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# A critique of the hospital services provision in Iran after implementing Health Sector Evolution Plan: A case report

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#### **ABSTRACT**

Background and aims: Public sector in Iran is responsible for providing whole primary health care and approximately 85% of the second and third level services. Following the previous programs, and in order to improve health system performance, Iranian Ministry of Health and Medical Education launched Health Sector Evolution Plan of Iran (HSEP) in 2014 aimed to reduce patients' cost, improve quality, and provide equal access for all. Methods: We examined the achievement of these objectives through reporting a case and comparing current and past situation. The data related to the case were collected by interview and surveying patient documents. Published articles were considered as a base to compare some indices before and after the plan.

**Results:** Our case was a Ph.D. student who sought out health care for his wound treatment. Total treatment expenses were \$ 195 and many medical supplies were used. Waiting time and visit length were calculated 345 minutes and 1 minute, respectively. Paying an amount of money equivalent to almost 57% of his salary and too long waiting time to receiving short visit are in contrast to the primary objectives of HSEP and show no improvement in these indices compared with prior to the plan.

**Conclusion:** With regard to increasing financial resources through HSEP (70%) compared with the same time before HSEP, it is necessary to manage these funds properly to achieve objectives more effective and efficient than the current ones.

**Keywords:** Hospital services provision, Health Sector Evolution Plan, Waiting time, Visit time.

# INTRODUCTION

Health care systems are responsible for improving population health and they should

protect them from paying tremendous financial cost of disease. 1-4 The World Health report in

protect them from paying tremendous financial

2000 stated three fundamental objectives of health care systems, namely improving the health of the people they serve, responding to people's expectations, and preparing financial protection against expenditures due to illness. In addition, it pointed to the poor's demand for financial protection being as large as or larger than well-off people's, since unimportant risks may even cause catastrophic subsequences for the poor and needy.<sup>5</sup>

In the recent years, many lower to middle-income countries, including Colombia, India, Vietnam, Mexico, Thailand and Turkey have been reforming their health care systems to improve universal access to health care and promote health equity and quality of health service. Most of the reforms resort to health insurance as the main perspective to improve health care systems to protect the poor and needy.<sup>6</sup> Many look for strengthening the role of health care users and patients in responsibility, particularly for assuring purposes and improving performance.<sup>2,4,7,8</sup>

In addiotion, over the past 10 years, there has been a chain of health care reforms in the European Union (EU) Member States. In a number of countries, reforms aimed at enhancing productivity to decrease the perceived issues of the public integrated patterns which may be correlated with waiting lists and lack of response to patients' needs.

Iran's health system has experienced some reforms in the past three decades. One of the most important reforms was the establishment of the National Health Network in 1983. This plan was aimed to reduce inequities and increase coverage and access to primary health care. Although the whole country was included as target population of this project, the greatest emphasis was put on deprived areas.<sup>11</sup> Other transformations in this regard include integration of health services and medical education, the hospital autonomy policy, Family Physician program, and the Health Sector Evolution Plan (HSEP).<sup>12</sup> During 2014, a series of reforms, called as the HSEP, was launched in the health system of Iran in a multistage process. HSEP was mainly based on the fifth 5-year health development national strategies. HSEP includes multiple interventions in the health sector such as: preparing free basic health insurance, decreasing out-of-pocket (OOP) payments for inpatient service, financial protection of patients with chronically debilitating or specific disease, progressive policies to encourage physicians to stay in hospital, improving quality of care and hoteling in the affiliated hospitals, and improving quality of outpatient services.<sup>13</sup>

The HSEP is supported through several financial sources. One of them is public annual budget of health sector that increased by about 59% in 2015 compared to 2014. Other sources include resources of the targeted subsidies' law (around 10% of total subsidies) and a specific 1% value added tax (VAT) for health. Thanks to these additional resources, the health sector funds are estimated to be 70% higher in 2015 compared to 2014. Id,15

#### **METHODS**

In this study, we discussed the challenges ahead of service delivery in Iran's hospitals and changes made by implementing HSEP. To achieve this purpose, we reported a case from patients who referred to one of the affiliated hospitals where HSEP has been implemented, and compared the current and previous situation through some indices such as waiting time, visit time, and out of pocket (OOP) expenses. The sources for comparing these indices were published articles before and after HSEP establishment. This study reported patient problems and challenges of HSEP. The patient story showed the problems and issues of HSEP.

## **RESULTS**

This study showed that one simple wound between pinky and its contiguous finger may lead to fraud and irregularities in hospitals covered by HSEP.

Healthcare system of Iran is based on 3 pillars: The public-governmental system, the private sector, and non-governmental organizations (NGOs). Iranian Ministry of Health and Medical Educations (MOHME) is responsible for planning, monitoring, and supervising health-related activities for the public and private sectors in Iran. However, this ministry has a unique structure that distinguishes it from health ministries in other countries. According to

official data, more than 90% of Iranian population is under the coverage of health insurance. The health care system of Iran is fragmented not only in financial resources, but also in stewardship. A discrepancy between public and private sector, different types of health insurance, and absence of national protocols and guidelines is thwarting this system. Moreover, lack of effective health information system is a serious problem with all programs. 12

Iran's health care delivery system can be distinct in terms of three levels. The basic PHC level includes: rural health houses, rural health centers, urban health posts, and urban health centers. All of these centers are under supervision of MOHME and governmental in term of ownership and services delivery. The second level is the district health centers and district hospitals. District health centers are responsible for the planning, supervision, and support of the PHC network. The third level of the system consists of the provincial and specialty hospitals most of which are affiliated to medical sciences universities. Hospitals in Iran are public, private, charity, and NGOs in term of ownership. 82% of hospital beds are in public hospitals (76% in governmental hospitals and 6% in Social Security Organization (SSO) hospitals), 10% in the private hospitals, and the remaining in charity and NGOs hospitals. According to above information MOHME is responsible for the largest amount of services which are delivered in hospitals.<sup>18</sup>

Results of some studies which carried out before HSEP implementation showed a great variation in waiting time. One of these studies was conducted in 2011 to evaluate patient satisfaction with the Emergency Department of Imam Reza Hospital in Tabriz. The average waiting time for the first visit to a physician was 24 minutes and 15 seconds in emergency department. This amount was 346.3 minutes in emergency department of Rasool Akram hospital in Tehran and affiliated to Iran University of Medical Sciences. In 2011 waiting time was calculated 161 minutes for 160 persons referring to specialized clinic affiliated to Qazvin University of Medical Sciences. Based on results obtained in a study carried out in Tabriz

after HSEP implementation the average waiting time was 101.57 minutes for outpatients.<sup>22</sup>

Visit length was estimated to be 4.67 minutes in different specialties in clinics affiliated to teaching hospitals.<sup>7</sup> The results of a survey conducted in 2011 on 264 outpatients in Yazd showed that physicians consult with 8 patients per hour.<sup>23</sup> A cross-sectional study was conducted in 2014 (one year after HSEP implementation) by Hassanpoor et al. A sample of 540 patients were selected from peoples who referred to the outpatient clinics of Tabriz Province. The average visit time was 8.52 minutes, which is significantly lower than the minimum average of 15 minutes approved by MOHME.<sup>22</sup>

According to the information published by WHO about Iran in 2011, the share of OOP in the total health expenditure was 58%. The rate of exposure with Catastrophic Health Expenditure (CHE) was reported in a range of 8.3 to 22.2% in regional studies conducted before HSEP implementation. Piroozi et al. carried out a study aimed to explore the percentage of households facing CHE after the implementation of HSEP. The results showed that the rates of households facing CHE were 4.8%. However, this rate was reduced compared to the previous rates, although the aim was to achieve less than 1% after implementation HSEP.

He is a man who was 26 years old. He is a Kurd and Muslim living in a rented house in Northwestern of Iran (Tabriz city). He has rural insurance which have not value without a referral system and in the majority of private clinics and hospitals, this insurance has no application. He is a Ph.D. student. His income is \$ 340 \$ 65 of which should be spent for renting.

One day, he presented the article in conference room. He needed whiteboard for illustrating the special case of article. He went to clean the whiteboard and during clean-up, a wound was created between pinky and its contiguous finger by the edge of the whiteboard. So, he was transferred to the nearest hospital (A) that was teaching, general and affiliated to HSEP. The hospital kept the patient and his waiting time was about 45 minutes for consulting, while his hands were bleeding. The doctor visited him with consultation time less than 1 minutes and then he was transferred to

another hospital. That hospital was a teaching and specialized center (B) where HSEP was implemented. After an hour of waiting, he was visited by a cardiologist who stated that patients should be transferred to orthopedic center (C). Four hours after the event, he was transferred to an orthopedic center. He was referred to emergency department and the supervisor told him that the doctor would visit him at 5 pm. The emergency department was not crowded and only 3 patients were admitted. Also, 6 residents were present in the emergency department of the hospital. Finally, after doctor came in, he examined the patients and concluded that patient must be operated by outpatient surgery. The surgery length was 1 hour. Although the patient's condition was good but the hospital would not discharge him, because the hospital held him for a day of hospitalization and thereby gained more revenue.

The patient was discharged by his consent, but he was threatened that if he went, he should pay all the costs himself. He is the student of Tabriz University of Medical Sciences and knew that their actions were irregular. The treatment expenses were about \$ 195 and many medical supplies were used for the patient. Staff of discharge department presented the inappropriate behavior. So, the patient contacted the office of hospital management and co-director of the University. The patient was discharged after long negotiations at 9 and 45 pm.

## **DISCUSSION**

The result showed that HSEP was not a transformation plan, but it is a periodical program. There was no change for our case in the hospital. In all three hospitals, problems that should have been resolved according to HSEP have worsened in some cases. Regarding improving quality of care and hoteling in the affiliated hospitals, it must be stated that patient was not satisfied in hospitals (A) and (B) and finally, improvement quality of visit services was very little for patient so that the visit length was much shorter than the standard and waiting time was very much longer than the usual and normal waiting time. Five hours and 45 minutes waiting time was very long for doctor visit in an emergency. In addition, visit length was about

1 minutes with a significant difference from the standard visit time. The results of a study that was undertaken in Iran before HSEP implementation showed that the mean visit length was 4.67 minutes and in other studies the mean waiting time was obtained less than our findings. 19,21,30,31 According to national instruction that was approved by MOHME and Ministry of Social Welfare (MOSW), the standard visit length for general physician and specialists were 15 and 20 minutes, respectively. Also, the results showed that the hospitals focused on their income rather than a patient-centered approach. In fact, the imposing of costs on the health insurance has not reduced OOP payments rather they have been transferred from one sector to another.

According to health minister counselor for economic affairs, OOP was reduced by 10.5% due to HSEP. 32 Regarding the domain of decreasing OOP payments for inpatient service, it can be stated that OOP payments of patients has not decreased. The hospitals have imposed costs on insurance companies. The hospital tries more revenue by unnecessary hospitalization. Along with the implementation of HSEP, according to the instruction confirmed by **MOHME** and insurance organizations copayments for MOHME affiliated hospitals, inpatient services must be limited to 10% for residents of the cities and 5% for nomadic people and residents of rural regions, and small towns (with population less than 20000).<sup>33</sup> Therefore, the reduction of patient's share can be discussed from two perspectives: Fiorst, available resources of MOHME were increased by 70% compared with the same time before HSEP implementation, and second, the protocol related to reduction of patient's share make them satisfied because they pay a little proportion of the heavy bills.

Heavy financial burden on governmental budget was mentioned as one of the HSEP challenges in another study. <sup>12</sup> Also, in a study that was done to investigate the percentage of households facing CHE after the implementation of HSEP, the results showed that the rate of CHE was 4.8%, although the aim was to achieve less than 1% after the implementation of HSEP. <sup>29</sup> The main limitation of this study is to judge the HSEP success based on a case report, but it is also noteworthy that in addition to the reported case, there was some evidences for this

claim which has been mentioned in the hospital services delivery in Iran, related indices, and the discussion part.

#### CONCLUSION

Our finding and results of some mentioned studies show more shortfalls in achieving HSEP goals certainly in financial and quality related aspects. With regard to heavy financial burden of this plan (70% increases in the first year compare with the same time before HSEP implementation), it is necessary to revise fundamental theories and assumptions to improve the rate of achievements and use resource more effective and efficient than now.

### **CONFLICT OF INTEREST**

The reported case in this article is one of the authors. We tried to remove all concerns about this contribution with using hospital bills, contribution of other authors and check out patient treatment documents to calculate wait and visit time.

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#### REFERENCES

- 1. Wennberg J, Gittelsohn. Small area variations in health care delivery. Science. 1973; 182(4117): 1102-8.
- 2. Hasanpoor E, Janati A, Salehi A, Sokhanvar M, Ebrahimzadeh J. Under the table in health care system: A case report in Iran. Int J Hosp Res. 2014; 3(3): 155-8.
- 3. Busse R, Riesberg A. Health care systems in transition: Germany; 2004. Available from: www.wpro.who.int/asia\_pacific\_observatory/hit s/en/.
- 4. Schieber GJ, Poullier JP, Greenwald LM. Health care systems in twenty-four countries. Health Aff. 1991; 10(3): 22-38.
- 5. Organization WH. The world health report 2000: health systems: improving performance: World Health Organization; 2000.

- 6. Han W. Health care system reforms in developing countries. J Public Health Res. 2012; 1(3): 199-207.
- 7. Hasanpoor E, Asghari JafarAbadi M, Saadati M, Sokhanvar M, Haghghoshaei E, Janati A. provincial level survey provides evidence for remarkably short outpatient visit length in Iran. Int J Hosp Res. 2015; 4(2): 77-82.
- 8. Morrissey S, Blumenthal D, Osborn R, Curfman GD, Malina D. International health care systems. N Engl J Med. 2015; 372(1): 75-86.
- 9. Abel-Smith B, Mossialos E. Cost containment and health care reform: a study of the European Union. Health policy. 1994; 28(2): 89-132.
- 10. Mossialos E. Citizens' views on health care systems in the 15 member states of the European Union. Health Econ. 1997; 6(2): 109-16.
- 11. Nasseri K, Sadrizadeh B, Malek-Afzali H, Mohammad K, Chamsa M, Cheraghchi-Bashi MT, et al. Primary health care and immunisation in Iran. Public health. 1991; 105(3): 229-38.
- 12. Heshmati B, Joulaei H. Iran's health-care system in transition. Lancet. 2016; 387(10013): 29-30.
- 13. Cabinet approval. Available from: http://www.behdasht.gov.Ir/uploads/1\_187198.pdf.
- Accessed May 10, 2015. Published April 2014.
- 14. Islamic Parliament Research Center (IPRC). Assessment of national annual budget proposal of 2015.
- 15. Mare Sedgh S. A growth in health budget by 70%. Available from: http://www.shefanews.com/fa/news/ 33033. Accessed August 16, 2015. Published December 2014.
- 16. Jafari F, Eftekhar H, Pourreza A, Mousavi J. Socio-economic and medical determinants of low birth weight in Iran: 20 years after establishment of a primary healthcare network. Public health. 2010; 124(3): 15.
- 17. Mehrdad R. Health system in Iran. JMAJ. 2009; 52(1): 69-73.
- 18. Organization WH. Health system profile, Islamic Republic of Iran. Regional Health Systems Observatory, WHO Eastern Mediterranean Regional Office. 2006.
- 19. Soleimanpour H, Gholipouri C, Salarilak S, Raoufi P, Vahidi RG, Rouhi AJ, et al. Emergency department patient satisfaction survey in Imam Reza Hospital, Tabriz, Iran. Int J Emerg Med. 2011; 4: 2.

- 20. Tabibi SJ, Najafi B, Shoaie S. Waiting time in the emergency department in selected hospitals of Iran University of Medical Sciences in 2007. Pejouhesh dar Pezeshki. 2009; 33(2): 117-22.
- 21. Mohebbifar R, Hasanpoor E, Mohseni M, Sokhanvar M, Khosravizadeh O, Mousavi Isfahani H. Outpatient waiting time in health services and teaching hospitals: A case study in Iran. Glob J Health Sci. 2013; 6(1): 172-8.
- 22. Hasanpoor E, Janati A, HaghGoshayie E, Aslani F, Arab Zozani M. Survey on waiting time and visit time in plan of health sector evolution in Iran: A case study in Tabriz. Int J Epidemiol. 2016; 3(3): 239-45.
- 23. Ranjbar M, Bahrami M, Sadeghi J, Moradi M, Masoomi R, Baghiyani N. Estimate the average waiting time to receive service in the outpatient department: A case study on Shahid Rahnemoon and Afshar Clinics in Yazd. J Tolooe Behdasht. 2014; 13(1): 30-9.
- 24. World Health Organization (WHO). The Work of WHO in the Eastern Mediterranean Region. Geneva: World Health Organization; 2011.
- 25. Kavosi Z, Rashidian A, Pourreza A, Majdzadeh R, Pourmalek F, Hosseinpour AR, et al. Inequality in household catastrophic health care expenditure in a low-income society of Iran. Health Policy Plan. 2012; 27(7): 613-23.
- 26. Amery H, Jafari A, Panahi M. Determining the rate of catastrophic health expenditure and its

- influential factors on families in Yazd province. J Health Adm Educ. 2013; 16(52): 51-60.
- 27. Kavosi Z, Keshtkaran A, Hayati R, Ravangard R, Khammarnia M. Household financial contribution to the health System in Shiraz, Iran in 2012. 2014.
- 28. Karami M, Najafi F, Karami Matin B. Catastrophic health expenditures in kermanshah, west of iran: magnitude and distribution. J Res Health Sci. 2009; 9(2): 36-40.
- 29. Piroozi B, Moradi G, Nouri B, Mohamadi Bolbanabad A, Safari H. Catastrophic Health Expenditure After the Implementation of Health Sector Evolution Plan: A Case Study in the West of Iran. Int J Health Policy Manag. 2016; 5(7): 417-23.
- 30. Gorji H, Sokhanvar M. Surveying standard of visit time of outpatient at general hospitals: A case study in Qazvin. Hospital. 2015; 14(3): 75-81.
- 31. Golaghaie F, Sarmadian H, Rafiie M, Nejat N. A study on waiting time and length of stay of attendants to emergency department of Vali-e-Asr Hospital, Arak-Iran. Arak Med Univ J. 2008; 11(2): 74-83.
- 32. 10 percents reduction of out-of-pocket. 2016 [cited 2016 20 Feburary]. Available from: http://www.salamatonline.ir/news/3092/.
- 33. Moradi-Lakeh M, Vosoogh-Moghaddam A. health sector evolution plan in iran; equity and sustainability concerns. Int J Health Policy Manag. 2015; 4(10): 637-40.

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