



The Iranian Health Insurance System; Past Experiences, Present Challenges And Future Strategies

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Abstract

Background: The Iranian healthcare system is primarily an insurance based system. This structure has an important influence on the efficiency and equity of the provision of healthcare in Iran. This paper reviews the history of the Iranian healthcare system and the impact of the Iranian health insurance system on healthcare performance based on the results of interviews with key opinion leaders and empirical evidence.

Methods: This review uses mixed methods: a systematic literature review of electronic databases supplemented by hand searching of books and journals including Government publications and other grey literature. The issues identified were explored through a series of semi-structured interviews with key informants from within the Iranian healthcare system. The interviews were recorded transcribed, coded, classified, and analysed thematically. Empirical evidence was also sought to support or contradict the views expressed in the interviews.

Results: Sixteen interviews with key informants were conducted and presented anonymously. The interviewees raised many issues which were summarised into five main issues: increasing health expenditures, lack of systematic health technology assessment, very limited financial resources, challenging management and regulation, and uncovered population.

Conclusion: A wide range of issues have affected the efficiency, quality and equity of the services provided by the Iranian healthcare system. The initial and most important step toward improving the efficiency, equity and quality of the health insurance system is to focus on evidence-based policy making to generate feasible, reasonable and comprehensive reforms.

Keywords: Health, Insurance, Strategy, Iran

Introduction

The Iranian health system is primarily an insurance based system which represents an important influence on the Iranian healthcare system. The aim of this paper was to review the history of health insurance in Iran and then evaluate its performance based on the results of the interviews and empirical evidence.

Methods

This study uses mixed methods. A systematic literature search was undertaken of electronic databases

including MEDLINE, EMBASE, and Google Scholar. This was supplemented by hand searching of local books and journals including Government publications.

The issues and uncertainties identified were explored further qualitatively by semi-structured interviews with key informants. These were selected by purposive sampling, to cover government, relevant professions, health service administrators, and health insurance organisations.

Due to the limited published materials, much of the evidence concerning delivery of health care services was obtained through these face-to-face interviews. The interviews were recorded on audio tapes and transcribed. They were then coded, classified, and analysed thematically (1). 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 and comments

The review of published literature identified the history and some elements of the structure of the health insurance market in Iran. The grey litera-

ture expanded this and also identified issues to be explored further in the interviews.

The initial selection of interviewees consisted of sixty senior healthcare managers. Following the initial invitation thirty eight interviews were actually undertaken consisting of 12 interviewees from the healthcare delivery system, 11 from health insurance organizations and 15 from the pharmaceutical division. 16 of the interviewees offered comments related to the health insurance system, which are summarized in Table 1. The results of interviews are presented anonymously.

We started with attempting to understand the impact of the historical context in framing the challenges and changes in health insurance policy in Iran.

Table 1: Health insurance interviewees and their roles

No.	Position
DR. 1	Senior staff, Medical Services Insurance Organisation
DR.2	Deputy of Provincial Department of Imam Khomeini Health Insurance Organisation
DR.3	Senior staff, Imam Khomeini Health Insurance Organisation
DR.4	General Director of Insurance and Income at Medical Services Insurance Organisation
DR.5	Deputy of Medical Services Insurance Organisation
DR.6	Member of the Managing Board in Medical Services Insurance Organisation
DR.7	Executive manager of provincial department of Medical Services Insurance Organisation
DR.8	Director of Provincial Department Medical Services Insurance Organisation
DR.9	Senior staff in Social Security Health Insurance Organisation
DR.10	Senior Manager in Social Security Health Insurance Organisation
DR.11	Member of management committee of Medical Services Insurance Organisation
DR. 12	Health Scientist, Deputy Chancellor of Medical University
DR. 13	Academic, Senior Policy Maker of the Iranian Health System
DR. 14	Academic Staff, Ex-Deputy Chancellor of a Medical University
DR. 15	GP, Director of Regional Health Network
DR. 16	Health Scientist, Academic staff

The history of health Insurance in Iran

In 1947 the Iranian Tobacco Company insured their employees against health expenditure and health services. The first Labour Social Insurance law was legislated in 1952 when the Labour Social Insurance Organisation officially became part of the Ministry of Work and Social Services (2). In 1974, the Ministry of Social Welfare was created to coordinate the previously dispersed activities relating to social welfare. The Social Security Law

expanded the supportive services provided by insurance companies and made it compulsory for all workers to get insurance coverage from the Social Security Organisation in 1975 (3).

In 1979, the Iranian parliament merged the Ministry of Social Welfare into a Ministry of Health and renamed it the Ministry of Health and Welfare, with the Social Security Organisation also being placed under the management of this new Ministry. This organisation was renamed the Social Security Insurance Organisation (SSIO) in 1980 to

emphasise the importance of the health insurance services. The SSIO currently covers more than 27 million people (36% of the Iranian population) across the country. Almost all of its customers are workers and employees in the private sector where coverage is compulsory by law. It has two specific features which make it different from other health insurance organisations. First, its financing system is mainly independent from the government providing it with more freedom to manage its sources and services. A total of 30% of the employee's wages is paid in the following proportions: government, 3%; employee, 7%; and employer 20%. One-third of this premium is for supporting health and two-thirds supporting pensions (4).

Secondly, the organisation has two service departments that work alongside each other; the pensions department and the health department. The Health department acts as both a provider and a consumer of health care services. As a provider it provides services in its health centres and hospitals which are free of charge for SSIO insured people. As a consumer, the organisation is to pay 90% of inpatient and 70% of outpatient costs to health care providers who are contracted to the organisation (4); but it is now failed to meet these requirements (see below).

Imdad (Relief) Committee Health Insurance (ICHI) is a charity based health insurance body that was established shortly after the 1979 revolution to provide the basic level of insurance cover-

age for poor citizens who cannot afford to pay any insurance premium. Around 20% of its revenue comes from charitable donations and the government provides the rest. ICHI currently covers about 4.5 million disadvantaged people (5).

The Public Health Insurance Law in 1994 sought to cover nearly 60 percent of uninsured Iranian population (6). The Medical Services Insurance Organization (MSIO) was created based on this law in October 1994 to cover a wide range of individuals within five years (7). These included governmental employees and all individuals of the community with various socioeconomic levels that were not eligible to be covered by other health insurance organisations. From the introduction of MSIO the proportion of the population covered by health insurance increased from 40% in 1994 to about 90% in 2010 (7). This is while the number of the population also has increased from 57.7 million in 1994 to 74.7 millions in 2010 (8). This increase has happened mainly in rural areas (7), where the ability to pay is more likely to be lower than urban areas. However, the target of full coverage of the population has not been met yet. MSIO is now the largest health insurance organisation in Iran, covering 39 million people (7).

MSIO has various types of insurance policy, with the premiums being dependent mainly on a per capita rate for health care (PCHC). Determination of the PCHC is one of the main duties of higher insurance council (see below).

Table 2: Existing Accounts of MSIO and their percent of subsidises and payments

Targeted Population	Insurance Premium		Patient Co-payment	
	Payment (Percent of PCHC*)	Subsidise (Percent of PCHC*)	Out-patient (Percent of Medical Fees)	In-patient (Percent of Hospital Fees)
Government employees	30	70	30	10
Rural People	20	80	30	10
Self-employed	100	00	30	25
Others**	20-50	80-50	30	10

*Per Capita for Health Care

** others could be included University students, Religious School students and Martyr's families. A martyr is a person who was put to death or endured suffering because of his or her belief in Islam or Iran.

Governmental employees, those in rural areas and specific groups such as students receive government subsidies. Table 2 shows the insurance accounts of MSIO and the level of subsidies that various groups receive.

The Armed Forces Medical Services Insurance Organisation (AFMSIO) covers around four million people in the armed forces and their families. Its services and policies are very similar to MSIO but it is funded directly by the Ministry of Defence. Private insurance companies also provide policies that reimburse the co-payment share of patients' health expenditures which is 30% for outpatients and 10% for inpatients services, in addition to providing certain services and facilities that main health insurance organisations do not cover.

Policy with regard to health insurance is developed by the Higher Insurance Council (HIC) and communicated to all health insurance organisations to implement. The council was established in 1994 to undertake policy planning, coordinating and conducting, monitoring and evaluating the quality and quantity of health insurance services.

The Council has a wide range of duties including determination of per capita for health care, determination of the level of insurance premiums and patient contributions, and decisions relating to the inclusion or exclusion of medical services and health technologies.

The Minister of Welfare and Social Security (head of the council), Minister of Health, and directors of SSIO, MSIO, AFMSIO and ICHI are of main members of the HIC. All decisions of the HIC must be ratified by the cabinet to be implemented. Health Insurance organisations (HIOs) had faced numerous challenges in late 1990s. The first was that they failed to meet the Public Health Insurance law's target in covering all Iranian population by 1999. The second was increasing concern regarding financial difficulties of the HIOs. These two led to a considerable increase in out of pocket health expenditures (9,10) with spending of patients for health care services increasing to 56 % (11). Many policy makers thought that while the Ministry of Health had considerable concerns regarding delivery of health care services, it was very

hard for it to focus on HI challenges. Thus they suggested establishing a new ministry to overcome this problem. This resulted in 2005 in the development of the Ministry of Welfare and Social Security (MWSS) to incorporate all health insurance organisations under one ministerial structure.

Current challenges in Health insurance in Iran

The interviewees highlighted a range of serious challenges currently confronting the health insurance system in Iran. Many of these challenges originated directly from the health insurance policy and regulations; these we called internal challenges. In addressing these challenges, we examined whether empirical evidence supported the opinions expressed by the interviewees. Other challenges are attributable to factors beyond the control of the health insurance system; these we called external challenges as they originated from outside elements (12, 13).

The interviewees emphasised the wide range of internal challenges currently confronting HIOs. These challenges have been grouped for further analysis into increasing health expenditures, lack of systematic health technology assessment, limited financial resources, challenging management and regulation, and uninsured members of the population. Though these topics have direct or indirect association to each other, they are presented separately to facilitate better understanding. Each opinion that was expressed was triangulated with empirical evidence in the form of literature, government statistics and independent expert opinions for validation.

1. Increasing health care expenditures

Increasing health care expenditures were viewed as being an important concern to the interviewees. They stated that although a multitude of factors contributed toward this increase, a primary cause was the introduction of new and expensive health technologies which became severely over utilized once the technologies had been made available in mainstream clinical practice.

Table 3 shows that how sharp the rise in health-care expenditures have been in Iran over the last

decade. Pharmaceutical expenditures, as one of the important parts of health expenditures, have also increased dramatically, more than 3 fold over the past 8 years (14).

Such a rapid increase in healthcare expenditure has imposed serious pressures on both insurance systems and health care providers.

2. Lack of systematic health technology assessment

Many of the interviewees emphasised that while new technologies are increasingly being imported to the country, Iran currently has no systematic method of evaluation and guideline creation for the utilization of new and high cost technologies.

Empirical evidence also supports the view that new health technologies have been increasingly introduced into the Iranian health care market without formal and systematic evaluation (15, 16). Expensive new technologies may offer the potential for significant cost savings if their introduction is appropriately evaluated and managed. Alternatively they can represent an expensive waste of valuable health resources if they are not effectively utilised, In such circumstances the 'value for money' offered by the health technology will be closely related not only to the nature of the technology but also to the efficiency with which this new and expensive resource is managed.

Table 3: 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
Total Cost of Pharmaceuticals (M. US \$)**	---	---	---	---	---	---
Pharmaceutical Expenditures growth rate	---	---	---	---	---	---
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 3: Cond...

2001	2002	2003 ****	2004	2005	2006	2007	2008
41,130,149	56,885,993	68,164,827	86,086,691	113,987,734	140,393,344	170,321,511	220,907,034
20.16	38.32	19.81	26.31	32.41	23.16	21.32	29.70
23,972,261	32,343,928	36,462,859	48,621,383	58,071,712	70,138,244	90,676,288	119,907,640
11.18	34.92	12.74	33.35	19.44	20.79	29.28	32.23
---	661	875	992	1263	1,557	1,875	2,369
---	---	40.2	19.2	31.3	24.7	22	29.2
94.7	95.2	94.2	95.3	95.4	95.4	95.4	95.2
15.8	15.6	15.2	10.4	11.9	18.4	25.4	

Data Source:

*WHO website

**Iranian Pharmaceutical Statistics Letter, various years;

***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.

Considering simply affordability as the sole criteria for accepting or rejecting new health technologies may lead HIOs to avoid the introduction of potentially cost-effective health technologies or to introduce others that are managed inefficiently. This could be considered as one of the major sources of inefficiency in health insurance system. The HIC which is in charge of accepting or rejecting new health technologies simply evaluate whether HIOs are able to afford the extra cost of the new technology. If it is affordable for HIOs, the HIC approve the new technology to be covered in health insurance policies, otherwise, it has to find the required resources for the new technology before adding it to health insurance services.

The trend of increasing cost of new technologies, including new pharmaceuticals (14), emphasises the crucial importance of developing a rigorous and systematic structure for health technology assessment to optimise resource use in Iran both now and in the future.

3. Limited financial resources

The interviewees perceived a significant imbalance between income and expenditures of the HIOs, which manifested itself in the form of a serious financial shortage which prevented them from meeting patient expectations which were far in excess of their financial abilities. While the interviewees believed that dramatic increase in health care expenditures is one of the main causes of this shortage, they also stated that a further factor for this is that the actual per capita health expenditure (PCHE) of the population is much higher than what the cabinet usually approves.

Per capita expenditures of the HIOs have increased far faster than the expected rate in recent years (Table 3). This has caused serious financial difficulties for HIOs which has led them to delay reimbursement to health care providers (17). Such late payment simply transfers the problem of financial shortage to health care providers with the consequence that some hospitals had serious cash flow problems and could not even pay their utility bills (18). However given that HIOs are ultimately financially supported by the govern-

ment, in such circumstances the government helps HIOs to pay off their debts to hospitals and other health care providers.

Many of the subjects attributed the problem of financial difficulties to the method of premium setting. This matter is discussed in more details below.

4. Management and Decision making

An important concern for the interviewees was the fact that there is a fragmented structure of four different main health insurance organisations in Iran, each of which has its own management board and organisational structure. The interviewees perceived that the existence of such a range of health insurance organisations caused some key technical problems like overlapping the covered population and difficulty in reaching consensus in decision making.

Although there is no precise figure to show the extent to which the different HIOs overlap in their coverage empirical evidence confirms the existence of this problem perhaps most starkly by the fact that the total number of registered people with HIOs is more than the total number of the Iranian population. This is exaggerated by the fact that at least 10 percent of Iranians currently have no insurance coverage at all (9, 10, 19). Thus the need for four large organisations to integrate their operations is a serious policy issue in Iran at present. The structure of health insurance system in Iran can be perceived as being a significant source of technical inefficiency within the Iranian health care system.

Difficulty in reaching consensus and the lengthy process of decision making has also imposed a significant impact on health insurance activities. As mentioned before, the HIC plays a very important role in the process of decision making in health insurance services in Iran. The interviewees stated that sometimes it is very difficult to reach a consensus in the HIC. This particularly happens when there is conflict of interest between the HIOs. For instance, determination of PCHE has been one of the main issues between the HIOs. PCHE exerts a direct impact on the level of the

revenue of every HIOs with the exception of SSIO and consequently on their services.

The interviewees stated that on many occasions that whereas all three other organisations supported an increase in PCHE in the HIC, the representative of SSIO was against this decision. Considering the influence of SSIO on the council, this made the situation difficult for other HIOs to increase PCHE to a level that would enhance their financial viability.

As the financial source of SSIO is not dependent on PCHE, it is clear that increasing PCHE does not help it to improve its revenue. Thus it is understandable that SSIO has been almost always against increasing PCHE. The concluding result of this process is that other HIOs face overwhelming financial difficulties which lead them to attempt to reduce their level of financial support leading to a significant increase in out of pocket costs being imposed on the Iranian population. This tendency for a continuous increase in the level of out of pocket spending has been confirmed by recent studies (9,10,20).

5. Uninsured Populations

A concern about uninsured members of the Iranian population also became apparent in the interviews. This was particularly emphasised for vulnerable people who may not be able to attain any insurance coverage. The interviewees pointed out that there are considerable numbers of individuals who are potentially eligible to be covered by ICHI policy but who could not be covered due to limited resources.

Currently no accurate figures exist for the number of the eligible population covered by ICHI services. However recent evidence support the view put forward in the interviews concerning limited coverage of the neediest members of society. While the ICHI currently covers around 4.5 million people (5), a recent study estimated that there are at least 9.2 million people defined as being in absolute and severe poverty in Iran (21). Such figure emphasizes the number of poor and disabled unemployed who are left without any health insurance coverage.

It is estimated that between 10-15% of Iranian population has no any health insurance coverage (9, 10, 17, 19). This is while according to the public health insurance act, HIOs were legally obliged to provide health insurance coverage for all the Iranian population by 1999 (6).

Discussion

Health insurance coverage in Iran has increased significantly from 40% in 1994 to around 85% at the present time. However the wide range of health insurance challenges in late 1990s and beginning of 2000s led the government to establish new political and administrative arrangements to deal with those challenges.

The issues raised in the interviews by the key informants could be seen as being common to most health insurance systems in middle income countries (22-25). However the roots, sources and context of the challenges outlined in this paper are specifically Iranian.

While raising health care expenditures area common phenomenon worldwide, there are two points which made the situation in Iran different from other countries.

First, the speed and extent of the increase in Iran far outstrips that of most other countries (Table 3); many other middle income countries have found the establishment of structures of systematic health technology assessment to be an effective method of exerting downward pressure on healthcare expenditure and ensuring the rational use of the resources devoted to this area. It is undoubted that such a system could become a significant element in addressing an important area of inefficiency within the healthcare system (12).

The second point which made the situation in Iran different from other countries is that the health insurance system in Iran is suffering from a range of specific challenges which made its situation even worse.

It is now clear that certain administrative changes like establishment of the new ministry, did not help the system to overcome its difficulties. This

might be because such changes mainly originated from political pressure rather than evidence based policy. It is obvious that the current health insurance system in Iran is sub-optimal from the perspective of HIOs, health care providers and health insurers. This is why there are some clear objectives, i.e. reduction in out of pocket spending, for reforming in health insurance policy in the national fifth development plan (26). However these are exactly the same objectives which were stated in the fourth development plan which was expected to be achieved by March 2010 (27). Thus ensuring that future strategies and policies are based on the best available evidence rather than simply responding to political pressure; represents by far the most important step in reforming the health insurance system in Iran.

Conclusion

This paper has identified a range of fundamental challenges confronting the health insurance system in Iran. Such challenges have imposed serious limitations on the efficiency, quality and equity of the healthcare services provided within Iran. The views of the key opinion leaders emphasize that the policy and strategy of health insurance in Iran would benefit from a wide range of significant and urgent reforms. However in order to be effective such reforms must be based on evidence generated both from within Iran and international.

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.

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