



## **Health Care Financing In Iran; Is Privatization A Good Solution?**

*\*M Davari<sup>1</sup>, A Haycox<sup>2</sup>, T Walley<sup>3</sup>*

- 1. Health Management & Economics Research Centre, Isfahan University of Medical Sciences, Isfahan, Iran*
- 2. Regional and International Economic Development, University of Liverpool, Liverpool, UK*
- 3. Department of Health Services Research, University of Liverpool, Liverpool, UK*

**(Received 12 Oct 2011; accepted 27 May 2012)**

### **Abstract**

**Background:** This paper considers a range of issues related to the financing of health care system and relevant government policies in Iran.

**Methods:** This study used mixed methods. A systematic literature review was undertaken to identify relevant publications. This was supplemented by hand searching in books and journals, including government publications. The issues and uncertainties identified in the literature were explored in detail through semi-structured interviews with key informants. These were triangulated with empirical evidence in the form of the literature, government statistics and independent expert opinions to validate the views expressed in the interviews.

**Results:** The systematic review of published literature showed that no previous publication has addressed issues relating to the financing of healthcare services in Iran. However, a range of opinion pieces outlined issues to be explored further in the interviews. Such issues summarised into four main categories.

**Conclusion:** The health care market in Iran has faced a period in which financial issues have enhanced managerial complexity. Privatization of health care services would appear to be a step too far in assisting the system to confront its challenges at the current time. The most important step toward solving such challenges is to focus on a feasible, relevant and comprehensive policy, which optimises the use of health care resources in Iran.

**Keywords:** Healthcare, Financing, privatization, Iran

### **Introduction**

All health systems around the world have faced rising health care expenditures, which threaten their ability to deliver good quality care in an equitable manner. Health care expenditures in Iran have been accelerating rapidly in past years (Table 1) and have placed serious resource pressures on the health system. This in turn has created additional pressures for health insurance organisations, policy makers and the Iranian population. Considering the fact that more than 90 percent of health care services are providing by the state- such pressures have encouraged health policy makers to consider the potential role that the privately funded sec-

tor can play in providing an alternative to public sector services.

As health care expenditures increased, the questions of efficiency and equity were confronted simultaneously. Health care financing in Iran is based on social insurance and is a pluralistic funding system (1). There are three main sources of health care funding in Iran; general government budget, health insurance payments and individuals' out of pocket expenses. The size of the health budget is determined by the deputy of the president in Management & Planning in close collaboration with the financial department of the Ministry of

Health & Medical Education (MH&ME). This budget must then be approved by the cabinet and subsequently by parliament.

Iran has four main health insurance organisations; the Social Security Insurance Organisation (SSIO), the Medical Services Insurance Organisation

(MSIO), the Armed Forces Medical Services Insurance Organisation (AFMSIO), and the Imdad Committee Health Insurance (ICHI). All of these organisations benefit from government support at various levels (1). Iran spent 220 Million US\$ for its health in year 2008 (Table 1) (2, 3).

**Table 1: National Expenditures on Health**

	1995	1996	1997	1998	1999	2000
Total expenditure on health (Million US\$)*	8,652,828	13,219,043	15,988,423	19,299,998	25,872,594	34,228,946
Health Expenditure Growth Rate (%)	---	52.83	20.95	20.70	34.04	32.32
Private expenditure on health (Million US\$)*	4,334,993	7,109,605	8,664,450	10,577,211	16,051,639	21,560,040
Private Health Expenditure Growth Rate (%)	---	64.20	21.80	22.17	51.70	34.33
Out of pocket expenditure as % of PvtHE*	92.4	94.0	96.9	97.3	95.6	95.9
Inflation growth rate**						11.4

**Table 1: Cond.....**

	2001	2002	2003***	2004	2005	2006	2007	2008
Total expenditure on health (Million US\$)*	41,130,149	56,885,993	68,164,827	86,086,691	113,987,734	140,393,344	170,321,511	220,907,034
Health Expenditure Growth Rate (%)	20.16	38.32	19.81	26.31	32.41	23.16	21.32	29.70
Private expenditure on health (Million US\$)*	23,972,261	32,343,928	36,462,859	48,621,383	58,071,712	70,138,244	90,676,288	119,907,640
Private Health Expenditure Growth Rate (%)	11.18	34.92	12.74	33.35	19.44	20.79	29.28	32.23
Out of pocket expenditure as % of PvtHE*	94.7	95.2	94.2	95.3	95.4	95.4	95.4	95.2
Inflation growth rate**	15.8	15.6	15.2	10.4	11.9	18.4	25.4	

Data Source: \*WHO website /\*\*Central Bank of Iran, various years /\*\*\* by 2002 the monetary policy of the Iranian government was to devote subsidised currency to many products and services including health care services and pharmaceuticals. Thus while the expenditures of health care services increased significantly in 2003 in domestic market, it shows a decrease in its growth rate in terms of US dollar

Despite this level of expenditure there remained considerable financial difficulties for the government, as the main providers of health care, for health insurance organisations, as the main purchasers of health care services, and for the patients, as the consumers of health care. We have attempted to elucidate such issues by a series of interviews with key opinion leaders within the Iranian healthcare system and point out possible interrelated links between them, as part of a wider study, which undertook a comprehensive evaluation of each component of the Iranian health system.

## Methods

This study is a part of larger study evaluating the application of health technology assessment (HTA) programme in Iran (4). It provides an overview of health care system performance in the whole. This study uses mixed methods. A systematic literature search was undertaken of electronic databases including MEDLINE, EMBASE, and Google Scholar. This was supplemented by searching in local books and journals including, Government publications, Iranian Journal of Public Health, and Iranian news agencies including Islamic Republic News Agency (IRNA), Iranian Students News Agency (ISNA), Iranian Labour News Agency (ILNA), and Fars News Agency. The issues and uncertainties identified were explored further qualitatively, by semi-structured interviews with key informants. These were selected by purposive sampling (5), to cover government, relevant professions and health service administrators.

Due to the limited published materials, much of the evidence concerning financing of the Iranian health care system has been obtained through face-to-face interviews with key personnel supported by an extensive review of government publications and other 'grey' literature.

The interviews were recorded, transcribed, coded, classified, translated and presented using thematic analysis (6). These were triangulated with empirical evidence in the form of the literature, government statistics and independent expert opinions to validate the views expressed in the interviews.

The results of the interviews are presented anonymously to ensure as honest a response as possible, but it is important to be aware of the interviewee's roles and possible perspectives: these are summarised in Table 2.

## Results

The systematic review of published literature was unable to identify any previous publication regarding financing of healthcare services in Iran. However, there are many personal comments and interviews with news agencies, which helped to identify issues to be explored further in the interviews.

The initial selection of interviewees for the whole study consisted of 60 senior healthcare managers. Following the initial invitation, 38 interviews were actually undertaken consisting of 12 interviewees from the healthcare delivery system, 11 and 15 from the pharmaceutical division. However, considering the results of the interviews, it became clear that 21 of the interviewees offered comments related to the financing of the healthcare system. The interviewees' positions are summarized in Table 2.

The interviewees raised various types of concerns relating to financing of the health system. We summarized them into four main issues: over use of health care services, lack of health economic expertise in health care management, high out of pocket expenditures and issues relating to privatization.

**Table 2:** The interviewees and their roles within the Iranian Health System

Designation	Position of the interviewees
Dr 01	Academic, Senior Policy Maker of the Iranian Health System
Dr 02	GP, Director of Regional Health Network
Dr 03	Vice Chancellor of Medical University
Dr 04	Senior staff, Medical Services Insurance Organisation
Dr 05	Academic, Senior Policy Maker of the Iranian Health System
Dr 06	Deputy of Medical Services Insurance Organisation
Dr 07	Senior Manager in Social Security Health Insurance Organisation
Dr 08	GP, Director of Regional Health Network
Dr 09	Member of the Managing Board in Medical Services Insurance Organisation
Dr 10	Chancellor, Medical University
Dr 11	Specialist, Director of Hospital
Dr 12	Health Scientist, Academic staff
Dr 13	Health Scientist, Deputy Chancellor of Medical University
Dr 14	GP, Director of Regional Health Network
Dr 15	Pharmacist, Senior Staff, Food and Drug Department
Dr 16	Deputy Chancellor of a Medical University in Food and Drug
Dr 17	Pharmacologist, Academic Staff, Ex-Deputy Chancellor of a Medical University
Dr 18	Deputy of Provincial Department of Imam Khomeini Health Insurance Organisation
Dr 19	Executive manager of provincial department of Medical Services Insurance Organisation
Dr 20	Director of Provincial Department Medical Services Insurance Organisation
Dr 21	Member of management committee of Medical Services Insurance Organisation

### **Excessive use of health services**

The interviewees considered that there was over use of health care services in past years. They believed this problem has wasted significant amount of financial resources in the health care delivery system. They suggested three main reasons for this over use: the nature and structure of health care delivery system in Iran, enhanced expectations of the patients, and poor monitoring.

Almost all of the subjects believed that the structure of healthcare delivery system directly led to the over utilization of health care services. They stated that the patients freedom of choice of clinician made it impossible to implement any systematic referral system, which made patients, use of the various levels of the services haphazard. This issue has been discussed in greater detail elsewhere (7).

In addition, of the nature of healthcare delivery system, the interviewees argued that expectations, demands for new, and high technology services, such as new drugs and imaging techniques have significantly increased in recent years. They believed that these expectations far exceeded the ability of the health insurance organisations to meet them. Issues related to health insurance system in Iran are also discussed in detail elsewhere (1).

Lack of effective monitoring, was considered the third important reason for over using medical services within the Iranian healthcare system.

Empirical evidence supports this: Dr Fazel, an ex-minister of health and the head of Iranian society of surgeons, and Dr Ghasemi, the head of Iranian heart association, have stated publicly that considerable numbers of unnecessary angiographies are undertaken in Iran (8). Re-

cent studies also show an exceptional growth in utilization of caesarean delivery (9,10).

#### **Lack of health economic expertise**

The interviewees believed many issues originated from the lack of economic expertise in health care management. Such issues generally related to limited financial resources, unrealistic medical tariffs, and profit sharing.

Many senior health authority managers have also publicly support these comments. For example, Dr M. V. Dastjerdi (11), minister of health, Dr I. Fazel (12), the ex-minister of health, and Dr Zafarghandi (13), the ex-chancellor of Tehran Medical University, stated that no economic approach was undertaken in managing the health system. Dr Fazel judged that this approach not only has reduced the quality of care, but also has undermined medical ethics (12).

#### **Limited financial resources**

An important concern of the interviewees was the perceived shortage of financial resources, due to the combination of a significant increase in health care costs and an inadequate per capita expenditure on health care (PCEHC). Such issues are discussed in more detail elsewhere (1).

#### **Low Medical tariffs (medical fees)**

Several interviewees severely criticized the process and the method underlying the determination of the medical tariffs paid for defined diagnoses. They stated that the process is challenging because the main buyers of health services, the health insurance organisations via the Higher Insurance Council (HIC), have the power to determine the medical tariffs. The interviewees perceived that this has led, the HIC to set medical tariffs below the market value of the services provided. A recent study also showed that this process has caused many problems even for health insurance organisations (1).

In addition to the level of medical tariffs, the method of their determination also received

significant criticism. It was felt that the HIC focuses strongly on affordability of health insurance organisations, rather than the cost and effectiveness of the services. They argued that this has consequently led to considerable difficulties for both, health care providers as well as the patients.

#### **Profit Sharing**

Profits arising from medical services i.e. laboratory test, radiography, CT or MRI Scan, is often shared between those doctors who recommend the services and those who undertake it. This was considered by our interviewees an inevitable consequence of the unrealistic medical tariffs.

Such supplier-induced demand for medical services in Iran inevitably leads to a significant over utilisation of health care services without any commensurate increase in health benefits to the patient, creating allocative and technical inefficiency in the system (14, 15).

#### **High out of pocket expenditures**

Out of pocket spending by patients received considerable attention from the interviewees. They suggested two main causes for the comparatively high level of private health expenditure in Iran which is around 60%; Firstly the prevalence and size of under the table fees, and secondly the comparative ineffectiveness of health insurance coverage.

#### **Under the table fees**

Considerable numbers of the interviewees strongly criticised the existence of irregular, under the table fees paid by patients to doctors. While they believed that this has damaged medical dignity and medical ethics significantly, again they perceived that low medical tariffs were the main cause of the problem.

The interviewees argued that doctors and other health professionals working in the private sector had no alternative to making additional charges if they were to be able to buy equipment and medicines at market prices. An alternative response to low medical tariffs is to re-

duce their quality care in order to reduce their services' costs.

The responses of the interviewees emphasised that the problem of unrealistically low medical tariffs causes problems for all parts of the Iranian healthcare system. It has consequently led to the disequilibrium of the health care market through the development of a black market and by adversely affecting the quality of care provided.

**Ineffective health insurance coverage**

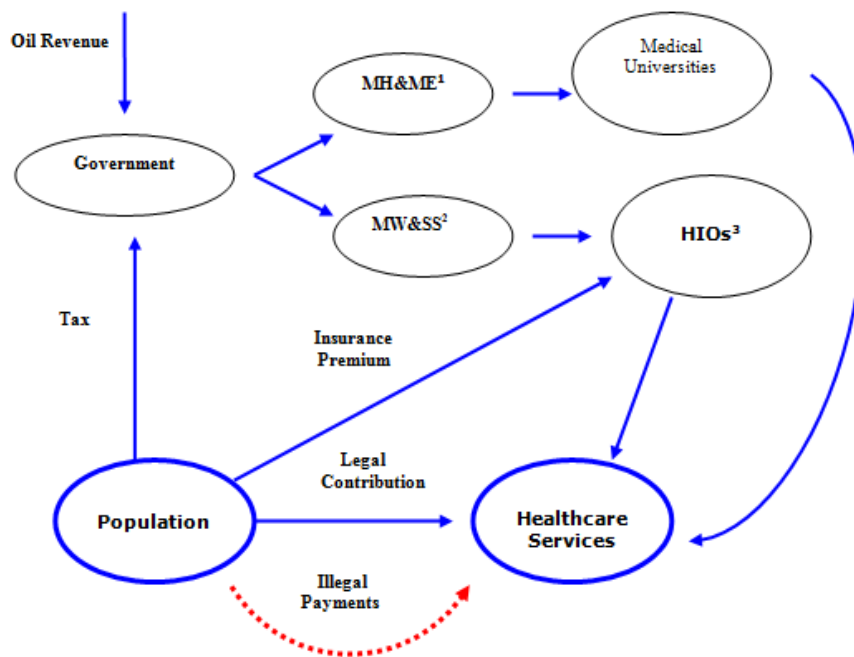
The interviewees believed that ineffective health insurance coverage was also one of the principal causes of high out of pocket health expenditures in Iran. They stated that every year health insurance organisations (HIOs) reduce their health care coverage by, for example, refusing to fund new medicines mainly as a

direct consequence of their financial difficulties. In such circumstances, it is not surprising that patients choose to pay for such services from their own pocket.

Empirical evidence, including recent studies (1,16,17) and governmental reports (18) also support this theme .

The money cycle in health care market in Iran shows that the population pay various kinds of the payments within the health care market (Fig. 1). This may help to understand why numerous families fall below the poverty line each year as a direct consequence of their health care expenditures (18, 19).

It can be expected that the greatest problems be imposed on the poorest members of Iranian society whose needs for health services are greatest, due to poor housing and diet.



1. Minister of Health and Medical Education
2. Minister of Welfare and Social security
3. Health Insurance Organisations

**Fig. 1:** Money cycle within the Iranian health care market





## **The potential for enhanced privatization of health care**

Some interviewees believed that improving private health care services could help the system to improve its services in both quality and quantity. It has been stated that because of limited resources, the government is not able to provide health care services for all; and therefore it is necessary to find a new way to meet the financial needs of the system. Some senior policy makers, such as Dr Larijani (20), the parliament speaker, have also stated that the private sector should take more responsibilities in providing health care services.

A range of recent policy developments show that this theme is developing quite rapidly between health-policy makers. Transferring some parts of the state hospitals (21) and more importantly changing some of state-owned hospitals to “Board of Trustees' hospitals” represent important steps toward the further privatization of health care delivery systems.

“Board of Trustees' hospitals” charge patients 3.6 times more than the official public sector medical tariffs (21). However, health insurance organizations reimburse patients based on the official tariffs in their reimbursement policy. This means that the patients have to pay the amount above the official tariffs out of their own pocket.

## **Discussion**

The interviewees emphasised the broad range of financial challenges currently facing the Iranian health care system. The issues raised by the interviewees and the empirical evidence cited suggest that the most important problem in financing health care delivery system is the lack of a systematic economic approach in the management and financing of the system. The ad hoc approach in determining medical tariffs provides a clear example of the potential benefits that would arise from a more detailed economic scrutiny. As remarked before, many of the interviewees stated that in their view the

current medical tariffs had been set far below the market price of the services, which has imposed a wide array of financial problems for health care providers. The recent policy of the ministry of changing the state hospitals to “Board of Trustees' hospitals” would also appear to confirm this perception.

One of the main consequences of the low medical fees was a serious reduction in health care providers' income. This decrease inevitably led to a series of consequences at various levels of the healthcare system. At the general practitioner (GP) level, there is an obvious incentive to use their power to recommend, or induce demand for clinical services beyond those that are strictly necessary for the effective and efficient treatment of the patient. This supplier induced demand (SID) could be simply justified in economic terms with reference to “target income” theory (22) or simple “profit maximization” theory (15).

According to “income target” hypothesis, doctors have some “target income” in their mind that they seek to achieve. Thus, while the decision makers try to maintain the health expenditures in low level by controlling medical fees strictly, the doctors and other medical workers seek to find additional methods of increasing their income. Sharing profits of medical services would provide one such method of income generation to recompense for the below market value levels of medical fees.

The logical expectation from these arguments is increasing utilisation of medical services without any medical indication. This is clear example of technical inefficiency in health care services (14,15). A wide range of recent studies also support this argument (1,9). In addition to the problem of supplier-induced demand, private health care providers may face financial difficulties in covering the costs of their services. This has led them to compensate their financial shortage through unofficial or under-table fees.

This unofficial fee would increase the likelihood of two other negative consequences. Firstly, it may result in reduction of utilization



of health care by patients who have difficulty affording such extra billing. As such patients are also those who are likely to be in greatest need of health care this will inevitably increase inequity in access to health care services (23). Secondly, the unofficial payment increases the share of individuals' payment for their health care expenditures. This will also enhance financial inequity in health care services (16,17,24,25). This situation is occurring at the same time that a reduction in out of pocket spending of Iranians for health care services was clearly one of the main objectives of the Government's fourth development plan for the health care market (26). This plan stated that out-of-pocket spending of the population on health-care should reduce from 60 percent to 30 percent by the end of the plan (March 2009) (26). But WHO data (Table 1) and local documents (18) and recent studies (16,17) do not show such a trend in the health expenditure pattern of the Iranian population. The failure to achieve this objective led to the same target being repeated in the fifth development plan (2011-216) (27).

An increased government interest in the privatization of health care services, as one of the dominant health policies, has become apparent in recent years (7). However at the present the role of privatisation appears to be limited as it doesn't seem to adequately address efficiency, equity and how to protect patients against high cost services. Thus, enhancing the role of the private sector without addressing in detail its potential consequences may lead to further deterioration particularly in terms of equity of access. Moreover, the current objectives of five-year developing plan for health care system confirm that the ministry is still looking for ways to reduce out of pocket spending of the patients. This privatization policy does not seem to help the ministry to achieve its targets. The results of this study emphasize that the healthcare market in Iran continues to face a wide range of complex financial issues. The ministry needs a clear, accurate and comprehensive policy to achieve the optimum trade-off

between enhancing the health of the Iranian population and supporting health insurance organisations on the one hand, and providing cost effective high quality health care services on the other hand.

The establishment of a clear unifying national health policy would enable detailed consideration of the extent to which the established objectives are coherent and achievable. Such a policy should aim to achieve the goals of the health policy and should be based on evidence based medicine and Health Technology Assessment, rather than political pressures and tensions.

In conclusion, the health care market in Iran continues to face a range of financial issues, which increased the difficulty of achieving its defined healthcare objectives. In addressing these difficulties, further privatization of health care services can only play a limited role in managing such challenges at the time being. The first and most important step toward solving such challenges is to develop and implement a rational, feasible, and comprehensive policy that effectively addresses the current challenges and carefully considers the impact of the policy on the government, health insurance organizations, and patients. Such an approach supported by a rigorous economic analysis of the priorities and trade off inherent in the system would help health policy makers to confront the challenges of the system and to achieve their desired objectives more effectively.

## **Ethical considerations**

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

## **Acknowledgments**

Authors thank Iranian Ministry of Health for sponsoring Majid Davari's PhD project. The authors declare that there is no conflict of interests.

## References

1. Davari M, Haycox A, Walley T (2012). Health Insurance system in Iran; past experiences, present challenges and future strategies. *Iranian J Publ Health*, under publication.
2. C.B.I. (2012). The main economic indicators. Various Eds: *Central Bank of Islamic Republic of Iran*, 2012. Available from: [www.cbi.ir](http://www.cbi.ir)
3. WHO (2010). Iran Health profile. World Health Organization. Available from: <http://www.who.int/gho/countries/ir.pdf>
4. Davari M, Haycox A, Walley T. Does the Iranian health system need a Health Technology Assessment programme to improve effectiveness, efficiency and equity of its healthcare services? [PhD thesis]. Faculty of Medicine, University of Liverpool; UK; 2008.
5. Denzin N, Lincoln Y (2003). *The Landscape of Qualitative Research; Theories and Issues*. 2nd ed. London Thousand Oaks.
6. Rubin H, Rubin I (2005). *Qualitative Interviewing: The Art of Hearing Data*. 2nd ed: Sage Publications.
7. Davari M, Haycox A, Walley T (2012). Issues related to health care delivery system in Iran; past experiences, current challenges and future strategies. *Iran Red Crescent Med J*. under publication.
8. Ghasemi M (2008). The growth of unnecessary angiographies. *Hamshari*. 9th May. Available from: [www.hamshahrionline.ir](http://www.hamshahrionline.ir)
9. Tamouk A, Amini-Sani N, Moghadam-Yegane J, Mardi A (2003). Assessing the rate of caesarean delivery and its indications in Social Security hospital in Ardabil. *Journal of Ardabil University of Medical Sciences*. 2(8):28-32.
10. Mohseni SM, Mohammadi K (2007). Prediction of the increasing trend in caesarean delivery based on current statistics. *Daneshvar*. 4(66):59-62.
11. Vahid-Dastjerdi M (2010). The population is paying 54% of their health care expenditures from their own pocket. Health News. Tehran: *Farsnews Agency*. Available from: [www.farsnews.com](http://www.farsnews.com)
12. Faazel I (2008). Health Insurance Organisations have not provided peace of mind for patients. *ISNA (Iranian Students News Agency)*, Health News. Available from: [www.isna.ir](http://www.isna.ir)
13. Zafarghandi MB (2007). The country's health achievements. Health News: *ISNA (Iranian Students News Agency)*. Available from: [www.isna.ir](http://www.isna.ir)
14. Jacobs P, Rapoport J (2004). Value Judgments and Economic Evaluation. *The Economics of Health and Medical Care*. 5th ed. London: World Headquarters. pp. 269-290.
15. Folland S, Goodman AC, Stano M (2007). Microeconomic Tools for Health Economics. *The Economics of Health and Health Care*. 5th ed. Harlow: Prentice Hall, pp. 36-43.
16. Davari M, Maraci MR, Bakhshizade Z, Aslani A. Evaluation of equity in pharmaceutical services in selected cities of Isfahan (Iran) province. [PharmD thesis]. School of Pharmacy & Pharmaceutical Sciences, Isfahan University of Medical Sciences, Iran; 2009.
17. Davari M, Maraci MR, Amini MS, Aslani A. Evaluation of equity in pharmaceutical services in selected cities of Kurdistan (Iran) province. [PharmD thesis]. School of Pharmacy & Pharmaceutical Sciences, Isfahan University of Medical Sciences, Iran; 2010.
18. Akhavan-Behbahani A, Tarighat M-H, Rezaie O (2006). Out of pocket expenditures on health In: *Centre IPR*, editor. Tehran- Iran: Iranian Parliament Research Centre.
19. Mohseni A (2011). 5 percent of Iranian people go under poverty line each year because of health expenditures. *Fars News Agency*. Available from: [www.farsnews.com](http://www.farsnews.com)
20. Larijani A (2009). Encouraging implementation of the article number 44 [privatization]. Tehran University of Medical Sciences.
21. Parliament I (2009). The regulation of the Board of Trustees' hospitals. Tehran, Iran: Iranian Parliament.
22. Evans R (1974). Supplier-Induced Demand: Patterns of Funding and Regulation In: *The Economics of Health and Medical Care*. Eds, Perlman. New York: John Wiley and Sons.

23. Wagstaff A, Van Doorslaer E (1993). Equity in the Delivery of Health Care: Methods and Findings. In: *Equity in Financing and Delivery of Health Care: An International Perspective*. Eds, Doorslaer, Wagstaff, and Rutten. Oxford University Press.
24. Wagstaff A, Van Doorslaer E (2000). Equity in Health Care Financing and Delivery. In: *Handbook of Health Economics*. Eds, Culyer and Newhouse. Elsevier Science.
25. Naghavi M, Jamshidi HR (2005). *The utilization of health care services in Islamic Republic of Iran, in 2002*. Tehran: Ministry of Health.
26. Parliament I (2004). The Regulations of Fourth Development Plan. Tehran, Iran: Iranian Parliament. Available from: [www.parliran.ir](http://www.parliran.ir)
27. Parliament I (2011). The Regulations of Fifth Development Plan. Tehran, Iran: Iranian Parliament. Available from: [www.parliran.ir](http://www.parliran.ir).