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Health Care Systems in Selected Countries and Iran: A Descriptive-Comparative Study

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The main goal of health care systems in countries is improving the health of population in order empower them to help in economic and social activities. This research was conducted to compare health care system in Iran and some chosen countries in the world. This is a descriptive-comparative study which was conducted to compare health services delivery models in Iran and some chosen countries in the world with focus on family physician's practice. In this research 20 out of 191 countries, which were ranked by WHO in terms of health care delivery were selected, and six countries including were studied based on availability of data. These data were compared to that of Iran. Data were excluded and reported qualitatively. The results from this study showed that there is a gap in health system indicators between Iran and other selected countries. According to the findings from this study and experiences from successful health systems in the world, it can be concluded that to have a better health care system in Iran, some proceedings about decentralization in government role should be taken.

Key words: Health care system, Iran, Heath delivery models.

Nowadays health care systems play an important role in developing the infrastructures of societies[1]. The main goal of health care systems in countries is improving the health of population in order empower them to help in economic and social activities[2]. Health systems in countries have several methods to reach their targets, which will face significant challenges despite achievements[3]. Health system in Iran works in an environment with rapidly changing social, economic, and technical functions that will lead to challenges and tensions[4]. It has been established to make changes aimed at having equity in using health care services in whole population, helping people in paying health care costs, financing continually, and adjusting payment system[5]. Although health care network which was developed in 1984 is considered as a remarkable success in health system in Iran, population access to services in secondary and tertiary levels has not been improved anymore[6]. Hence a reform in health system was considered inevitable and some strategies such as family physician and referral system appeared as best

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choices to solve problems[7]. Referral system is a link between levels of services which can cause a decrease in costs[8]. An Iranian general physician in referral system program is accountable for monitoring the healthiness of specified covered families[9]. General physicians prevent wasting additional costs by referring patients to specific care level if they need and following them up[10]. Nowadays most countries have experienced some rapid political changes through focusing on primary health care. In order to improve the efficiency of health care systems, policy makers suggested implementing family physician program and family medicine was specialized in universities[11]. In 2005, family physician program was implemented in all rural areas and cities with a population of less than 20 thousands[12]. In spite of using variant health care delivery models and referral system, it seems that there remain many issues which need to be considered. Doing such comparative studies of health care delivery models in successful countries introduced by the World Health Organization (WHO) and using their experiences will assist us in achieving a prospering health system.

This research was conducted to compare health care system in Iran and some chosen countries in the world.

MATERIALS AND METHODS

This is a descriptive-comparative study which was conducted to compare health services delivery models in Iran and some chosen countries in the world with focus on family physician's practice. In this research 20 out of 191 countries, which were ranked by WHO in terms of health care delivery were selected, and six countries including Canada, Australia, England, France, Denmark, and Japan, were studied based on availability of data. These data were compared to that of Iran. The report "International profiles of health care systems, 2013" were discovered in the early search that included the wanted data. Following indicators were picked up for data extraction: Government role, who is covered, what is covered, health system financing, health services organization, key entities for health system governance, what is being done to ensure quality of care, what is being done to improve care coordination, what is being done to reduce health disparities, who is responsible for population health, what is the status of electronic health records, and how are costs controlled. Data were excluded and reported qualitatively.

RESULTS

Indicators related to selected countries were compared to that of Iran and the findings are as below.

The results from this study showed that government role in Iran dose not differ that of other countries, and policy making, financing and allocating health care budget is duty of government in Iran the same as other studied countries.

All of the population is covered by the health care system in all countries except Iran, in which 10-20% of population don't have any insurance coverage.

Public coverage comprises primary health care (PHC) alone in Iran, while in other countries it comprises services in second level of care and some dentistry and psychological care along with PHC.

It is covered approximately all costs through public program in Canada and England, although in Iran and other countries patients participate in health care payment. However in these countries public funding account for an estimated 70% of total health expenditures, while in Iran this amount is about 24.9 percent. Also there exists more than 50 percent of out-of-pocket (OPP) payment in Iran.

The gate keeper role is defined for physicians in all countries but Iran and Japan. Also special care is provided through referral system in those countries. There is not any referral system and all out-patient services are provided by the specialists in cities and patients have authority in choosing them in Iran and Japan.

There is a mix of public and private hospitals in all studied countries. About 97 percent of hospital beds in Denmark are owned by the public sector. Also the large amounts of hospitals are public ones in Iran which are managed by global budgets, insurance organizations, and private incomes and are funded by OPP from patients. According to statistics, there seems to be a large number of hospitals with low number of beds in Iran.

Table 1. Health system status in selected countries

	Iran	Japan	Denmark	French	England	Australia	Canada
Government role	Planning, leadership, supervision and health care evaluation, financing in the primary level of care (13-15)	Stewardship and financing all aspects of universal insurance system by regions	Stewardship, financing in partnership with regions, legislation, general planning, health delivery supervision by regions	Allocating and dividing budget, macro functions	Legislation and general health policy-making	National health policy-making, financing, universal public medical insurance program supervision (Medicare)	Canadian provinces and territories have primary responsibility for organizing and delivering health services and educating, accrediting, and licensing health care providers, delivery of hospital, community, long-term care, mental, and public health services. Government is accountable for financing, adjusting safety and effectiveness of medical devices, pharmaceuticals, and natural health products
who is covered	More than 10-20 percent of population has any type of insurance coverage (16)	Universal coverage	Universal coverage	Universal coverage	Universal coverage	Universal coverage	Universal coverage
what is covered	Public coverage of all primary health care provided through health networks (health house, rural and urban	All hospital care, ambulatory care, mental health care, approved prescription drugs, home care, physiotherapy, most dental	All primary, specialist, and hospital services. Preventive ser-vices, mental health services, and long-term care, Dental	hospital care and treatment in public or private rehabilitation or physiotherapy institutions; outpatient care provided	preventive services, including screening, immunization; inpatient and outpatient clinical care; physician services; inpatient and	Free inpatient care in public hospitals, free or subsidized access to medical and pharmaceutical services, wide range of	Different levels of additional benefits, such as outpatient prescription drug coverage, vision care, dental care, home health

	health care centers, health bases (14, 17).	care, lenses prescribed for children under 9.	services for children under 18.	by general practitioners (GPs), specialists, dentists, and midwives; diagnostic services prescribed by doctors; prescription drugs, medical appliances, and approved prostheses; and some health care related transport services. long-term and mental health care, outpatient vision and dental care	outpatient prescribed drugs; some dental care and eye care; mental health care, including some care for those with learning disabilities; palliative care; some long-term care; rehabilitation and physiotherapy	other health services including public health, mental health, dental and physical therapy services, rural health programs, and health services for war veterans.	care, physiotherapy, aids to independent living, and ambulance services are provided by provincial government. They also provide public health promotion and prevention services (including immunizations) as part of their public programs which financed by government.
Cost-Sharing	The rural population premiums (equal to 40% of government staff's insurance) are covered publicly. People with lower incomes are covered by Emdad Committee and their premium paid by government is poured to this fund (17). OPP is more than 58% (16).	All enrollees have to pay coinsurance (copayment) of 30 percent for services and goods covered, except for children under 3 years old (20%) and people age 70 and over with lower incomes (10%) OOP: 16%	There is no cost-sharing for hospital and primary care services. Cost-sharing is applied to dental care for those age 18 and older	Cost-sharing takes three forms: coinsurance, copayments, and extra-billing. Preventive care is paid out of pocket or by supplement insurance. All other services are covered. OOP: 7%	There are only a few cost-sharing. (Outpatient prescription drugs are subject to a copayment of US$12.62 per prescription in England)	Medicare usually reimburses 85 to 100 percent of its fee schedule for ambulatory services. It also reimburses 75 percent of the medical fee schedule for private patients in public hospital services.	No cost sharing
Percentage of GDP Spent on Health Care	7.5%	8.5%	9.4%	11.7%	9.4%	8.9%	10%

Public health system financing	Public expenditure accounted for around 4.9% of total health expenditure from general budget, the revenue from f the funds and assets of the organization, premiums (the main source), the cash proceeds from damages and penalties prescribed by law, the capitation from organizations, ministries and insured people, gifts given to the organization, revenues from other sources (18, 19).	Publicly finance of 80.5% of total health expenditure	Public expenditure accounted for around 85.3 percent of total health expenditure from general tax revenue.	Public expenditure accounted for 76.8 percent of total health costs by employer and employee payroll taxes, a national earmarked income tax, revenue from taxes levied on tobacco and alcohol, state subsidies, and transfers from other branches of social security.	NHS accounts for about 83% of public funding from taxes and national insurance (a payroll tax) and also income from copayments, those using NHS services as private patients.	Government funds about 69% of health expenditure from general tax revenue including a value-added tax. Also small part of funding is from patient fees and other private sources	Public funding accounted for an estimated 70 percent of total health expenditures by general taxation
Private health system financing	About 20% of health expenditure was funded through prepayments for Social Health Insurance in 2008. Out-of-pocket payments and other private resources represented 52.7 and 2.4 percent (respectively) of total health expenditures. (19)	Provision of privately funded health care has been limited to such dental services as orthodontics and expensive artificial teeth, and treatments of traffic accident injuries. These treatments, however, are usually paid by compulsory and/or voluntary	The total share of private expenditure for health care was 14.7 percent in 2011. Out-of-pocket payments represented 12.8 percent of total health expenditures.	Complementary VHI is provided mainly by not-for profit institutions, which cover around 90 percent of the population. It originally covered only those services that already were covered by SHI; however, a few VHI providers recently extended	Private expenditure is for over-the-counter drugs and other medical products and private hospital care, including both insured and uninsured costs. Most private hospital care, largely for elective treatment, is financed through voluntary health insurance.	Nongovernment sources provided 30.9 percent of health expenditure in 2010–11. Private health insurance accounted for 7.6 percent of total health expenditure	OOP payments by private households represented about 15% of total health spending. Private health insurance it accounted for approximately 12% of total health spending.

		automobile insurance.		complementary coverage to well-being services that are not part of the SHI basic benefit package.			
health services organization (Primary Health Care)	PHC are covered totally by the government. The referral system doesn't run currently. Also there is no gate keeping and GP registration (14, 17)	Primary care and specialist care are not regarded as distinct disciplines, although it has been argued that they should be. Traditionally, most physicians are trained as specialists, and then choose to work in clinics and hospitals. Government asks patients to choose their family physician. There is no gate keeping.	Family medicine program based (gate keeper role in primary health care) and referral system	A voluntary gate keeping system for adults aged 16 years and over. Also financial incentives are considered for registered patients in GPs.	Family medicine program based (gate keeper role in primary health care) and referral system, primary dental care through contracts with dentists within the framework of a nationally determined contract.	Gate keeper role in primary health care	Family medicine program based (gate keeper role in primary health care), referral system, multidisciplinary primary care
Out-patient care	all out-patient services are provided by private specialists in cities (20)	Outpatient specialist care is provided at hospital outpatient departments as well as at clinics, where patients can visit without referral. Some hospitals, particularly educational hospitals, bill patients extra fees for visits without referrals from primary care physicians.	Outpatient specialist care is delivered through hospital-based ambulatory clinics (fully integrated and funded, as are other public hospital services) or is provided by self-employed specialists in privately owned facilities.	GPs are office-based and self-employed. Outpatient specialists are office-based or in private for-profit clinics. Hospital physicians are salaried.	Specialists are almost all salaried employees of NHS hospitals	Medicare allows individuals to choose their specialist for out-of-hospital care—although their GP must provide a referral letter to the specialist. Specialists practice in both the private and the public sector; many work in both sectors.	The majority of specialist care is provided in hospitals with referral system.

Hospitals	There are 1159 public and private hospitals, and 100 beds per 100000 populations. The large amounts of hospitals are public ones (including teaching hospitals) which are funded by global budgets, insurance organizations, and private incomes from patients. OPP in public hospitals constitutes more than 20% of total health expenditure. Also OPP in private hospitals includes more than 50% of the total cost depending on service and insurance coverage (15).	There are 1211 beds per 100000 populations. More than 55 percent of hospital beds are in private nonprofit hospitals; the rest are in public hospitals, which tend to be larger than private hospitals.	There are 117 public hospitals (97%), 19 private hospitals, and 350 beds per 100000 populations.	There are 660 beds per 100000 populations. Two-thirds of all hospital beds are in government-owned or not-for-profit hospitals (all university hospitals are public).	There are 1123 public hospitals (95%) and 400 beds per 100000 populations. Publicly owned hospitals are organized either as NHS trusts, which are directly accountable to the Department of Health, or as Foundation Trusts. Foundation Trusts enjoy greater freedom from central control, have easier access to capital funding	There are 752 public hospitals (61%), 303 private ones and 390 bed per 100000 population. There is a mix of public, private, and not-for-profit hospitals. Public hospitals are funded jointly by the Australian government and state governments in addition to receiving funds from treating private patients. Private hospitals (including day clinics) can be either for-profit or nonprofit, and their income is derived chiefly from patients with private health insurance.	There are 899 public and not for profit hospitals (95%), 45 private hospitals and 270 beds per 100000 populations. Hospitals generally operate under annual, global budgets and are a mix of public, private, predominantly not-for-profit organizations. Hospitals are managed by local and regional health entities. Physicians are not hospital employees.
key entities for health system governance	The ministry of health and education, the ministry of welfare, the accreditation office of the ministry of health and education, office of technology assessment and standards development,	The social security council, a statutory body within the ministry of health, labor, and welfare.	Ministry for the Interior and Health and the Danish Health and Medicines Authority, municipalities, the Danish Institute for Quality and Accreditation in Healthcare	The National Authority for Health (HAS), The French Health Products Safety Agency, The Biomedicine Agency (public)	Ministry of health, The National Institute for Health and Clinical Eminance,The National Institute for Health and Clinical Excellence (NICE)	Council of Australian Governments' Health Ministers Conference and its extensive committee structure, Commission on Safety and Quality in Health Care National Health and	Provinces, Health Council of Canada, Canadian Institute for Health Information, some nongovernmental organizations, accreditation by related organizations.

	non-governmental-organizations (21-23)					Medical Research Council, accreditation by non governmental organizations	
what is being done to ensure quality of care	Health technology assessment, standard development and health tariffs, clinical governance program, accreditation (24)	The Social Security Council, a statutory body within the Ministry of Health, Labor, and Welfare, is in charge of national strategies on quality and safety, cost control, and the setting of provider fees in health care. The Japan Council for Quality Health Care, a nonprofit organization, works to improve quality throughout the health system and to develop clinical guidelines, although it does not have any regulatory power to punish poorly performing providers. Specialist societies themselves also produce clinical guidelines.	The DDKM, which is based on extensive accreditation standards, has now been implemented in all hospitals, and is in the process of being introduced in primary care and pharmacies. It aims to include all health care delivery organizations, and applies both organizational and clinical standards.	National plans are have been developed for a number of chronic conditions, medical device registries fro ensuring their quality, accreditation of hospitals every 4 years, quality assurance and risk management in hospitals under the authority of the Ministry of Health.	Care Quality Commission	Reports on the safety and quality of health care performance against national standards, monitoring trends in the performance of health service providers against standards set out in the National Health Performance Framework, accreditation, rewarding practices deemed to be working toward meeting the standards.	Health funds provided to provinces were increased, health technology assessment, development of strategies and standards and patient safety tool

what is being done to improve care coordination	Although levels of services and referral system are suggested for care coordination (25), they aren't respected. There is overlap between services and insurance coverage, also they are offered in parallel.	Multi-specialty groups or clinics, financial incentives.	Mandatory health agreements between municipalities and regions	-	GP's role in coordination of care, team working, improving merged care including communication between hospital and community based health care.	The significant role of GP in coordination of care, Multidisciplinary teams, financial incentives for team practice, developing standard guidelines a setting financial incentives for them	Growing number of doctors practicing in multidisciplinary teams, Family Incentive Program to support the management of congestive heart failure, diabetes, and hypertension, developing standard guidelines a setting financial incentives for them
what is being done to reduce health disparities	Inequality in the distribution of services and the financial contribution of population is extremely obvious (113th rank). Health system transformation plan will possibly be effective in reducing disparities (21)	Paying attention to the mean of life expectancy among different social groups and geographical areas. Also government gives subsidies in order to improve care.	higher taxes on tobacco and unhealthy food; targeted interventions to promote smoking cessation; prohibition of the sale of strong alcohol to young people; establishment of anti-alcohol policies in all educational institutions	There is a seven-year gap in life expectancy between males in the highest social category and those in the lows. The 2004 Public Health Act made reducing health inequalities a national priority. It set targets for reducing geographic inequities, financial inequities, and inequities in prevention.	local authorities to pay for public health programs	Working in partnership with indigenous communities, Extra subsidies for services, training programs, and outreach services are also being directed to people in rural areas and a safety net in place.	Health disparities are a significant issue in health policy in Canada. Public Health Agency of Canada includes in its mandate reporting on health disparities among the population. Provincial governments had established teams in society to pay for disparity in health including health program and Native's health. The 2013 budget also included renewed funding for the Homelessness Partnership Strategy.

who is responsible for population health	The ministry of health and medical education (21)	Ministry of Health and Welfare, municipalities, and local institutes	The responsibility for population health is shared between the various levels of the health system. National authorities (the Danish Health and Medicines Authority and SSI States Serum Institute) monitor the health status of the population, and the former is responsible for intervening if regions and municipalities do not deliver adequate services.	The state (Ministry of Health, General Directorate of Health) and the Regional Health Agencies.	NHS England +Clinical Commissioning Groups (CCGs)	Historically, state governments have the major responsibility for population health, including preventive regulation and campaigns, environmental health, occupational health and safety, and communicable disease control.	In Canada, responsibility for population health is spread across levels of government. At the federal level, the Public Health Agency of Canada. Provincial governments set province-wide priorities for population health, while health regions are responsible for establishing local priorities and for the health of a population in a given geographic area.
what is the status of electronic health records	Electronic health records have been activated, along with this, smart health cards have been issued, and publicizing this program is going on. Also telemedicine is in the agenda but there are any actions around electronic prescription yet (26)	Almost all hospitals used electronic billing; Online appointment systems are available, unique identifiers for financial transfers.	Information technology (IT) is used at all levels of the health system. The national strategy for use of IT in health care is supported by the National Agency for Health IT.	Apart from the EHR project, there are two coexisting HIT systems: one for hospital admissions (the PMSI), used by hospitals to bill SHI, and one for patient reimbursement claims for outpatient and hospital care.	Every patient registered with the NHS receives an NHS number, which serves as a unique patient identifier. Most GPs' and hospitals patient records are computerized.	Most general practices and many public sector health service providers use electronic health records. DoH is now providing Personally Controlled EHRs to all citizens and permanent residents upon request. The National E-Health Strategy, an inter governmental strategy on health information technology, has been published	Canada Health Infoway, a federally funded independent not-for-profit organization, works with governments and health organizations to accelerate the adoption of electronic health records and other electronic health information systems

Public entities are key entities for health system governance in studied countries except Canada and Australia in which non-governmental organizations play important roles in system governance. The Ministry of Health and Education is responsible for governing health system in Iran.

There is a wide range of interventions done to ensure quality of care in countries such as standardization and accreditation, annual internal and external evaluation. Furthermore, Canada has moved to increase budget of provinces to improve the quality of care. The Care Quality Commission has responsibility for these interventions in England. Also in France there are national plans for a number of chronic conditions, new tools, and risk management in hospitals. Patient safety and reporting accidents by staff members are some actions done by Danish government. In addition to these interventions, cancer reporting scheme is done in Japan. Finally Iran has some plans such as health tariffs and standards, hospitals accreditation, clinical governance and health technology assessment through treatment affair.

For improving care coordination, financial incentives are been used in Canada and Japan. Mandatory health agreements between municipalities and regions were introduced in Denmark. Lastly England and Iran take the advantage of levels of services and referral system.

Reducing inequality is one of the concerns of countries in the health system. In this context, Japan and Australia have subsidized some health services. France provides preventive care to reduce geographic and fiscal disparities. There are some educational programs, relief services, care delivery to villager and safety nets introduced by Australians. Also Danish government has some plans for reducing health disparities including: higher taxes on tobacco and unhealthy food; targeted interventions to promote smoking cessation; prohibition of the sale of strong alcohol to young people; and establishment of anti-alcohol policies in all educational institutions. There is not any institution responsible to this issue in Canada. The current health care system in Iran is considered unsuccessful in accomplishing justice and equality and the solution is in implementing the health system transformation plan.

In all studied countries as well as Iran; government agencies are accountable for population health.

Information technology is used at all levels of the health system in all countries. Electronic health records have been activated in Iran. Along with this, smart health cards have been issued and publicizing this program is going on. Also telemedicine is in the agenda but there are some actions around electronic prescription yet.

Costs of health care have been controlled in different ways in countries. In Canada costs are controlled principally through single-payer purchasing power, and increases in real spending mainly reflect government investment decisions and budgetary over-runs. Policies to control pharmaceutical expenditure in Denmark include generic substitution by doctors and pharmacists, pre-scribing guidelines, and assessment by the regions of deviations in physicians' prescribing behavior. Price regulation for all health care services as a national benefits package is a critical cost-containment mechanism in Japan. Implementing the health system transformation plan in Iran is considered as a cost control policy. Iran has increased health tariffs which will actualize costs of care and will frustrate physician's subterfuge for receiving additional costs without health system supervision.

DISCUSSION

This comparative research was conducted to compare health care systems in Iran and selected countries in the world. Findings of this study show that there are some shortcomings and problems in the health system of Iran in comparison to the leading countries.

Government in Iran plays an active role in planning, leadership, and supervision in a centralized manner which is better to devolve these tasks to local health care providing centers. Furthermore, Iranian government has the responsibility of planning and supervision of these centers by itself. Jabbari and colleagues proposed a mechanism to decentralization including transferring of health care provision to medical sciences universities, some welfare services to municipalities or ministry of welfare, and public-private partnership in health care provision[4]. Results of a study conducted by Doshmangir and associates showed that the implementation of the

board of trustees' policy in teaching hospitals in Iran and some similar decentralization policies in the past didn't succeed due to lack of proper infrastructure. Also key stakeholders, particularly the government, did not support the decentralization of Iran's health system[28].

All of the population is covered by the health care system in all countries except Iran. Public coverage comprises primary health care (PHC) alone in Iran, and most expensive secondary and tertiary services not covered. To reduce inequalities in Iran measures such as the implementation of the health system transformation plan has been devised but direct costs are still remained high. The results of a research by Karimi and colleagues indicated that equitable access to health services in Iran would develop a national health insurance system with the aim of eliminating parallel insurance, coverage for all medical necessary services particularly for the elderly and patients with chronic mental illnesses[29].

Having had that preventive care is a public good, it is important for government to provide it publicly (30). Primary health care in urban and rural areas is almost entirely covered by the government in Iran as well as other countries.

Findings show that the majority of hospitals are public in all studies countries and Iran. But OPP in public hospitals are high in Iran. Ghanbari and associates offered a model for health services provision in state hospitals in Iran. They suggested that government can guarantee function of the public interest and improve quality of services, customer satisfaction, and productivity of existing resources with assembling context of market-oriented mechanisms in the provision of hospital services and monitoring through intermediate institutions, along with determining the rules of fair and social competition in public hospitals[31].

Findings from this article suggest that the government's quota for the health sector financing is very low in Iran compared to the selected countries. Private sector in selected countries only limited to some specific services and are responsible for a small fraction of the financing, while it is reversed in Iran. Costs are low in health systems which are financed by the government. Pazouki and associates offers a mechanism to improve financing of the health system in Iran including using taxes in fiscal policy, health care tariff based on final cost of services and creating infrastructures for private sector activity[32].

There is a wide range of interventions done to ensure quality of care in countries. Despite implementation of these measures in recent years in Iran in terms of clinical governance, accreditation, and implementation of some plans such as health tariffs and standards, hospitals accreditation, for some reason including a state instead of a private institution responsible for accrediting hospitals, these programs have not been particularly successful. Also there is a lack of representatives of all the factors involved in the provision of health care in accreditation team. Results of a research by Ameryon and co-workers showed that in order to reform accreditation system of Iran, licensing of health institutions can be in government stewardship; however, accreditation context need to contain representatives of all the factors involved in the provision of health care including ministry of health, insurance companies, health care receivers, hospitals, private health care providers, and experts[33].

The gate keeper role is defined for physicians in primary level in all countries except Iran. As a result, there are some issues related to referral system and coordination of care. Also there is not any referral system and all out-patient services are provided by the specialists in private sector. Hasanzadeh and co-authors indicated that implementing and managing an effective referral system requires comprehensive cooperation of government and inclusive reform[34]. In another study carried out by Ferdosi and co-authors a model for management of referral system based on level of service, open referral system and family medicine was proposed in which membership was voluntary[35]. Also Khaleghi and colleagues showed that it is necessary to educate health team in proper implementation of the referral system, legal commitment of specialists to give feedback and educate the public regarding the referral system[36].

Electronic medical records are performing publicly in Iran which is the reason of why this program hasn't been succeeding yet. Whereas according to experiences from other countries this task should be devolved to private organizations. Nasiripour and co-authors indicated that ambiguity and complexity of strategy and infrastructures are

the main obstacles related to implementation of electronic health in Iran. Also they reported that the weaknesses of electronic health in Iran includes culture and education for information technology, rapid change in top managers in health and welfare ministry, inability to attract information technology experts in the field of electronic health, unclear mechanisms for electronic health financing, and lack of technical standards[26].

Given that fee-for-service (FFS) and capitation are payment methods for general physicians in primary care level in all leading countries, it seems that it is better for Iran to go around these two methods because of lack of motivation, failure to comply with referral system by physicians, and poor quality of primary health services. A research done by Karimi and co-authors showed that regarding low GDP in Iran and low percentage of it spent on health, FFS and capitation is recommended in primary health care level. Also in case of paying FFS in secondary and tertiary level, it is better to indirectly allocate financial resources to health care providers and unification of tariffs between public and private sectors in order to reach fairness in health system[37]. Also Vatankhah and co-workers suggested implementation of mix payment method of salary, capitation, and bonus payment for general physicians and another mix payment method of salary if there exists an employment relationship and bonus payment for specialists[38].

CONCLUSION

According to the findings from this comparative study and experiences from successful health systems in the world, it can be concluded that to have a better health care system in Iran, some proceedings about decentralization in government role should be taken. Moreover, as current evidence indicates, primary health care and family medicine based systems are more cost-effective than specialty based ones and considering that primary care service compared to secondary care services are economically affordable and cost less through expensive technology in second level; it seems that referral system and family medicine role in health system as a gate-keeping role should be more highlighted. Educating and deployment of family medicine in primary health care systems are as one of the key strategies to tackle the challenges of the health system in Iran.

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