ORIGINAL ARTICLE

Service quality from the perspective of myocardial infarction patients

Miyokart enfarktüsü olan kişilerin bakış açısından hizmet kalitesi

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ABSTRACT

Objective: Service quality (SQ) generally refers to the non-clinical aspects of health services and primarily focuses on the relationship between the care provider and the customers, and the environment in which care services are delivered. The aim of this study was to assess the SQ provided for myocardial infarction (MI) from the patients' perspective.

Methods: A cross-sectional study was conducted with 164 patients with MI at the Tabriz Shahid Madani cardiology clinic. Study participants were selected using convenience sampling. SQ was measured using a validated Comprehensive Quality Measurement in Healthcare SQ questionnaire. The reliability was confirmed based on Cronbach's alpha coefficient (α=0.81). SQ was calculated using the formula SQ=10–(importance × performance), based on the importance and performance of non-health-related aspects from the customers' perspective. Importance scores ranged from 1 to 10 and performance was scored between 0 and 1.

Results: Of 164 participants, about 75% were men and almost 44% were between 51 and 65 years of age. From the customers' perspective, the total SQ score was 6.80 (0-10 scale), and the individual scores for all SQ aspects were below an acceptable level. Confidentiality, dignity and continuity were given the highest scores, while availability of support groups had the lowest score.

Conclusion: The study findings revealed an opportunity to improve SQ. Patient and provider participation in quality improvement activities could be an effective strategy to improve the aspects of health care quality that were most important to the customers and those with low scores, such as availability of support groups.

ÖZET

Amaç: Genellikle sağlık hizmetlerindeki klinik olmayan durumları ifade eden hizmet kalitesi (HK), temel olarak "sağlık hizmeti sağlayıcıları" ve müşteriler arasındaki ilişkiye ve sağlık hizmetlerinin verildiği ortama odaklanmaktadır. Bu çalışmada, miyokart enfarktüsü (ME) geçiren hastaların bakış açısından HK'yi değerlendirmeyi amaçladık.

Yöntemler: Tabriz Shahid Madani Kardiyoloji Kliniği'ndeki 164 ME hastası üzerinde bir kesitsel çalışma gerçekleştirildi. Çalışmaya katılacak kişiler, uygun örnekleme yöntemi kullanılarak seçildi. Hizmet kalitesi, onaylı bir "Sağlık Hizmet Kalitesinde Kapsamlı Kalite Ölçümü Anketi" kullanılarak değerlendirildi ve ölçümlerin güvenilirliği Cronbach alfa güvenilirlik katsayı temel alınarak doğrulandı (α=0.81). Hizmet kalitesi, müşterinin bakış açısından sağlık ile ilgili olmayan durumların önem ve performansı dikkate alınarak HK=10-(Önem x Performans) formülü kullanılarak hesaplandı. Önem puanları 1 ila 10 arasında, performans puanları ise 0 ila 1 arasında değişmekte idi.

Bulgular: Çalışmada yer alan 164 katılımcının yaklaşık %75'i erkekti ve bunların yaklaşık %44'ü 51 ila 65 yaş arasında idi. Müşterilerin bakış açısından, toplam HK skoru 10 üzerinden 6.80 ve tüm HK bileşenleri için tek tek verilen skorlar kabul edilebilir düzeyin altındaydı. Gizlilik, haysiyet ve devamlılık en yüksek skorları alırken, destek gruplarına erişim en düşük skora sahipti.

Sonuç: Çalışma bulguları, HK'nin iyileştirilebilmesi için bir fırsat oluşturmuştur. Müşteriler için önemli olan ve destek gruplarına erişim gibi düşük skorlar almış bulunan hizmetlerin kalitesinin artırılması için, hasta ve sağlık hizmet sağlayıcılarının kalite düzeltme faaliyetlerinde birlikte yer almaları etkin bir strateji olabilir.

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Cardiovascular disease (CVD) (especially ischemic heart disease) is a global health problem and is the leading cause of death in most countries in the world. CVD and its risk factors have remained the top killers for the past decade.[1,2] CVD killed 17.5 million people in 2012; 7.4 million died due to ischemic heart disease and 6.7 million due to stroke.[2] It is expected that by 2020, these diseases will cause 25 million deaths in the world annually.[3] According to the American Heart Association in the United States, each year, about 1.5 million people suffer from acute myocardial infarction (MI), and one-third of them die before reaching the hospital.[4] CVD is the first and most common cause of mortality in both genders in Iran. Among the average daily 700 to 800 recorded deaths in Iran, 317 occurred due to CVD, and 166 of them were due to MI. In Iran, the total annual health expenditure per capita was $1414 (purchasing power parity international US $). Of this, $ 577 was government spending. Considering the incidence and burden of CVD in the Iranian population, these conditions consumed the most resources of all health-related conditions.[5,6] Health and health care are considered a human right, and in this regard, quality improvement and ensuring confidence in the health system have increasingly become a critical issue for all health care systems.[7,8] In 1999, Kenagy[9] developed an effective model to measure the quality of health services that included 2 essential aspects: service quality (SQ) and technical quality. Since its launch, this model has been used frequently, and Tabrizi et al.[10] added a third dimension of customer quality in 2007 to their new model, the Comprehensive Quality Measurement in Healthcare (CQMH). Customer quality focuses on the ability of service users to participate effectively in the processes of health care delivery.[11] Technical quality is what the customer receives, and is primarily a reflection of the knowledge, skills, and capabilities of service providers.[9]

SQ usually refers to non-clinical aspects of health care, including physical features and managerial, organizational, and communication characteristics.[12,13] Therefore, SQ must be directly assessed by the users of health care services based on their own experiences.[14,15] SQ has a direct impact on the overall quality of care from the patients' perspective.[9]

The quality of clinical cardiac care following acute MI is an important factor in the outcome and in the control of risk factors.[16] In addition to the necessity of diagnosis, treatment, prevention, rehabilitation, and care of people with MI, health systems need to provide quality care in order to improve effectiveness and efficiency, reduce complications and costs, and increase quality of life and customer satisfaction.

Abbreviations:

CQMH	*Comprehensive Quality Measurement in Healthcare*
CVD	*Cardiovascular disease*
MI	*Myocardial infarction*
SQ	*Service quality*

The aim of the present study was to evaluate the SQ of care delivered to patients with MI in Tabriz, Iran.

METHODS

This cross-sectional study was conducted with 164 participants with MI who received at least 1 year of medical care in Tabriz Shahid Madani cardiology clinic in 2014. G*Power software (Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany) and linear regression were used to calculate a sample size of 157 with an effect size of 0.07 to achieve a statistical power of 95%.

Participants were excluded from the study if they did not have the ability to complete questionnaire or were not interested in being part of the research project. Convenience sampling was used to select the participants. The researchers went to the clinic on random days between January and March 2014, and participants were selected to be interviewed from the list of people who had appointments with a cardiologist that day. Among 180 patients contacted, 164 elected to participate in the study (91.1% response rate).

The study design and procedures were approved by the Tabriz University of Medical Sciences ethics committee prior to implementation. In addition, all participants provided written, informed consent before completing the questionnaire.

SQ was measured using the CQMH Services Quality questionnaire completed by the study participants.[15] The questionnaire had 3 main parts. The first collected demographic characteristics (age, gender, place of birth and current residence, language, employment and insurance status, and level of education), the second part was related to disease condition (including disease history, type of treatment, disease complications, and smoking status), and the

third section contained questions about 14 aspects of SQ: choice of care provider (3 questions), communication (6 questions), autonomy (4 questions), support groups (3 questions), continuity (3 questions), basic amenities (4 questions), dignity (4 questions), timeliness (5 questions), safety (3 questions), prevention (3 questions), accessibility (2 questions), confidentiality (2 questions), the cost of care (3 items), and diet counseling (3 questions).

For each aspect of SQ, participants were asked to evaluate the importance of that aspect and their perception of the quality of care they had received in relation to that aspect (performance) over the past year. The importance of SQ was scored on a 4-point Likert scale, which was then scaled from 1 to 10 as 1=not important, 3=may be important, 6=important, and 10=very important. Perceived performance of care was scored on a 4-point scale of "never, sometimes, usually, and always" or "poor, fair, good, and excellent." For the data analysis, this scale was reduced to between 0=usually/always or good/excellent and 1=never/sometimes or poor/fair.[17,18] The study questionnaire was a valid instrument confirmed and used in previous studies.[15,19,20] Its face validity was reviewed and confirmed by health management specialists and cardiologists at Tabriz University of Medical Sciences and its reliability was confirmed according to Cronbach's alpha coefficient (α=0.81), based on a pilot with 30 participants. The Cronbach's alpha coefficient of SQ aspects ranged from (α=0.67) for timeliness to (α=0.83) for diet. According to previous studies, an SQ score of less than 9 indicates a failure in quality of care and a significant opportunity for quality improvement.[20]

An overall measure of SQ was calculated for each SQ aspect by combining the importance and performance scores using the Netherlands Institute for Health Services Research methodology[18] using the following formula: Service quality=10–(importance × performance). SQ scores ranged from 0 (worst) to 10 (best). The SQ of each aspect was calculated as the average SQ score for that aspect and a total SQ was calculated as the average SQ scores of all 48 questions.

Frequencies and percentages were used to describe the demographic information of the MI patients and median (interquartile range) was used to report SQ scores and aspect scores. The Mann-Whitney U test and the Kruskal-Wallis test were performed to analyze the relationship between an SQ aspect and binary and categorical variables, respectively. Two-step linear regression analysis using the enter method was applied. Variables found to be associated with SQ in univariate analysis were included in a multivariate regression model. The p-value for entry and removal variables in the stepwise regression model was 0.05 and 0.25, respectively. Age, education, continuous care by a specialist, and self-evaluation of disease control were considered confirmatory factors. A normal probability plot and a residual versus predicted values plot was used to assess and confirm residual normality and homogeneity of residual variances, respectively. Also, the Durbin-Watson statistic and variance inflation factor were used to assess and confirm residual independence and co-linearity. All of the assumptions were fulfilled. P values <0.05 were considered statistically significant and the data were analyzed using SPSS Statistics for Windows, Version 17.0 (SPSS Inc., Chicago IL, USA) software.

RESULTS

The study findings indicated that the majority of participants (75%) were male and 41.5% were illiterate. In all, 95% had health insurance and almost half of them (49.5%) were insured by the social security service. The findings also revealed that the majority of the participants (44.4%) were aged between 50 and 65 years (Table 1).

Information on smoking status showed that 41.5% of the patients were current smokers, 53% did not smoke. The average age at which the patients started to smoke was 21 (±8.4) years.

The results further indicated that for 65% of the participants, the disease had been diagnosed less than 5 years earlier, in 27.2% of cases diagnosis was made in the previous 5 to 10 years, and in 7.5% it was more than 10 years prior [range: 1–15 years; mean: 4.62 (3.4) years]. Side effects, such as arrhythmia, were present in 34.8% of the participants.

The total SQ score illustrating the perspective of the patients was 6.80 (1.47) out of 10 (0 to 10 scale). The aspects of confidentiality [10 (3.0)], dignity [9.62 (2.06)], and continuity of care [9.00 (3.0)] had the highest scores. Access to support groups had the lowest score [5.00 (4.33)] (Table 2).

The study participants indicated that the aspects of

Table 1. Service quality scores in terms of demographic and condition of care of myocardial infarction patients

Characteristics		n	%	Service quality score		*p*
				Median	IQR	
Gender	Male	123	75.0	6.76	1.55	0.679
	Female	41	25.0	6.87	1.37	
Age (years)	Under 50	44	27.0	6.94	1.54	0.732
	50–65	72	44.0	6.80	1.75	
	Over 65	46	29.0	6.82	1.32	
Education	Illiterate	68	41.5	6.97	1.67	0.069
	Non-academic	85	51.8	6.56	1.67	
	Tertiary	11	6.7	6.84	1.04	
Employment	Yes	118	72.0	6.75	1.47	0.472
	No	46	28.0	6.94	1.42	
Insurance	Yes	156	95.0	6.80	1.45	0.731
	No	8	5.0	6.80	2.52	
Smoker	Yes	68	42.0	7.09	1.55	0.179
	No	94	58.0	6.72	1.47	
Continuous care by specialist	Yes	117	71.3	6.87	1.53	0.223
	No	47	28.7	6.58	1.64	
Self-evaluation of disease control	Poor	32	19.6	6.52	1.79	0.082
	Good	66	40.2	7.00	1.55	
	Excellence	66	40.2	6.60	1.63	

IQR: Interquartile range.

cost [8.67 (3.67) out of 10], accessibility [8.00 (4.0)], and safety [7.33 (3.33)] were the most important to them, and that diet counseling [4.00 (4.75)] was the least important from their perspective. The overall importance of SQ for all aspects was 6.18 (1.87) out of 10.

Confidentiality [0.01 (0.50)], dignity [0.25 (0.50)], and the choice of care provider [0.33 (0.67)] had the best performance scores, and support groups [1.00 (0.0)] had the worst performance from the patients' perspective. The total SQ performance score was 0.58 (0. 23) (Table 2).

The study findings indicated that the communication score (p=0.011) was related to patient education. Illiterate participants and people with a primary school education scored communication higher than other groups. Individuals with better self-evaluation of disease control gave diet counseling a higher score (p=0.032). Furthermore, unemployed participants gave a higher score to continuity of care (p=0.009) and autonomy (p=0.018), but a lower rating to the aspects of cost of care (p=0.032) and accessibility (p=0.042).

Univariate analysis for overall SQ revealed a statistically significant difference only for SQ score by education (p=0.023). Multiple regression analysis showed that education was significantly and independently related to SQ score by age, self-evaluation of disease control, and continuous care by a specialist. Educated participants reported poorer SQ scores compared with those who were illiterate and the difference was significant between patients who were illiterate and those with non-academic educational status (p=0.019) (Table 3).

DISCUSSION

According to the study findings, the overall SQ from the perspective of patients with MI was relatively low. In comparison with the reference score (9 out of 10), the average SQ score was 6.80.

The SQ scores of patients with MI were lower than those reported in other similar studies of other conditions. For example, the SQ score of patients with

Table 2. Performance, importance and service quality scores of myocardial infarction patients

Service quality aspects	Importance*		Performance†		SQ score‡	
	Median	IQR	Median	IQR	Median	IQR
1. Choice of care provider	6.00	4.67	0.33	0.67	8.00	4.00
2. Communication	6.83	2.50	0.67	0.67	6.25	3.63
3. Autonomy	6.00	3.88	0.75	0.50	7.00	3.75
4. Availability of support group	5.00	4.33	1.00	0.00	5.00	4.33
5. Continuity of care	6.00	3.67	0.33	0.33	9.00	3.00
6. Basic amenities	6.00	3.50	0.50	0.75	7.75	4.00
7. Dignity	7.00	4.50	0.25	0.50	9.63	2.06
8. Timeliness	6.33	2.60	0.67	0.40	6.40	4.60
9. Safety	7.33	3.33	0.67	0.33	7.00	4.33
10. Prevention	6.00	3.42	1.00	0.67	6.00	4.00
11. Accessibility	8.00	4.00	0.50	1.00	5.00	6.38
12. Confidentiality	6.00	5.00	0.00	0.50	10.00	3.00
13. Cost of services	8.67	3.67	0.67	0.33	6.67	4.67
14. Diet counseling	4.00	4.75	1.00	0.00	6.50	5.75
Total service quality score	6.18	1.87	0.58	0.23	6.80	1.47

*Importance score: Range between 0 (not important) and 10 (very important). †Performance score: Range between 0 (good) and 1 (poor). ‡Service quality score: Range between 0 (worst) and 10 (best).

diabetes in Australia[20] was 8.62; in pregnant women, it was 7.59 (2.78);[19] and for rheumatoid arthritis patients, it was 7.91.[15]

In this study, neither the total SQ score nor any aspect of SQ reached the desired status. Confidentiality [10.00 (3.0)], dignity [9.62 (2.06)], and continuity of care [9.00 (3.0)] received the highest scores and prevention [6.00 (4.0)], accessibility [5.00 (6.37)] and support groups [5.00 (4.33)] were given the lowest scores.

Tabrizi et al.[20] found that choice of care provider, continuity of care, timeliness and immediate attention, and accessibility had the lowest scores in their study. Dignity, confidentiality, basic amenities, and support groups had the highest scores. A similar study that was conducted in Australian hospitals in 2010 to evaluate the aspects of SQ demonstrated that the major problems were related to accessibility, basic amenities and waiting room facilities, and patient participation in the care process, which is consistent with the findings of the current study.[21]

Confidentiality, which refers to the security of patient information and the contents of medical records, was awarded the highest score among the SQ aspects. This fact indicated the high level of importance of this aspect from the perspective of patients and the largely successful performance of service providers in this area. Tabrizi et al.[19] and Karimi et al.[15] also observed that confidentiality had the highest score in their studies.

Continuity of care refers to the provision of comprehensive and integrated care that leads to continuous communication between patients and providers and expanding preventive care, adherence to standards, and increased patient satisfaction. The relatively high score of continuity of care in the current study demonstrated that in addition to attaching great importance to receiving care from a specific provider, patients were also able to see their own physician. A study in 2003 that evaluated the patients' perspective regarding the importance of continuity of care demonstrated that while 89% of the patients gave special importance to this issue, the majority of them believed that the continuity of care was not good.[22] However, in the current study, continuity of care was assessed relatively well.

With regard to the structural standards of health care facilities, such as cleanliness, basic amenities,

Table 3. Results of univariate and multiple regression analysis for variables related to total service quality score (n=164)

Characteristics	n	Unadjusted (Univariate)				Adjusted (Multiple Regression)			
		95% CI for B				95% CI for B			
		B	LB	UB	*p*	B	LB	UB	*p*
Age (years)	164	-0.01	-0.02	0.12	0.564	-0.01	-0.03	0.01	0.169
Education									
Illiterate*	68								
Non-academic	85	-0.45	-0.83	-0.06	0.023	-0.47	-0.86	-0.08	0.019
Tertiary	11	-0.40	-1.16	0.37	0.306	-0.48	-1.27	0.31	0.229
Continuous care by specialist									
Yes	117	0.26	-0.15	0.67	0.205	0.34	-0.08	0.75	0.112
No*	47								
Self-evaluation of disease control									
Poor*	32								
Good	66	0.30	-0.21	0.81	0.244	0.25	-0.27	0.76	0.348
Excellent	66	-0.16	-0.67	0.35	0.537	-0.19	-0.70	0.33	0.477
Time since diagnosis (months)	164	0.01	-0.04	0.07	0.670				
Gender									
Male	123	.088	-0.34	0.22	.686				
Female*	41								
Employment									
Yes	118	-0.14	-0.55	0.28	0.522				
No*	46								
Insurance									
Yes	156	0.14	-0.71	1.00	0.754				
No*	7								

Dependent variable: Total SQ scores/ *= Reference category/ There was significant predictive ability of second part of the model (F Change (6, 155) = 2.34, p=0.034)/ CI: Confidence interval; LB: Lower bound; UB: Upper bound.

and the air conditioning system, our participants were dissatisfied with inadequate attention to basic amenities like chairs in the waiting room and toilet cleanliness. Tabrizi et al.[20] found that the aspect of basic amenities had the highest SQ score (>9) in Australia, unlike our study, whereas the results of a study conducted by Karimi et al.[15] in Iran on patients with rheumatoid arthritis were consistent with the current study findings.

The communication aspect refers to proper interaction between patients and providers, and providing clear and understandable information to patients. Coulter and Jenkinson[23] investigated patients' perspective with respect to the responsiveness of the health system and found that only slightly more than half of the respondents stated that their doctors listen to them carefully, devote enough time to ask them questions, and provide clear answers to patient questions. Study participants in Switzerland and England have reported high levels of satisfaction related to the communication skills of doctors, whereas Polish respondents expressed little satisfaction with this aspect. Krones et al.[24] found that shared decision-making between patients and providers significantly improved satisfaction with the process and results, and decisional regret was significantly lower at follow-up.

Access includes economic, geographic, time, and cultural access, and refers to the accessibility and possibility for comfortable contact with service providers. The target population should be able to obtain ser-

vices without difficulties, and from the viewpoint of the recipients, these services should be acceptable, adapted to their culture, and tolerable in terms of imposed costs.[25] The SQ score for access in the present study was 5.72; most of the patients were dissatisfied in terms of geographic and economic access to services. In the similar study in Australian hospitals performed in 2010 it was found that patients regarded the access aspect unfavorably.[21] Piette et al.[26] found that use of telephone care in the CVD program was associated with greater patient satisfaction, and that planned telephone care services might increase access and self-management support.

Participants in the current study were dissatisfied with overcrowding in clinics and long wait times. According to the standard, outpatient wait time should not exceed 30 to 60 minutes,[27] and the results in this study in some cases were 2 to 4 times longer than the standard. Lambert et al.[28] reported that 54% to 68% of therapies and services were performed outside the proper time, which leads to increased risk for patients with acute MI. Pastore et al.[29] found that shared medical appointments and a multidisciplinary team approach reduced wait times and improved provider efficiency, patient satisfaction, and adherence to recommended guidelines.

According to the study findings, access to support groups had the lowest score from the patients' perspective. This aspect also scored poorly in terms of performance and importance. Access to support groups was also weak in other studies conducted in the cities of Tabriz and Isfahan in Iran.[15,19] Research in Australia indicated better conditions with regard to access to support groups.[20] This may be due to differences in services and study settings, or may arise from a lack of facilities to conduct meetings for participating patients at the clinic due to constraints in structure, planning, and management.

Limitations

One of the limitations of this study was that we included only public and academic centers and it may be difficult to generalize the finding to private centers. In addition, the length of study questionnaire may have led to cursory responses from the patients.

Conclusion

The study findings indicated a considerable quality gap (especially in access to support groups, prevention, access and cost of service, diet counseling, timeliness, and communication) between the current and desired condition. Shahid Madani clinic needs to improve the quality of service in all of the aspects studied. The joint involvement of patients and providers could be an effective strategy to improve the quality of the aspects of health care that are most important to customers as well as those that had low quality scores, such as availability of access to support groups.

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REFERENCES

1. World Health Organization. World Health Statistics 2010. Available at: http://www.who.int/whosis/whostat/2010/en/. Accessed Feb 9, 2018.
2. World Health Organization. The top 10 causes of death. Available at: http://www.who.int/mediacentre/factsheets/fs310/en/. Accessed Feb 9, 2018.
3. Sanderson JE, Mayosi B, Yusuf S, Reddy S, Hu S, Chen Z et al. Global burden of cardiovascular disease. Heart 2007;93:1175.
4. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction--executive summary. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to revise the 1999 guidelines for the management of patients with acute myocardial infarction). J Am Coll Cardiol 2004;44:671–719. [CrossRef]
5. World Health Organization. Health expenditure per

capita, by country, 1995-2013, Iran (Islamic Republic of). Available at: http://apps.who.int/gho/data/view.main.HEALTHEXPCAPIRN?lang=en. Accessed Feb 9, 2018.
6. Talaei M, Sarrafzadegan N, Sadeghi M, Oveisgharan S, Marshall T, Thomas GN, et al. Incidence of cardiovascular diseases in an Iranian population: the Isfahan Cohort Study. Arch Iran Med 2013;16:138–44.
7. Seddon ME, Marshall MN, Campbell SM, Roland MO. Systematic review of studies of quality of clinical care in general practice in the UK, Australia and New Zealand. Qual Health Care 2001;10:152–8. [CrossRef]
8. World Health Organization. Everybody's business - strengthening health systems to improve health outcomes: WHO's framework for action. 2007. Available at: http://www.who.int/healthsystems/strategy/everybodys_business.pdf. Accessed Feb 9, 2018.
9. Kenagy JW, Berwick DM, Shore MF. Service quality in health care. JAMA 1999;281:661–5. [CrossRef]
10. Tabrizi JS. Quality of delivered care for people with type 2 diabetes: a new patient-centred model. J Res Health Sci 2009;9:1–9.
11. Tabrizi JS, Gholipoor K, Asghari Jafarabadi M, Farahbakhsh M, Mohammadzedeh M. Customer quality and maternity care in Tabriz urban health centers and health posts. J Clin Res Gov 2012;1:12–5.
12. Ferlie EB, Shortell SM. Improving the quality of health care in the United Kingdom and the United States: a framework for change. Milbank Q 2001;79:281–315. [CrossRef]
13. World Health Organization. The world health report 2000 - Health systems: improving performance. Available at: http://www.who.int/whr/2000/en/. Accessed Feb 9, 2018.
14. Auras S, Geraedts M. Patient experience data in practice accreditation--an international comparison. Int J Qual Health Care 2010;22:132–9. [CrossRef]
15. Karimi S, Mottaghi P, Shokri A, Yarmohammadian M, Tabrizi JS, Gholipour K. Service quality for people with rheumatoid arthritis: Iranian patients' perspective. Int J Health Syst Disaster Manage 2013;1:243. [CrossRef]
16. Shahraz S, Barzanjeh A, Bahari A, Nadery Y, Farzadfar F, Beyranvand MR et al. The completeness of medical records to assess quality of hospital care: the case of acute myocardial infarction in a district-level general hospital in Iran. Arch Iran Med 2012;15:592–5.
17. Sixma HJ, Kerssens JJ, Campen CV, Peters L. Quality of care from the patients' perspective: from theoretical concept to a new measuring instrument. Health Expect 1998;1:82–95.
18. van der Eijk I, Sixma H, Smeets T, Veloso FT, Odes S, Montague S et al. Quality of health care in inflammatory bowel disease: development of a reliable questionnaire (QUOTE-IBD) and first results. Am J Gastroenterol 2001;96:3329–36.
19. Tabrizi J, Gholipour K, Alipour R, Farahbakhsh M, Asghari-Jafarabadi M, Haghaei M. Service Quality of maternity care from the perspective of pregnant women in Tabriz Health Centers and Health Posts – 2010-2011. Hospital 2014;12:9–19.
20. Tabrizi JS, O'Rourke PK, Wilson AJ, Coyne ET. Service quality for Type 2 diabetes in Australia: the patient perspective. Diabet Med 2008;25:612–7. [CrossRef]
21. Hayman N. Strategies to improve indigenous access for urban and regional populations to health services. Heart Lung Circ 2010;19:367–71. [CrossRef]
22. Sherina HN, Teng CL, Yasin S. Continuity of care of diabetic patients in a family practice clinic: How important is it? Asia Pac Fam Med 2003;2:10–5. [CrossRef]
23. Coulter A, Jenkinson C. European patients' views on the responsiveness of health systems and healthcare providers. Eur J Public Health 2005;15:355–60. [CrossRef]
24. Krones T, Keller H, Sönnichsen A, Sadowski EM, Baum E, Wegscheider K et al. Absolute cardiovascular disease risk and shared decision making in primary care: a randomized controlled trial. Ann Fam Med 2008;6:218–27. [CrossRef]
25. Gulliford M, Figueroa-Munoz J, Morgan M, Hughes D, Gibson B, Beech R et al. What does 'access to health care' mean? J Health Serv Res Policy 2002;7:186–8. [CrossRef]
26. Piette JD, Lange I, Issel M, Campos S, Bustamante C, Sapag J et al. Use of telephone care in a cardiovascular disease management programme for type 2 diabetes patients in Santiago, Chile. Chronic Illn 2006;2:87–96. [CrossRef]
27. Ajami S, Ketabi S, Yarmohammadian MH, Bagherian H. Wait time in emergency department (ED) processes. Med Arh 2012;66:53–7. [CrossRef]
28. Lambert L, Brown K, Segal E, Brophy J, Rodes-Cabau J, Bogaty P. Association between timeliness of reperfusion therapy and clinical outcomes in ST-elevation myocardial infarction. JAMA 2010;303:2148–55. [CrossRef]
29. Pastore LM, Rossi AM, Tucker AL. Process improvements and shared medical appointments for cardiovascular disease prevention in women.J Am Assoc Nurse Pract 201;26:555–61. [CrossRef]

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