Medical Laboratory Journal
Online ISSN: 2538-4449
Golestan University of Medical Sciences

Evaluation of the policy of improving the quality of visit service in the reform plan in laboratories of medical-teaching centers in Golestan province, Iran

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Abstract

Background: Improving the quality of visit services in laboratories of medical-teaching centers of universities of medical sciences plays a major role in providing better services to patients. The present study aimed to evaluate the policy of improving the quality of visit services of the reform plan in laboratories of medical-teaching centers in Golestan province.

Methods: The present research was cross-sectional and had a descriptive-analytical type. A total of 384 staff in the diagnostic laboratories were selected for the study using a simple random sampling method. The data collection tool included a 35-item researcher-made questionnaire.

Results: There was a gap between the current and desired status of the fourth axis of the health system reform plan. The gap was about -0.01, indicating that there was a gap between the current and desired status and it was related to the supervision department according to the respondents in the target statistical population.

Conclusion: The implementation of this plan was effective in improving the quality of visit services in laboratories of medical-teaching centers in Golestan province but this effectiveness did not meet the goals of the fourth axis of the reform plan. Therefore, the factors, which caused a lack of supervision among the executive departments of laboratories of medical-teaching centers in Golestan province, should be removed for increasing the effectiveness of this plan.

Article History

Received: 2 January 2023
Received in revised form: 31 May 2023
Accepted: 24 June 2023
Published online: 23 August 2023
DOI: 10.29252/mlj.17.4.3.

Keywords

Gap
Policy making
Health system
Health care reform
Health plan
Laboratory services
Quality of health care

Article Type: Original Article

Introduction

The citizens' health is an issue facing society in any government. Paying attention to health and trying to maintain and improve it have always been important priorities in governments (1). The term "health system" has a broad definition, including the resources, actors, and institutions involved in financing, regulating, and delivering activities that aim to promote, restore, and maintain health (2). The effort, which was made in 2014 to develop the policy of the health system reform plan, was an important attempt in the continuation of the path of realizing public coverage and justice in health. The health system reform was keyed in 7 service packages (3). The fourth axis of the seven packages of the first phase of the health system reform plan is dedicated to improving the quality of patient visits in laboratories of medical-teaching centers. The quality of health and laboratory care is a fundamental area of service provision in health service organizations, and high-quality health and laboratory care is the basic right of every patient. Accordingly, the patient has the right to use the best laboratory facilities, the best treatment, and the best doctor (4,5). Like other services, outpatient visits have components such as visit time, doctor-patient communication, confidentiality, and privacy that determine the final quality (4). Standard visit duration is necessary for the correct and flawless diagnosis of the doctor and plays a decisive role in the recovery of diseases. Patients want a real relationship with doctors, and a standard visit time has a significant effect (6). Studies indicate that a longer visit is more efficient and the patients need fewer follow-up visits (7). Allocating the appropriate time for visiting patients is an important factor in the diagnosis and treatment of diseases (8). The need to improve the quality of outpatient education and develop the provision of outpatient laboratory services, more people's use, and improve the standards of providing outpatient laboratory services are among important concerns in the world's universities and health service provider systems that are active in the field of medical education (9). According to official global statistics, the average time, that should be spent by a specialist on each patient, is 15 minutes and it is 10 minutes for a general practitioner (10). Increasing the quality of the laboratory diagnostic visit improves doctor-patient communication, increases patient satisfaction, increases patients' trust in the doctor, and reduces direct and indirect laboratory costs (11).

Iran is a developing country and, like other countries, it is facing the expansion of the number of outpatients, and the duration of laboratory outpatient visits is less than the standard and usual rate in these countries (5).

Due to visiting a large number of patients in a short period, patients often cannot see the doctor and there is no opportunity for the doctor to visit the patients by spending the necessary time, and this is an important factor in causing problems in the laboratory diagnosis of diseases (12). The examination duration also reduces the level of satisfaction and trust in patients, causing patients to be reluctant to follow up and receive treatment for their diseases which ultimately leads to the worsening of the disease outcome (13). It is very common to refer patients to receive diagnostic, therapeutic, and paraclinical laboratory services in Iran, thereby, increasing the laboratory costs of treatment for patients (9). The health system reform plan started with the aim of standardizing the doctor's visit time (8 patients per hour for all cases and 6 patients per hour for the psychiatric group) as well as paying special attention to clinical and laboratory examinations and preventing the repetition of unnecessary visits (14). Various studies have evaluated and estimated the quality of visit services in laboratory diagnostic centers in Iran and they have provided different mean levels according to the status of the service delivery system and the level of specialized services. In a study by Jahani et al., they reported that the mean diagnostic visit index per hour improved in 2016 compared to 2014. In 2014, the first year of implementation of the plan, it was far from the standards (11.9 visits per hour) and reached 8.4 visits per hour in 2016 with the reduction of this index. In other words, the doctor allocates more time for the diagnostic visit of the patients, but it is still far from the standard of the Ministry of Health and requires attention to the continuous improvement of this process, and more supervision to achieve the goals of this service package (15). Bastani et al. analyzed the gap in the quality of outpatient laboratory diagnostic services and reported that there was a negative gap in all dimensions of the quality of laboratory diagnostic services and the components related to their measurement. Furthermore, the scores of expectations (optimal status) of the clients were higher than their perception scores (current status). In other words, the patients' needs and expectations were not well met, and thus they had low-quality laboratory diagnostic services (16). Hasanpoor et al. reported the mean duration of outpatient visits (about 12 visits per hour) (17). Mosadegh Rad reported this index to be 3.15 minutes (about 19 visits per hour) for 4 main specialties in Qazvin Social Security Hospital (18). Furthermore, Ansari and Kebriaei compared the quality gap of physiotherapy services in public and private centers, indicating that the individuals' expectations were not met (a negative quality gap) in public and private centers (19). The results of the above-mentioned studies indicated a gap in the fourth axis (improving the quality of

patient visits in laboratories of medical-teaching centers) of the health system reform plan. Based on the above cases and the need to pay attention to the subject, the present research aimed to evaluate the policy of improving the quality of visit services in the reform plan for providing laboratory diagnostic services, and thus the researcher sought to answer the question "how is the gap between the current and expected status of improving the quality of visit service in the reform plan in providing laboratory service in medical-teaching centers in Golestan province.

Methods

The present research was cross-sectional and had a descriptive-analytical type. The statistical population consisted of all employees, medical staff, and doctors in diagnostic laboratories of medical-teaching centers at Golestan University of Medical Sciences. The sample size was equal to 384 due to the unlimited statistical population and using the simple random sampling method and Morgan's table. The data collection tool included a 35-item researcher-made questionnaire based on the objectives set forth in the instructions of the health system reform plan for the executive goals of the health system reform plan, on the one hand, the current status of objectives of the health system reform plan policy, and on the other hand, the expected status of the objectives of the health system reform plan policy, based on the five-point Likert scale (very high, high, relatively acceptable, very low, and low). To determine the validity, the questionnaire was given to supervisors and advisors to examine each item of the questionnaire based on three criteria, namely the expressiveness, completeness, and relevance to the topic, and also provide their corrective and supplementary comments. After receiving their opinions and making the necessary writing corrections, its formal and content validity was confirmed by the experts, and then then the questionnaire was given as a pilot to a group of participants in the statistical population. After completing the questionnaires, the reliability of the tool was evaluated by Cronbach's alpha method, and the result (α=0.83) indicated very good reliability of the tool. Questionnaires were distributed and collected over a period of 6 months from the beginning of fall to the end of winter of 2021. Necessary approvals were obtained from authorities and written consent was received from all individuals. The collected data were analyzed using SPSS 22 and Kolmogorov-Smirnov and one-sample t-tests. The proposed framework for the research process in the book "Public Issues Management" was utilized to investigate and analyze the gap between the current and expected status in the fourth axis (20) (Figure 1). In this model, the level of a gap between the current and expected status was examined based on the two components, the key stakeholders' compliance with the reform policies in the health system and the stakeholders' opposition to reform policies in the health system (small gap, no gap, large or small gap).

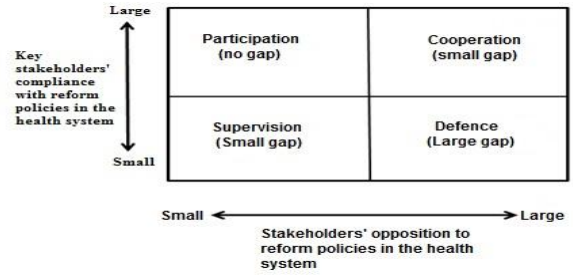

Figure 1: Conceptual model of the research

Results

The respondents' demographic characteristics were first examined to investigate the research objectives (Table 1).

Table 1. The respondents' demographic characteristics

Variable		Percentage
Gender	Male	22.92
	Female	77.08
Age	20-30	17.18
	31-40	48.69
	41-50	30.22
	50 and older	3.91
Education level	Bachelor	80.99
	Master	16.41
	Specialist	2.60
Workgroup	Medical	67.71
	Administrative	27.08
	Teaching/Medical	1.83
	Teaching	3.38

The results of Table 1 indicated among 384 statistical samples, 22.92% were male and 77.08% were female. The largest age group was in the group of 31-40 years with 48.69% and most respondents had bachelor's education levels with a mean of 80.99%, and 67.71% were working in the medical field, 27.08% in the administrative field, 1.83% in the medical-teaching field, and 3.38% in the teaching field.

The Kolmogorov-Smirnov test was used to examine the normality of variables, and the results indicated that the significance level of all variables was above 0.05 and the data distribution was normal. The parametric tests could be used to analyze the data. In this regard, the questions of the questionnaire about the fourth axis of the health system reform plan: improving the quality of patient visits in laboratories of medical-teaching centers based on the current and expected (desirable) status, were first examined to investigate and answer the main question of the research, and then the gap level was determined.

According to the results of (Table 2) and the examination of the mean current and expected (desirable) status of improving the quality of visit services in laboratories of medical-teaching centers, the gap was equal to -0.01. The gap between the current and expected status was small in the statistical population. According to the total mean of current and expected status, the intersection of the two points on the gap matrix indicated a small gap in the supervision phase (Figure 2).

Table 2. The gap of the fourth axis (improving the quality of visit services in laboratories of medical-teaching centers)

Axis	Item	Mean		Gap
		Current	Expected	
Improving the quality of visit services in the laboratories of medical-teaching centers	Increasing the service providers' motivation and retention of doctors in public laboratories	2.58	2.52	-0.01
	Standardization and quality improvement in the provision of outpatient laboratory visit service	2.33	2.38	
	Patient satisfaction in laboratories	2.71	2.72	
	Changing the doctors' behavior and creating a desire to work in special laboratories	2.53	2.53	
	Quality and time of laboratory outpatient diagnostic visits	2.43	2.48	
	Coordinating laboratory equipment and facilities of hospitals by implementing the health system reform plan to improve the quality of visit services	2.35	2.31	
	Sum of mean	2.48	2.49	

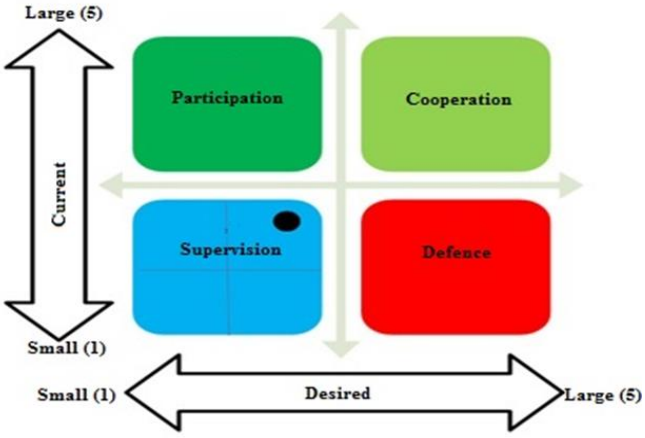

Figure 2. The gap between the expected (desired) and current status of laboratory services

In the next step, the t-test was used due to the data normality to meaningfully evaluate the difference between the current and expected status and the existence of a gap and ensure that the gap between the current and expected status was not random in the fourth axis of the health system reform plan (improving the quality of visit services in laboratories of medical-teaching centers) (Table 3).

According to the results and the confidence level of 0.99 and the significance level of lower than the assumed value (0.01) and the T-value, there was a significant difference between the current and expected status of the fourth axis of the health system reform plan. Furthermore, the difference also indicated the gap between the current and expected status in the fourth axis (improving the quality of visit services in laboratories of medical-teaching centers) of the health system reform plan from the respondents' perspective.

Table 3. The significant difference between the expected (desired) and current status in the fourth axis

Axis	Mean difference	Standard deviation (SD)	df	T-value	Significance level (P-value)
Improving the quality of laboratory visit services	-0.015	0.719	383	13.928	0.00

Discussion

The starting point of providing medical services to patients is their diagnostic visits. If the initial process of providing medical services, or visiting patients, is wrong or incomplete, the subsequent processes, including the treatment of patients, their care, laboratory services, and all clinical work on patients will be low-quality and even without safety (5). The present study aimed to analyze and evaluate the policy of improving the quality of visit services of the reform plan in laboratories of medical-teaching centers of the health system reform plan. According to the results, there was a gap between the current and expected status in this axis of the health system reform plan. After the implementation of the health system reform plan, the diagnostic and laboratory visit index worsened due to the increase in patient visits, but it improved over time in the third and fourth quarters. In the continuation of the plan, this axis did not reach what was proposed as the goals of the plan. The reasons for not achieving the goals of this axis included the lack of sufficient human resources (doctors) of laboratory sciences, the lack of necessary infrastructures, and continuous financial resources. The results of the present research were consistent with several studies (15-19) In research on the network of university hospitals in Turkey, Bakar et al. pointed out a negative gap in all aspects of the quality of laboratory services (21). The largest quality gap was related to the accountability dimension in research on health laboratory centers of Kashan (22) and laboratories of Tehran hospitals (23) and also belonged to the doctor's empathy dimension in studies on health laboratory centers of Gorgan (24) and health laboratory centers of Bandar Abbas (25). In similar studies abroad, the largest quality gap was related to the accountability dimension in the paraclinical and laboratory domains (26). In the field of policy, obstacles to the formulation of public policy (6 components), policy implementers (4 components), managerial domain (6 components), structural domain (8 components), financial, informational, and technological resources (4 components), and environmental domain (7 components) were considered the most important obstacles to the implementation of public policy in Iran's public organizations. The inappropriate interaction between administration and implementation, the lack of a suitable theoretical basis for the policy, weak information technology, personal characteristics of executives, inappropriate implementation tools, inappropriate laboratory supervision system, and insufficient coordination in implementation had the highest coefficients of importance respectively (27). The health reform plan was an unavoidable tool against the chaotic and abnormal status of the laboratory sector of health and treatment in the early years of the 2010s when the increase in prices of laboratory services and the reduction of insurance coverage put a lot of unbearable pressure on the low-income classes of society in the field of health laboratory services. For this reason and owing to causes such as unsuppliable costs, economic pressures due to comprehensive sanctions, institutionalized indiscipline in the public sector, along with the lack of drugs, laboratory equipment, and back-breaking treatment costs, the 11th government put the health reform plan on the agenda. Even though it could initially affect the health indices with the correct policy and intelligence, the trend of improving the indices decreased and, unfortunately, stopped in some cases over time due to the lack of proper management of resources, the increase of laboratory tariffs, and the reduction of cash receipts of hospitals owing to the insufficient resources of insurances, causing a gap between the current and expected status of society. For the complete and correct implementation of the real process of the health reform plan in the laboratory sector, it is necessary to aggregate existing resources, allocate sufficient and stable resources, modify the payment mechanisms in laboratories, improve service quality, develop the clinical governance, plan for preventing diseases, attracting the public participation, empowering people, and most importantly, providing the inter-sectoral cooperation and trust among effective organizations. Undoubtedly, it can decrease the gap between the current and expected status, improve health laboratory indices, and provide satisfaction in society and among stakeholders of the health system.

Conclusion

The results indicated that there was a gap between the current and expected (desirable) status in the fourth axis of the health system reform plan or the improvement of the quality of visit services in laboratories of medical-teaching centers in Golestan province, and the gap was in the field of supervision. Even though the implementation of the health system reform plan was first effective, the effectiveness was then insufficient to achieve the goals of the fourth axis of the health system reform plan. The greater effectiveness and the achievement of the goals of this axis require supporting and providing the necessary facilities of laboratories of medical-teaching centers through improving the quality of visits and forcing doctors to comply with visit standards, accurate recording of history and physical examination, paying attention to patient records, equipping physical space, purchasing necessary laboratory equipment, behavior development by setting tariffs, modifying the visit fees for doctors, increasing the public access by making more doctors full-time, establishing special clinics and paraclinical services and diagnostic laboratories in different regions of cities with a focus on less developed regions, and finally, monitoring the good work performance and identifying the determinants of the occurrence of the gap in Golestan province.

Acknowledgement

The authors of this manuscript are grateful to all members of the Public Administration Department of the Islamic Azad University of Gorgan and the staff of Golestan University of Medical Sciences who cooperated and participated in the study.

Funding sources

Gorgan Branch, Islamic Azad University, Gorgan, Iran funded this study.

Ethical statement

This article has been derived from postgraduate thesis with the ethics code: pg/35/87481 conducted in Gorgan Branch, Islamic Azad University, Gorgan, Iran.

Conflicts of interest

The authors did not report any conflict of interest regarding the publication of the present manuscript.

Author contributions

Writing – original draft, Ehsan Ameri; Supervision & Project administration & Writing – review & editing, Ali Farhadi Mahali and Mojtaba Tabari.

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How to Cite:

Ameri E, Farhadi Mahali A, Tabari M. Evaluation of the policy of improving the quality of visit service in the reform plan in laboratories of medical-teaching centers in Golestan province, Iran. *Med Lab J.* Jul-Aug 2023;17(4):3-6.