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ORIGINAL ARTICLE

Indicators and Barriers of Fair Access to Outpatient Services in Iran Health System: A Qualitative Study

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ABSTRACT

Background: One of the main challenges of the health system is providing fair access to services. The purpose of this study was to determine the indicators and barriers of fair access to outpatient services in Iran health system.

Methods: This qualitative research was conducted in the summer of 1399. The research community was policy makers, managers and planners of health field in the country who had a scientific-executive background in the field of health services management, health economics and health policy. The research sample was selected by purposive sampling method and the interview form was used to collect data.

Results: The results of the interviews analysis showed that the indicators of fair access to outpatient services are indicators related to manpower, indicators related to policy-making, indicators related to facilities and equipment, financial indicators, physical indicators, and demographic indicators. Barriers of fair access to outpatient services in the Iran health system include barriers related to policy-making, barriers related to resources, barriers related to manpower, infrastructure barriers, and financial barriers.

Conclusion: Regarding that the utilization of outpatient services has a great impact on patients' views about the hospital; and on the other hand, outpatient services are more used than inpatient services, it is necessary for planners and policy makers to take steps to improve the community health level by identifying the indicators affecting fair access to services and paying more attention to planning and removing obstacles.

Keywords and concepts: Access, fair, outpatient services.

INTRODUCTION

Health is a universal human right and a basic human need. The most important goal of the healthcare system is to improve the health of communities[1] and increase responsiveness[2] to needs and create financial justice[1]. One of the major challenges of developing countries is that, despite resources constraints, every citizen continues to receive proper health services[2].

Access to health services is defined as the right of citizenship in most countries, which has a great impact on health outcomes, and changes the prevalence of the disease and the life expectancy index[3].

One of the most important indicators of evaluating a safe and effective health system is accessibility[3]. The goal of many governments and countries is to reduce injustice in the health system by creating a fair distribution of services[1,4].

Access to a healthcare system means the ability of individuals to gain the proper health services without any obstacles at the right time. Barriers of access to health services include economic factors, inaccessibility of healthcare services providers, long travel distances, long waiting time. Providing health services based on community need has become a major challenge for policymakers[5].

Achieving fair access to health services remains as an unattainable goal. According to the statement of the World Health Organization, justice means the absence of compensable and avoidable differences in different groups of the population, which are distributed based on economic, social and geographical indicators[6].

Justice is one of the important aspects of health system evaluation, so that according to the World Health Organization in 2000, to achieve the goals of the health system (health promotion, responsiveness and financial participation), good services and the lowest possible differences between individuals and groups (justice) have been introduced as two important aspects of health[7].

The most important factors that affect the utilization of health services are the availability of manpower and adequate medical resources and reserves and appropriate geographical access to medical facilities, sufficient financial ability to pay medical expenses, adaptation of medical facilities and patient acceptance to use the mentioned equipment[8].

Outpatient services are referred to a set of services that do not require hospitalization of the patient. Outpatient services are mainly related to patients who do not have acute conditions[9]. Outpatient services account for the bulk of the services provided by physicians in hospitals[9,10]. Outpatient services play an essential role in the healthcare system[2].

The choice of services in outpatient field is influenced by several factors and is a complex process. In order to use the services, patients consider a set of factors related to the provider and related to the patient[11].

The outpatient ward[12] has been neglected in evaluating hospital services. The outpatient ward of the hospital is one of the first spaces and environments where

patients enter the hospital and is the most important source of patient circulation and admission of patients in the inpatient ward. The quality of services provided in this ward plays an essential role in the patient's referral for the next times and the choice of inpatient services by patient. On the other hand, the centers providing outpatient services are expanding rapidly and it is predicted that the revenue of outpatient services ward will be equal to or even greater than the inpatient ward in the near future. For this reason, the outpatient ward plays an essential role in the profitability of the hospital and the quality of services in this ward is critical for the long-term survival of the hospital[12].

The results of studies have shown that various factors such as age, place of residence, occupation, level of education, income, insurance status, are proper predictors for the services utilization[13].

Outpatient referrals include people's use from hospital services, the services of healthcare centers and medical cares, which can be known as a function of access to human and physical resources, geographical access to resources, reasonable costs and expenses of services, matching expectations and available resources, accordance with the indigenous culture of each region and most importantly the social and economic status of individuals, especially in the case of chronic diseases that are strongly influenced by lifestyle[14].

In order to improve the quality of outpatient services, researchers mainly studied the effects of factors affecting quality on reducing patients waiting time and examined factors such as queue structure, ratio of registrations and admissions in the combined admissions system, but the outpatient services unit not only should consider reducing patients waiting times but also should cause to improve fair access to health services[2].

According to the proposed materials, this study is designed to investigate the indicators and barriers of fair access to outpatient services in Iran health system.

METHODS

This qualitative study was conducted by content analysis method and cross-sectionally in the summer of 1398. The research environment in this study was the Ministry of Health and Medical Education. The study community was all policy makers, planners, senior executives[5] in Iran health system. The sample size in this interview continued (to increase) until duplicate and similar data (theoretical saturation) were obtained. The sampling method was non-random and purposive. Inclination criteria to the study were having a PhD degree in healthcare services management, health economics, health policy-making, as well as more than ten years of executive experience in key fields related to health in the Ministry of Health, Medical Education, and universities of medical sciences all over the country and hospital management. Exclusion criteria from the study were unwillingness to participate in the study or unresponsiveness within the specified time interval to the interviews. Data collection tool was semi-structured interview. In this way, the interview form was first compiled with questions including the status of outpatient services in Iran, indicators of fair access to outpatient services in Iran, barriers of fair access to outpatient services in Iran. Interview questions were organized based on a comprehensive literature review. Then, according to the special status of social distancing and the need to do things without a face-to-face visit, the interview form was sent to the interviewees via email, social networks, including WhatsApp, and telegrams, in coordination with the officials of the mentioned people's offices. The data were returned to the researcher in the form of an audio file by the interviewees. The questions were designed to be open-ended, and the interviews began with an open-ended question (please about questions below, provide any information that you think would help do the research), and at the end of the questions, an open-ended question was raised (regarding fair access to outpatient services, please present any issue that in your opinion is mandatory and noteworthy and has not been considered in the above questions,). The interviews were collected over a period of two months with regard to the executive and work busy of the interviewees. After precise reviewing and recording of the content of the audio files, any questions or ambiguities about the content of the information presented in the audio file were asked again via email or social media[6] to write the information accurately. The time of conducting the interviews was the summer of 1399. On average, each interview lasted between 60 to 90 minutes.

The method of "framework analysis steps" was used to analyze the data. This method has 5 steps as follows: Familiarity, identifying a thematic framework, indexing, drawing tables, drawing a map and interpreting. This method is specifically designed to analyze the qualitative data of policy-making field studies. In the familiarity step, a communicational and content summary was designed for each of the interviews. The initial thematic framework was designed based on the research literature, guide questions of interviews and thematic guide. This framework was also investigated by reviewing the interviews and repeating the familiarity phase. Then the researcher performed prime indexing of interviews by using MAXQDA software. Different sections of data related to the interviews were indexed through one or more codes based on thematic relevance. These codes were repeatedly reviewed and modified by the researcher, and eventually the finalized codes were sent to the interviewees for review and approval[7]. Based on the extracted questions, the data were divided into two categories: factors affecting fair access to outpatient services in Iran and barriers to fair access to outpatient services in Iran.

RESULTS

The results of the interview showed that the indicators of fair access to outpatient services include the 6 main axes of manpower indicators, policy-making indicators, indicators related to facilities and equipment, financial indicators, physical indicators and demographic indicators. Of course, each of the main axes were also composed of sub-categories, which are mentioned in Table 1.

In the following, some quotes from interviewee are presented.

"That how are the fair access indicators, in my opinion, the indicators should be defined based on the indications, and that is, we should see in each field what

the indications of outpatient services are in each ward. Many times the services that should be provided cannot be done out-patiently and we have to move forward according to practical indications."

"About the infrastructures that are needed, the most important infrastructure which is needed, is information and data discussion, which we should know what the number of households are, how much the access is, how many types of the insurances are. Whatever our information is more about households and people of the community, we can plan better; and surely electronic infrastructures are necessary, and insurance infrastructures should surely provide, software infrastructures are also necessary such as clinics and hospitals, which the government should plan gradually and make these centers, as it was also mentioned in transformation plan, and totally provide services which is needed in accordance with city and village through good information.

Barriers of fair access to health services also included barriers related to policy-making, barriers related to resources, barriers related to manpower, infrastructure barriers, and financial barriers. Each of these main axes are composed of sub-axes, which are mentioned in Table 2.

In the following, some quotes from interviewee are presented.

"Regarding the comprehensive health services centers as well as the special clinics which were created in the health system transformation plan[8], it can provide fair access if it is available to patients and all people 24 hours a day, otherwise it can highly increase financial burden for health care, but it will be useful if it is 24 hours."

"The most important obstacle is discussion (matter) of the economic status and it is possible a family not to be able to afford the cost because of insurance situation. Those who are unemployed, have problems economically and do not have insurance too. A discussion is about the education of the household's head. Most of times, the head of the household do not believe in referrals due to low education and cultural problems, and they may refer when the disease is advanced. Also, transferring the elderly and the disabled person to and from clinics can be very difficult. In terms of gender in some ethnic groups, you see that the women refer less to clinics for diseases. "

"Access to specialized and sub-specialized fields is much less because the number of general practitioners are more and fortunately in these years, they were able to send general practitioners to remote areas and provide services and access to general practitioners' services is easier or in terms of medicine. Access to basic medicines are easier, but certain medicines are more difficult to access. Some households may not be able to access certain medicines financially or economically."

Table 1: Indicators of fair access to outpatient services

Dimension	Component
Indicators related to manpower Access to outpatient services	General physician to population ratio
	Nurse to population ratio
	Radiologist to population ratio
	Family physician to population ratio
	The ratio of specialist and subspecialist physicians to the population
	Physiotherapist to population ratio
	Pharmacist to population ratio
	Paramedical forces to population ratio
Policy- making indicators	Family physician and referral system
	Plan of special clinics
	Physicians retention plan in deprived areas (transformation plan)
	The need to develop an indication
	Insurance and insurance coverage
Indicators related to facilities and equipment of access to outpatient services	Laboratory equipment to population ratio
	physiotherapy equipment to population ratio
	Radiology equipment to population ratio
Financial indicators of access to outpatient services	Diagnostic equipment to population ratio
	The amount of payment out of people's pockets for services
	The amount of income and occupation of community people
Physical indicators of access to outpatient services	Pharmacy to population ratio
	The ratio of clinics and centers providing outpatient services to the population
	Ratio of laboratories and diagnostic centers to population
	Population distance from centers providing service
Demographic indicators	Cultural indicators such as literacy level, health literacy level, people's attitude and trust in providing health services
	Social indicators such as marital status, education status
	Age structure of the population
	Sexual structure of the population

Table 2: Barriers related to fair access indicators to outpatient services

Dimension	Component
Barriers related to policy	Lack of roadmap for outpatient services
	Being dual of tariffs (one public tariff and one private tariff)
	Overtaking private sector from the public sector in providing outpatient services
	Issuing of office license for physicians committed to service
	Instability of programs due to instability of the managers and policymakers
	The need to implement screening programs in the country
	The inefficiency of the family physician plan in some cases
	Lack of service leveling
	The burden of over-service in the public sector due to cheapness (induced demand by the consumer)
	Low physician tariffs of specialists in the public and even private sectors for providing 24-hour services
	Lack of development of special clinics and the impossibility of providing 24-hour services in special clinics
	High governmental ownership, especially in deprived areas
	Weakness of referral system
	Failure to provide a sustainable solution to meet the needs
Barriers related to resources	Imbalances in service delivery (creating induced demand in some areas and lack of basic services in others
	Improper equipment distribution
	High concentration of some outpatient services
	lack of access to medicine
	lack of access to services in the suburbs and remote areas
	Imbalance between the public and private sectors in providing services and the greater share of the private sector in providing outpatient services
	Lack of equipment of clinics providing outpatient services and lack of resources in them
	Lack of equipment of outpatient emergency ward
	Lack of attention to the needs of less privileged areas
	Lack of distribution of services based on need
	Lack of access to specialized and sub-specialized services
	Lack of needs assessment in the country
	Unbalanced distribution of resources and facilities for outpatient services in the country
Barriers related to manpower	Overcrowding of public centers providing outpatient services and long waiting queues
	Lack of attention to training and lack of funding for education to encourage people to refer a family physician
	Low attractiveness of comprehensive health service centers for working of general practitioners and specialists
Infrastructural barriers	Lack of Informatics infrastructure
	Lack of developing proper index for outpatient services
	Lack of proper standards for patient visit in special clinics
	Lack of connection of family records together and lack of integrated information system of patients throughout the country
	Lack of records for outpatients in governmental wards providing services
	Lack of appropriate technology, manpower and equipment infrastructure
	Failure to determine the status of outpatients in a short time and referral to diagnostic and inpatient wards
Financial barriers	Disregard for priorities in allocating funds for outpatient services
	Lack of insurance coverage
	Lack of attention to a stable budget for financing the outpatient services
	Lack of attention to inflation to pay providers of outpatient services
	Being expensiveness of specialized services
	Low tariffs and salaries of physicians

DISCUSSION

As the results of the research clarified, the indicators of fair access to outpatient services included manpower indicators, policy-making indicators, indicators related to facilities and equipment, financial indicators, physical indicators, and demographic indicators.

Experts considered manpower as one of the important indicators of fair access to outpatient services in Iran. In other words, the existence of sufficient manpower including general practitioner, family physician, specialist physician, subspecialist, paramedical manpower including nurse, midwife, physiotherapist, radiologist, are defined as important factors affecting fair access to outpatient services in Iran health system.

According to the latest World Bank report in 2018, the per capita (ratio) of physicians to population is 1.6 in Iran, while the globally mean of this rate is between two and three, and the per capita of nurse and midwife to population is 2.62 in Iran in 2017. Iran is ranked in 87th position in the world in terms of per capita of physician-to-population and is far from the world very much[15]

It is noteworthy that the same number of physicians are also not well distributed in the country. The results of

the study of Ehsani Chimeh et al[16] also showed that there is an unequal distribution of human resources in the field of health in the country. Also, the distribution of specialist physicians has more inequality compared to general practitioners.

The interviewees of the research considered policy-making indicators as one of the other indicators affecting the fair access to outpatient services, which include the family physician plan and referral system, the package of the need to open special clinics and the package of the physicians stay in deprived areas of the health transformation plan, insurance and insurance coverage, the need to develop an indication.

Numerous studies have shown that if service leveling[9] is organized with a referral system, 80 to 90% of health needs can be met at the first level[17]. The results of another study have shown that the utilization of referral system causes to reduce the number of outpatients by 40.6%[18].

In different countries of the world, the situation of family physician and referral system regarding outpatient services is different, and of course, its consequences on the health care field are different in different countries. Half of all physicians in Australia, Canada and France are family physicians. But just they are about ten percent of the physicians in Greece[19].

In Denmark, all outpatients, except cancer patients, are required to refer to a family physician to receive and follow up their services. In the Netherlands, a family physician is stationed in the emergency ward and provides all outpatient services that do not require an emergency. Limited and minor surgeries, basic and simple diagnostic services such as glucose testing, Otoscopy, ultrasound and even radiology are performed by family physicians in four countries: Denmark, the Netherlands, Finland and Spain[20].

The results of Kazemian & Kavian Telluri's research[21] have shown that more than 65% of outpatient referrals of the community covered by health centers were unauthorized in Gorgan in 2011 and 2012, and the reason for this is considered the weakness in the referral system and incomplete implementation of the family physician plan. The results of this study also show that the presence of a family physician has reduced 58% of the shortcomings of the referral plan in the short term, it means less than a month.

One of the guidelines of the Health Transformation Plan is the program for the presence of resident physicians in hospitals affiliated to the Ministry of Health and Medical Education. This program was created with the aim of providing timely medical services, 24-hour responsiveness of the centers, assigning patients by the relevant specialist in the emergency ward in the shortest possible time, doing timely visits of patients, surgeries and emergency procedures, and increasing public satisfaction[22].

The results of Schafer et al.'s research[23] on the distribution of general practitioners, specialists and subspecialists in Spain and Brazil have shown that necessarily increasing the training of physicians and medical graduates in universities of one country cannot be a suitable solution to increase access to health services and provide services of physicians. The results of the survey in both countries have shown that there is a shortage of physicians and specialists in both Spain and Brazil, and there is access to public health services in both countries. Despite the increase in medical schools during the years 1998 to 2017 in both countries, lack of university professors, disregard for the needs in order to attract specialists in the school, lack of proper distribution of specialized and sub-specialized forces based on needs in the country, saturation of students and professors and specialists in the country's centers and the lack of manpower in the suburbs, disregard for the health market, disregard for local and regional injustice, disregard for the rate of aging and life expectancy index, have caused the retention problems and shortages in two Brazil and Spain countries.

The results of Danielson et al. indicate that a sense of cohesion between patient and healthcare providers during treatment is required for improving the quality of services and healthcare providers' communication skill has a strong effect on their interaction[24]. The Ministry of Health and Medical Education, in line with the program of the health system plan, provided guidelines to improve the quality of outpatient visit services to organize the outpatient visit status through increasing the time of visits, increasing accessibility to specialist physicians in special clinics and continue to provide their services in these clinics by employing full-time geographical physicians and creating favorable educational spaces for them; and one of the important principles of this program was to record the outpatients visit information, previous tests performed and the person's medical records, which of course the necessary electronic infrastructure was also needed[25].

In Iran in 2014, the health system transformation plan carried out interventions with the aim of financial protection from health services and increasing fair access to health services. One of the main interventions was to increase the general coverage of basic health insurance for the entire population and therefore all Iranians without basic health insurance were covered by public health insurance and this intervention was implemented in July 2014[26].

In this study, barriers to fair access to outpatient services from the perspective of experts in the Iran health system included barriers related to policy-making, barriers related to resources, barriers related to manpower, infrastructure barriers, and financial barriers.

Barriers related to policy-making included lack of roadmap for outpatient services, conflict of tariffs (public and private tariffs), overtaking private sector from the public sector in providing outpatient services, issuing of office license for physicians committed to service, instability of programs due to instability of the managers and policymakers, the need to implement screening programs in the country, the inefficiency of the family physician plan in some cases, lack of service leveling, the burden of over-service in the public sector due to cheapness (induced demand by the consumer), low physician tariffs of specialists in the public and even private sectors for providing 24-hour services, lack of development of special clinics and the impossibility of providing 24-hour services in special clinics.

In the study of Peykanpour et al[27], increasing the induced demand by the patient, increasing unnecessary referrals to the public sector, increasing the share of health costs in the household basket, increasing the

dissatisfaction of medical staff due to injustice in payments are the problems of the Iran health system during recent years and after the implementation of the Health Transformation Plan.

A comparison between Iran and Norway, Australia, the United States, Germany, Italy, Canada, the United Kingdom, Denmark and Japan conducted in the Almaspoor khangah study[28] showed that the primary health cares in all these countries is provided by the private sector and the government has a supervisory role, but in Iran these care are provided by the public sector. In all the studied countries, referral to a specialist physician is done only and only through the referral system and family physician, and the family physician is the gatekeeper of the system, but this is not the case in Iran. The referral system in Iran and Japan is not suitable.

Abedi et al[22] considered the weaknesses of residual plan as increasing induced demand, insufficient manpower infrastructure and lack of general practitioners, specialists and subspecialists to attend special clinics and in deprived areas, insufficient technological, equipment and structural infrastructures in order to 24-hour responsiveness to patients, unsustainable financial resources, weakening of the on call program, lack of guidelines for financial control of the program.

Factors related to the resource were among other effective barriers on fair access to outpatient services, which these barriers included imbalances in service delivery (creating induced demand in some areas and lack of basic services in others), improper equipment distribution, and high concentration of some outpatient services, lack of access to medicine, lack of access to services in the suburbs and remote areas, imbalance between the public and private sectors in providing services and the greater share of the private sector in providing outpatient services, lack of equipment of clinics providing outpatient services and lack of resources in them, lack of equipment of outpatient emergency ward, lack of attention to the needs of less privileged areas, lack of distribution of services based on need, lack of access to specialized and sub-specialized services, lack of needs assessment in the country, unbalanced distribution of resources and facilities for outpatient services in the country .There are also barriers related to manpower were identified which included the overcrowding of public centers providing outpatient services and long waiting queues, lack of uniform and equal distribution of manpower, especially physicians across the country, shortage of specialized and sub-specialized forces across the country, lack of attention to training and lack of funding for education to encourage people to refer a family physician, low attractiveness of comprehensive health service centers for general practitioners and specialists.

Unequal distribution especially in the medical profession is the first and biggest challenge, most physicians in developed countries and large cities acknowledge that they have high living standards, higher income, and more job satisfaction. The number of physicians in many countries, including Bangladesh, Brazil, China, and Pakistan are more than nurses. The third issue is related to subspecialty and the fourth issue is related to inadequate institutional distribution. Finally, inadequate gender distribution is also one of the challenges in this field.

The results of Aghajani et al' research[28] have shown that there is a large dispersion in medical staff in the country, including physicians, pharmacists, nurses, midwives, and medical staff are mainly located in the centers of cities and metropolitan. Also, the research results have shown that there is a high dispersion among general practitioners due to the lack of attention to the needs and facilities required of physicians in different regions of the country.

The research of Mir et al[30] has shown that although the production of specialized manpower in the field of health in recent years has been increasing, but the distribution of expert manpower does not follow the scientific and efficient model in the field of health. The lack of medical staff in remote cities, regions and villages of the country and the density of graduates of these fields in metropolises and provincial centers, has caused disruption in the provision of diagnostic and treatment services to residents of deprived and needy areas of the country.

In the study of Noorai Motlagh et al[31], the lack of related specialist in centers providing health services is one of the most important factors in the lack of health services in low-income areas.

In the research of Sefid Dashti et al[16], the results of research on medical staff in Tehran province have shown that human resources have increased in general, but specialists and nurses have an inadequate distribution. Also, the results of the research have shown that there is a negative relationship between the degree of education of the medical staff (specialists) and their presence and desire to continue serving in the suburbs and remote areas.

Infrastructural barriers were identified including lack of Informatics infrastructure, lack of proper index for outpatient services, lack of proper standards for patient visit in special clinics, lack of connection of family records together and lack of integrated information system of patients throughout the country, lack of records for outpatients in public wards providing services, lack of appropriate technology infrastructure, manpower and equipment, failure to determine the status of outpatients in a short time and referral to diagnostic and inpatient wards.

Financial barriers were considered as fair access to outpatient services in Iran including disregard for priorities in allocating funds for outpatient services, lack of insurance coverage, and lack of attention to a stable budget for financing the outpatient services, lack of attention to inflation to pay providers of outpatient services, expensiveness of specialized and sub-specialized services, low tariffs and salaries of physicians.

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Competing interests: No potential conflict of interest was reported by the authors.

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