were kept confidential. No identifying information was shared with other third parties.

In the analysis, we identified the aspects of quality that healthcare users find most important. At the same time, we also used attributes of outpatient care quality available in the survey.

In the analysis, we also identified the aspects of quality that the subgroup of outpatient medical assistance users finds most important. We compared changes in importance during a 4-year period. We also analyzed the relationship between the most important aspects (dependent variables) and socio-demographic characteristics. For the above analysis, we applied descriptive statistics as well as logistic regression analysis for binary dependent variables.

The list of dependent variables for analysis included: treatment effectiveness, courteous communications, free-of-charge drugs, explanations clarity, hygienic state, hygienic procedures, modern equipment availability, qualified personnel, respect, close stay, and quality influence (for the detailed wording see Appendix A). Each respondent was asked to choose up to two items from this list, depending on the quality criteria they found most important'.

In the binary regression, the dependent variable is binary and indicates whether a given attribute is chosen by the respondent. It is coded as '1' if the given attribute was chosen by the respondent, and '0' if it was not chosen by the respondent. The socio-demographic characteristics (including gender, age, education, occupation, income, type of settlement, health status, and household size) are used in the regression analysis as independent variables.

The significance of the model was checked using the Chi-square test. The predictive power was checked using Cox and Snell R square and Nagelkerke R square (for more detailed information, see Table 3).

3. Results

As shown in Table 1 (see Appendix B), socio-demographic characteristics of respondents across the 4 years are similar. The mean age of the participants was 47–48 years old. Overall, 45.1–45.2% of men and 54.8–54.9% of women took part in the survey. Participants from urban areas prevailed. The majority of respondents had specialized secondary education and were employed. The average number of people in the household was about 3. The majority of participants refused to answer the question about their income. Among those who gave an answer, the average income was low or middle (where low means up to 5000 UAH, middle means 5001–10,000 UAH and high means more than 10,000 UAH. According to the official website of the Ministry of Finance of Ukraine https://index.minfin.com.ua/ the exchange

rate in December 2015 was 26.2 UAH for 1 EUR, in December 2016–28.4 UAH for 1 EUR, in 2017–33/33.8 UAH for 1 EUR, in 2018–31.7UAH for 1 EUR and in December 2019–26.3/27.5UAH for 1 EUR). Also, the majority of the respondents considered their health to be good or average with the exception of 2016 when the majority of the respondents self-reported their health as bad.

During the first wave (in 2016), the respondents were asked the following question: 'What does health care reform mean to you?' From the set number of suggestions, 42.6% chose 'Improved quality of health care' as the first choice. The team of researchers added the question about the perceptions of quality in the next wave (in 2017) to find out the meaning of quality of health care for the respondents. Based on the qualitative data of the previous research, the answering categories were provided (for detailed wording, see Appendix C).

Respondents could choose the two most important aspects. As can be seen from Table 2 (see Appendix C), the majority of respondents indicated that the most important aspect of quality was 'The effectiveness of treatment (the correct diagnosis, adequate treatment)' (78.3%) and 'Qualified medical personnel using modern and safe treatment methods' (35.2%). The category 'Other' (0.5%) included: patients' life expectancy, trust in the doctor, accessible and affordable drugs, timeliness.

Table 3 (see Appendix D) shows the results of the binary regression analysis performed on the perception of quality of care.

The model is significant for all the attributes but for 'Equipment' (sig. 0.138), 'Respect' (sig. 0.137) and 'Close stay' (sig. 0.481). The total accuracy of the model varied from 81.5 to 98.4 for all the dependent variables, but for 'effectiveness of the treatment' (75.8), 'free of charge drugs' (77.6), 'qualified medical personnel' (65.0). We find a statistically significant association ($p < 0.05$) with age, gender, education, occupation, income, type of settlement, health status and household size.

Female respondents, respondents with low income and for the respondents with good self-reported health status are inclined to define quality more as 'treatment effectiveness'. 'Courteous communication' is less important to the respondents with low income. 'Free-of-charge drugs' is a less important aspect for respondents with specialized education, low income, and to those who live in cities but more important for people over 50 years old. 'Explanations clarity' is less important for female respondents. It is also more important for a household with two and three people compared to single-person households. 'Hygienic state' is more important for female respondents and respondents with low and middle income. 'Hygienic procedures' is more important for employed respondents and urban citizens, and less important for respondents with a low income. 'Equipment' is less important for respondents with a low income. 'Qualified personnel' is more important for respondents with specialized education and low income. The 'respect' aspect is less important for urban inhabitants. The 'quality influence' aspect is less important for female respondents and respondents with average self-reported health status. It is also more important for employed, urban inhabitants.

We observed no statistical significance in the relationship between 'The possibility to stay close to family members of patients' and the socio-demographic variables.

Next, we present results on the importance of the quality of outpatient care for outpatient medical assistance users only. The subgroup comprised 35.8% of all the respondents in 2016, 36.6% in 2017, 35.6% in 2018 and 43.2% in 2019 respectively. Table 4 (see Appendix E) shows the descriptive statistics of the importance of outpatient medical assistance aspects. We observe an increase in the importance of each aspect over time.

4. Discussion

This study investigated the perception of quality by healthcare users in Ukraine. In particular, the study identified and compared the importance of attributes of quality in health care in general to health care users as well as in outpatient care to outpatient medical assistance users.

The perception of quality by healthcare users is important for differentiation between good and poor quality [6]. Our findings show that health care quality in Ukraine is mostly associated by users with 'effectiveness of treatment (the correct diagnosis, adequate treatment)' and 'qualified medical personnel using modern and safe treatment methods'. Both aspects are predisposed by socio-demographic characteristics. The 'effectiveness of treatment (the correct diagnosis, adequate treatment)' aspect is predisposed by gender (more important for female respondents), low income, and good self-reported health status. And 'qualified medical personnel using modern and safe treatment methods' is predisposed by specialized education and low income. At the same time quality is least associated with such aspects of quality as 'the possibility to stay close to family members of patients' and 'respect, trust and empathy to the patient'. Whereas the 'the possibility to stay close to family members of patients' aspect is not predisposed by socio-demographic characteristics included in the analysis and 'respect, trust and empathy to the patient' is predisposed by gender, health status, occupation and type of settlement (less important to female respondents and respondents with average self-reported health status but more important for employed and urban inhabitants).

The lack of association of 'the possibility to stay close to family members of patients' and 'respect, trust and empathy to the patient' as well as the high importance attached to the 'qualification' aspect might be explained by the history of paternalistic doctor-patient relationships [21]. At the same time, the importance of the 'treatment effectiveness' indicates the more active role of healthcare users. The doctor–patient relationship is a known predictor of patient-perceived quality of health care [22]. Thus it is important to be considered at a system level while improving responsiveness. The doctor–patient relationship can also impact health outcomes [23]. Thus, on a facility level, it can help to improve outcome quality.

This change from a paternalistic to a more egalitarian model is confirmed by the comparison of the level of satisfaction with the quality of outpatient services in Ukraine. From 70% satisfaction with the general practitioner in 2016–73% in 2017, 76% in 2018, and 73.1% in 2019 [24]. It is also reflected by the fact that in 2016 the majority of the respondents self-perceived their health as bad whereas in 2017, 2018, and 2019 as good or average.

Our results also show that perceptions of outpatient care users about attributes connected with payment policies and general management of the facility have changed over time. We observe first a reduction (in 2017, 2018) and then and increase (in 2019) in the importance of such attributes as working hours, setting and hygiene ensuring by medical personnel. Moreover, we compared data collected during a 4-year period (2016, 2017, 2018, 2019). Our analysis showed the increase of the importance (it more than doubled) of all the quality attributes in 2019 in comparison with other years. This might be the result of increased competition after medical facilities became more autonomous and free choice of provider for health care users was introduced. Increasing competition stimulates healthcare facilities to develop and implement strategies of effective and better quality of care provision [25]. Healthcare facilities became autonomous in their expenditures. Financial and general management of the facilities improved and as a result, the state of the settings also improved (renovations were made, etc.). Healthcare users became more aware of the payment policies of the national payer, and that they were free to choose their service provider. These changes stimulate healthcare users to define more clearly the important attributes of the service they seek. Thus, helping service providers to design healthcare processes according to the needs of healthcare users [26, 27].

Our study also has some limitations that should be mentioned. The importance of quality attributes was measured in two subsets of in- and outpatient medical assistance users. This study focuses on outpatient care only, which leaves the perceptions of inpatient medical assistance users out of the analysis. The subset of outpatient medical assistance users comprises only 35.8% of all the respondents in 2016, 36.6% in 2017, 35.6% in 2018, and 43.2% in 2019 respectively. The importance of attributes of quality was evaluated by the general sample only in 2017. Thus there is no opportunity to study its dynamics. In addition, a multi-stage sampling technique, random at each stage, was used in the data collection. It is known as an efficient method for selecting a representative sample in the country. At the same time, its known disadvantage is its subjectivity as the chosen groups might not be optimal. Thus, the study is expected to be representative for each oblast (administrative-territorial unit).

The results of our analysis could help policymakers to analyze the importance of quality attributes for healthcare users to implement necessary changes making the healthcare system more responsive to their needs and expectations. At the same time, our results might be used on the level of facilities in customer relations management to create or strengthen the loyalty of the patients. Our analysis might also be interesting for countries in the region with similar healthcare systems or those whose healthcare systems are being transformed at the moment.

4. Conclusion

In conclusion, our study provides new insights into healthcare users' perceptions of healthcare quality in Ukraine, more specifically on the importance that healthcare users attach to quality attributes. Overall, we identified eleven aspects that were most frequently associated with the quality of health care by healthcare users, as well as ten aspects of outpatient health care quality that were most important for the subgroup of outpatient care users. Our findings provide evidence that 'effectiveness of treatment' is the most important aspect of quality for healthcare users, whereas 'respect, trust and empathy' appears to be relatively less important for healthcare users. The ongoing reform of healthcare financing is changing many aspects of healthcare delivery in Ukraine. In particular, the doctor-patient relationship is changing from a paternalistic to a more egalitarian relation. It also provokes changes in the perception of quality by healthcare users that need to be considered both at the system level and at the level of the facility. At the same time, studies on quality perceptions are rare. Thus our analysis may provide a baseline for future research on this topic as well as for decision makers and healthcare managers.

Although some improvements were introduced by the health care financing reform, no systematic work on national quality policy has been done. Patients' perception of quality is not recorded in a consistent

manner. There are no developed indicators in the Ukrainian health care system on aspects of quality important for patients. This makes it difficult to assess the responsiveness of the healthcare system and to evaluate the impact of the reforms.

There is a need to develop a national policy on quality and a national quality strategy for health care that incorporates quality aspects important to patients, as those indicated in this study. Moreover, the quality assessment practices in health care in Ukraine should include indicators that show the responsiveness of the health care system, such as patient quality perceptions and attitudes. This will help to further analyze the changes in perceptions of quality and these should be used for the implementation of necessary changes to make the healthcare system more responsive to the needs and expectations of healthcare users.

Availability of data and materials

The International Renaissance Foundation shared the results of the household survey 'Health Index. Ukraine' for this publication. The data are deposited with the International Renaissance Foundation. The contents of this publication are the sole responsibility of the authors and do not necessarily reflect the views of the donor. The data are available from the corresponding author Valentyna Anufriyeva with the permission of the International Renaissance Foundation.

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