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The distribution of health services in Iran health care system: A case study at East Azerbaijan



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ABSTRACT

Background: It is necessary that various aspects of health information and statistics are identified and measured since health problems are getting more complex day by day.

Objective: This study is aimed to investigate the distribution of health services in the health care system in Iran and the case of study is East Azerbaijan province.

Methods: This research was a retrospective, descriptive, cross-sectional study. The statistical population included all health service providers in East Azerbaijan Province in the public, private, charity, military, social security, and NGO sectors. In this study, the data from all functional health sectors, including hospitals, health centers, and clinical, rehabilitation centers and all clinics and private offices were studied during 2014. The data relevant to performance were collected according to a pre-determined format (researcher-built checklist)

which was approved by five professionals and experts Health Services Management (content validity).

Results: The study findings showed that the public sector by 45.28% accounted for the highest share of provided services and the private sector, social security, military institutions, charities and NGOs institutions by 25.47%, 18.92%, 4.37%, 3.3%, and 2.66% next rank in providing health services in East Azerbaijan province have been allocated.

Conclusion: The results show that most of the health services in East Azerbaijan Province belongs to the public sector and the private sector has managed to develop its services in some parts surpassed the public sector. According to the study findings, Policies should be aimed to create balance and harmony in the provision of services among all service providers.

Keywords: Health Services, Healthcare system, Iran

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INTRODUCTION

Health is considered as a major human right and thus all people should have access to the resources needed for health care. Factors affecting the health include the socio-economic factors, physical environment, lifestyle, genetic factors, and access to health services.¹

In all countries, the cost of health care services is paid by the government, insurances, and people; and the contribution of each part is different. In Iran, in accordance with article 29 of the Constitution, "the right to benefit from social welfare with respect to retirement, unemployment, old age, disability, state of being orphan, homelessness, accidents, health services, health and medical care through insurance or otherwise, is a universal right". The government is required by law to provide the financial services and support for all citizens of the country, using national revenues and funds obtained from public contributions.² The results show that all countries are faced with similar challenges despite major differences in finance, organization, and delivery of health services. These challenges in the health sector include: ensuring the equity of public access to health care, improving services, development and improvement of treatment results, reducing the

costs for the public, improving the performance, better responsibility and accountability in the health care system, more involvement of the public in decision-making in health care area, and reducing the barriers between health and social care. Of course, incoming responses to these challenges in different countries has been affected by various historical, political, social and cultural issues.³ Studying the international experiences in this field shows that the overall health and social welfare management system has had a focused planning in most of the developed countries, but it follows a completely decentralized system in the application process. Besides, regarding the complexity of the organizational structure, it is very simple and compact.⁴ Different methods are used in the health system of different countries to reach their targets, which will face significant challenges despite the achievements.⁵ The health system of Iran functions in an environment with rapidly changing social, economic, and technical factors that lead to diverse challenges and tensions.⁶ It has been established to make changes which aim at equal use of health care services for all people, which help them with paying health care costs, financing continually,

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and adjusting to the payment system.⁷ Although the health care network which was developed in 1984 has been considered as a remarkable success of health system in Iran, the public access to services in secondary and tertiary levels has not been improved further.⁸ Nowadays most countries have experienced some rapid political changes through focusing on primary health care.⁹ Iran's health system, like many developing countries, is of public assistance type. This system has undergone many changes in recent years. Therefore, the establishment of an extensive network of health care has been always considered necessary. In Iran, the private and public sectors both provide the health care and treatment services; however, public sector and especially the Ministry of health, treatment, and medical education plays a more significant role in this regard.¹⁰

In East Azerbaijan province during the search and queries from Medical University and other relevant institutions, no information about the share of each health care provider was available. Since programming, decision making, regulation of policies, assessment, and prioritization of problems, redesigning the plans, and better allocation of resources based on the present condition compared to the past need evidence-based information and statistics; the present study was done to evaluate the distribution of health services in the health care system of Iran, the case of East Azerbaijan.

MATERIAL AND METHODS

Study Design

The present study is retrospective and cross-sectional that aims to study the distribution of health services in the health care system of Iran, the case study of East Azerbaijan in Iran. It was conducted during 2014.

Study Population

The studied population in this study consists of all health service providers, including the public sector, private, charity, military, Social Security and NGOs in the province of Eastern Azerbaijan. In this study, statistics and information on the performance of all sectors of healthcare, including hospitals, health centers, clinics, rehabilitation centers and all clinics and private offices in the year 2014 were studied. The study was conducted in different sites including Deputy of Treatment, Health section of University of Medical Sciences, Social Security Organization, Iran Health Insurance, Imam Khomeini Relief Committee, Welfare Organization, healthcare organizations of the oil industry and other bodies with a stake in the provision of health services.

METHOD

Statistics and performance information affiliated to surgery, hospital emergency services, outpatient services, inpatient services, laboratory services and rehabilitation services by all providers ranging from "public, private, charity, military, social security and non-governmental" (Inclusion Criteria) in East Azerbaijan province during 2014 were collected from research sites according to a predetermined format (researcher-built checklist) that was approved by five professionals and experts Health Services Management (content validity). It should be noted, that the checklist of the researchers who investigate and contain information on the location and design of the data collection was used.

Exclusion Criteria

1. Information and statistics on primary health care services; due to the complete and transparent registration of this information in health departments and centers of East Azerbaijan Province.
2. Information and statistics on supplemental insurances.
3. Information and statistics on non-insurance services of offices and private paraclinics.

Data Analysis Method

In order to analyze the data, SPSS software (SPSS inc., version 18.0, Chicago, IL, USA) was used and descriptive statistics (mean, percentage of each health service provider) was used to obtain the distribution of health services.

RESULTS

The findings of the study included the information on a total of 41 hospitals, 469 health centers in urban and rural areas, 526 pharmacies, 256 laboratories, 146 imaging centers, 90 rehabilitation centers and all clinics and private offices in the province of East Azerbaijan, which was collected from various places.

The study findings showed that the maximum and minimum number of surgeries has been done in the public sector (63.1%) and the non-governmental sectors (3%), respectively (Table 1). Also, the highest outpatient surgeries (79.6%) have been provided by the public sector, while among other sectors providing healthcare service, military establishments account for the highest share of outpatient surgeries (14.6%) (Table 1). Also, the results showed that the most hospital emergency medical services have been provided in the public sector (86%) and the lowest is related to charitable sector (0.6%) (Table 1). The highest

Table 1 Status in different sectors providing healthcare services in East Azerbaijan Province in 2014

Different sectors providing healthcare services	Total number of procedures	Percent of each section
Status of Surgeries in different sectors		
Public	154184	%63.1
Private	34930	%14.3
Social security	21763	%8.9
Military institutions	24930	%10.3
Charitable	7674	%3.1
NGOs	780	%0.3
Status of Hospital Emergency services in different sectors		
Public	1221061	%86
Private	27945	%2
Social security	97634	%6.8
Military institutions	65042	%4.6
Charitable	8777	%0.6
NGOs	96	-
Status of Outpatient services in different sectors		
Public	1128881	%13.4
Private	4506214	%53.6
Social security	2329943	%27.7
Military institutions	131582	%1.6
Charitable	53672	%0.6
NGOs	264461	%3.1
Status of Hospitalization Services in different sectors		
Public	348726	%71.9
Private	47411	%9.8
Social security	38138	%7.9
Military institutions	33660	%6.9
Charitable	11198	%2.3
NGOs	6042	%1.2
Status of laboratory services in different sectors		
Public	245821	%19.5
Private	643147	%51
Social security	322476	%25.58
Military institutions	23654	%1.88
Charitable	10197	%0.8
NGOs	15627	%1.24
Status of Rehabilitation services in different sectors		
Public	7890	%17.8
Private	9837	%22.1
Social security	16288	%36.6
Military institutions	405	%0.9
Charitable	5519	%12.4
NGOs	4506	%10.1

and the lowest outpatient services, respectively, have been provided in the private sector (53.6%) and the charitable sector (0.6%). Social security with %27.7 and public sector with 13.4% are the largest providers of outpatient services after private sector in this province (Table 1). The public sector (71.9%) and non-governmental sectors (1.2%) provided the maximum and minimum hospitalization services, respectively. The private sector's share of provision of hospital services in this province is only 9.8% (Table 1). The highest and the lowest laboratory services have been provided by the private sector (51%) and the charitable sector (0.8%), respectively (Table 1). The maximum rehabilitation services have been provided in the social security sector (36.6%) and the lowest services in this part belongs to the military institutions (0.9%) (Table 1). From a total of 44% of visits to general practitioners in the private sector, 33.8% is related to physicians' offices, clinics, and private clinics and 10.2% is related to private hospitals. From total of 65.9% of visit to specialists and super-specialists in the private sector, 57% is related to physicians' offices, clinics, and private clinics and 8.9% belongs to private hospitals. From total of 44.3% of visits to the dentist in the private sector, 31.7% is related to the physicians' offices, clinics, and private clinics and 12.6% is related to private hospitals. From total of 50.9% of pharmacy services in the private sector, 45.1% belongs to private pharmacies and about 5.8% is related to private hospitals (Table 2). From total of 37.3% of radiology services provided by private sector, 29.5% is related to the city's medical imaging centers and 7.8% belongs to private hospitals. Also, from total of 79.8% of private ultrasound services, 65.2% belong to the city's medical imaging centers and 14.6% is related to private hospitals. From total of 47.3% of private sector CT services, 32.5% is related to the city's medical imaging centers and 14.8% belong to private hospitals. In terms of MRI services, 70% is related to the city's medical imaging institutions and private hospitals have no Share in this regard (Table 3).

DISCUSSION

The findings of this cross-sectional study showed that the public sector is at the forefront of health service providers and the private sector (formal and informal) have a smaller share than the public sector in providing services. Of course, In Iran, the government plays an active role in planning, leadership, and supervision in a centralized manner which are better to be devolved to the local health care centers. Furthermore, Iranian government has the responsibility of planning and supervision of these centers itself. Here, we

Table 2 Status of outpatient services in different sectors providing healthcare services in East Azerbaijan Province in 2014

Different sectors providing healthcare services	General doctor visit		Specialist and super specialist doctors visit		Dentist visit		Pharmacy	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Public institutions [†]	537827	%32.4	340149	%15.3	36327	%40.7	214578	%4.8
Private institutions ^{**}	738180	%44.4	1467489	%65.9	39582	%44.3	2260963	%50.9
Social security institutions	295836	%17.7	302436	%13.6	5513	%6.3	1726158	%38.9
Military institutions	40819	%2.5	53655	%2.4	2811	%3.1	34297	%0.8
Charities	19406	%1.2	1259	%0.6	1644	%1.8	20103	%0.5
NGOs ^{***}	29207	%1.8	49362	%2.2	3374	%3.8	182518	%4.1

[†]Hospitals affiliated to University of Medical Sciences, clinics, dispensaries, etc.)

^{**}(Private hospitals, physicians' offices, clinics and private clinics)

^{***}(Red Cross, Azad University, etc.)

Table 3 Status of imaging services in different sectors providing healthcare services in East Azerbaijan province in 2014

Different sectors providing healthcare services	Imaging services									
	Radiology		Ultrasound		CT		MRI		Other Imaging Service: (Mammography, etc.)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Public institutions [†]	50510	%31.1	16230	%7.4	7899	%26.5	2771	%8.7	11233	%24.8
Private institutions ^{**}	61075	%37.3	174257	%79.8	14047	%47.3	22293	%70	34038	%75.2
Social security institutions	38773	%23.7	14124	%6.5	6141	%20.6	4842	%15.2	0	0
Military institutions	6333	%3.9	3432	%1.6	1667	%5.6	1936	%6.1	0	0
Charities	1312	%0.8	5244	%2.4	0	0	0	0	0	0
NGOs [†]	5230	%3.2	54405	%2.5	0	0	0	0	0	0

[†](Hospitals affiliated to University of Medical Sciences, clinics, dispensaries, etc.)

^{**}(Private hospitals, physicians' offices, clinics and private clinics)

^{††}(Red Cross, Azad University, etc.)

compared and discussed the health systems of countries with similar experiences and achievements of Health system of Iran; however, other successful countries in this area are noted. The study findings showed that the maximum (63.1%) and the minimum (0.3%) surgeries have been done in the public sector and the non-governmental sectors, respectively. These results are similar to the findings obtained for Malaysia. In this country, the Ministry of Health and Care Services has a prominent role in secondary care.¹¹ These findings are also consistent with reports from studies conducted in Turkey which indicate that the Ministry of Health is the only provider of health and hospitalization services in this country. Although private hospitals also offer services, their capacity is low.¹² In fact, the high share of public sector in this area is because the majority of hospitals are at the disposal of public sector which provides services at a lower cost compared

to the private sector, hence, the number of hospitalization and surgery is more in public sector. The findings also showed that the highest emergency medical services have been provided by the public sector (86%), while the charitable sector accounts for providing the lowest services (0.6%) in this regard. Hospital emergency services in most countries of the Middle East and especially West Asia, is offered by large state-owned hospitals. In Lebanon, emergency services are provided by the Lebanese Red Cross and by paying annual subsidies provided by the Ministry of Health, although recently some non-profit organizations entered to this area.¹³ This finding was also true in developed countries. These results are similar to the findings obtained in Australia and Canada where more than 60% of these services are provided for free by hospitals and health centers that are mainly public or non-profit public.^{14,15} The results are consistent with the findings of Sandier et al.¹⁶ who reported

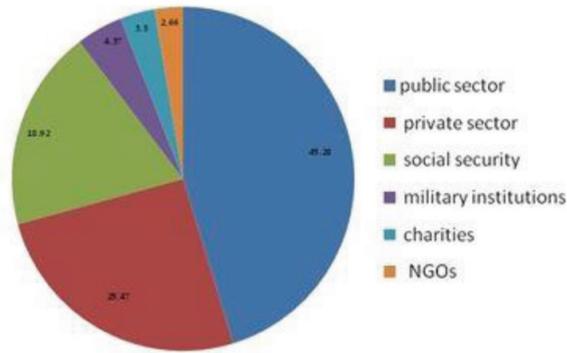


Figure 1 Distribution of health services in East Azerbaijan, 2014

that the public sector is top provider of emergency services in France.

However, emergency medical services in the Eastern Mediterranean countries have not developed very effectively compared to the OECD countries.¹⁷ The results also showed that highest and the lowest outpatient services, respectively, have been provided in the private sector (53.6%) and the charitable sector (0.6%). Social security with 27.7% and public sector with 13.4% are the largest providers of outpatient services after private sector in this province. The role of the private sector as a provider of health care has significantly become more prominent in the past two decades in the world. However, the private sector's involvement in the provision of public health services is limited.¹⁸ Reports of the Eastern Mediterranean countries suggest that the private sector has been an active partner in the development of health; and in many countries the number of physicians 'and dentists' offices as well as private pharmacies compared to the covered population is increasing.¹⁹ The voluntary not-for-profit organizations of civil society have been active in rural and low-income areas for a long time. Private services providers capture a significant and growing share of the health care delivery system, even in less developed countries.²⁰

In a sample of 40 developing countries, an average of 55% of physicians worked in the private sector in conjunction with 28% of hospital beds.²¹ In Germany, there is a general distinction between outpatient services (clinics) and inpatient services (hospitals). Hospitals do not provide outpatient services and doctors do not refer patients to the hospital for outpatient services and provide such services to their patients at office.^{22,23}

It was found that public sector (71.9%) and non-governmental sectors (1.2%) provided the maximum and minimum hospitalization services, respectively. The private sector's share of provision of hospital services in this province is only 9.8%. These results are similar to the findings obtained

in Norway which indicate that the public sector through associations and regional health authorities is responsible for the physical and mental patients. Similarly, in Saudi Arabia, more than 60% of health care for hospitalized patients is provided by the Ministry of Health.²⁴ In addition to having more features and more accessibility, the lower cost of hospitalization and the lack of an orderly and lawful referral system in this area are the reasons for the higher share of service provision in public sector. The highest and the lowest laboratory services have been provided by the private sector (51%) and the charity sector (0.8%), respectively; followed by social security and public sectors, with 19.5% and 25.58%, respectively. The findings of this study are similar to Malaysia where the private sector services such as pharmacies and private laboratories are on the rise and most of these services are offered by the private sector especially in urban areas.¹¹ Also, health-care delivery system of Singapore that is one of the most efficient and effective health systems provides primary health care (PHC), hospital care, long-term care and other health care seamlessly for the population. 80% of primary health care and outpatient services are provided by private medical clinics and a 20 percent is provided by public clinics.²⁵ Non-state actors, "the private sector" – including both for-profit and not-for-profit organizations – play a major role in the funding and provision of health care throughout the EAP region. Discussions with country experts indicate that the role of the private sector in healthcare funding and provision will increase.²⁶

The maximum rehabilitation services have been provided in the social security sector (36.6%) and the lowest services in this area belonged to the military institutions (0.9%). These results are similar to the findings obtained in Norway where rehabilitation services should be provided by the municipalities. The government and the tax unit municipalities provide the fund for municipalities in order to organize and regulate these services.²⁷ In Arabic countries, rehabilitation and palliative services to be offered by all sectors of the health care provider.²⁸ In OECD countries, more rehabilitation services in partnership with municipalities and private sector services will be provided to the recipients.²⁹ In general, it can be stated that 45.28%, 25.47%, 18.92%, 4.37%, 3.3%, and 2.66% of healthcare services in Eastern Azerbaijan Province during the year are provided by the public sector, private sector, social security, military institutions, charities, and NGOs, respectively (figure 1). These findings are consistent with the study by Sadaghiani et al.¹⁰ in 1994 that studied the distribution of health services in Iran. In this study, public sector, headed by the

Ministry of Health or 70.9% was at the front-line providers and the private sector with 18.8% was the second. Now, after almost twenty years, findings show that the private sector could approach to the public sector. There is a need for an effective rational dialogue between the public and the private sectors to determine mutually beneficial partnerships. Attitudes towards the private sector are changing.³⁰ Policy-makers can no longer ignore private health providers. They should pursue options for working with the private sector in order to achieve each sector's objectives. It is now believed that health services with mixed delivery systems enabled by strong government funding have better performance.³¹ However, privatization can only succeed in meeting society's goals when the state exercises strong stewardship. Reforms that increase the role of the private sector in financing health care will increase expenditures, and systems that rely heavily on private finance for health care tend to be less progressive. The increase in private finance need not lead to the evolution of the public sector into a "poor service for the poor".³² In the course of privatization or partnerships with the private sector, officials must pay attention to all aspects. A review study by Eggleston et al.³³ showed that there are some unresolved problems in China which aroused from changing the ownership of public companies to private or encouraging the two sectors to compete with each other in absorbing patients. Also, a systematic review by Sanjay Basu et al.³⁴ showed that the private sector is not more efficient, more responsive, and effective in the medical health care area, as it claims.

According to the findings of study, it seems that a multi-sectoral policy-making Council as the custodian of the policies and decisions in health sector should take charge, and policies should be aimed to create balance and harmony in the provision of services among all service providers. Distribution management in clients should be considered based on financial approaches and access to public and semi-private and private sectors. Another important point to be considered by health policy makers and managers is the negative attitude of the society towards the provision of services in the private sector that if the approach is changed, the traffic of referrals to the public sector will be decreased and satisfaction from services provided by the public sector will increase. Private and semi-private organizations also support clients in order to be better distributed. The rules and regulations should be provided in a way that changes the attitude toward competition to a cooperative attitude, increased consumer service and satisfaction in the health system.

CONCLUSION

The results of the present study show that most of the health services in East Azerbaijan Province belongs to the public sector and the private sector has managed to develop its services in some parts surpassed the public sector. Private sectors and other non-public sectors should invest more in hospitalization, surgery, and emergency services in order to gain a higher share in service provision in these areas.

CONFLICT OF INTERESTS

Authors had no conflict of interests.

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