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Health care expenditure in the Islamic Republic of Iran versus other high spending countries

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Abstract

Background: In all countries, health expenditures are a main part of government expenditure, and governments try to find policies and strategies to reduce this expenditure. Overall expenditure index has been raised 30 times during the past 20 years in Iran, while in the health sector, the growth in health expenditures index has been 71 times. The present study aimed at examining health care expenditure in the Islamic Republic of Iran versus other high spending countries.

Methods: A comparative panel study was conducted in selected countries with the high mean of health expenditure per capita. Data were collected from the WORLD BANK. Out- of- pocket (OOP), health expenditure per capita, public and private health expenditure, and total health expenditure were compared among the selected counties.

Results: Iran has the lowest health expenditure per capita compared to other countries and the USA has the highest health expenditures per capita. In Iran, out- of- pocket expenditure, with more than 50%, was the most cost, while in Luxembourg it was the least cost during 2004 to 2014, with less than 12%.

Conclusion: Our findings revealed that politicians and health care executives should find a stable source to finance the health system. Stable sources of financing lead to having a steady trend in health expenditure.

Keywords: Health Expenditure, Iran, Per Capita, Out of Pocket

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Introduction

The rapid and rising growth of health care expenditures has created great concern for the governments and people around the world and has become one of the main concerns of managers and decision-makers in health systems (1, 2). Continued expansion of new and expensive health technologies, rising expectations of the societies, increase of chronic diseases, and age of populations have been reasons for the growth of health expenditures (2, 3). Cutler argues that technological advances can increase life expectancy, thus causing the growth of health care costs (4). Also, Hall and Jones demonstrated that increase in income levels can cause rapid growth in health care spending (5).There is great differentiation in the health spending among countries across the world. For example, in high income countries, health expenditure per capita is more than US$ 3000, while in low income countries this is less than US$ 30. Moreover, there is a great difference in health expenditures of countries, given their economic growth. Some countries spend more than 12% of their Gross Domestics Product (GDP) on health, while others spend less than 3% (3).

In all countries, heath expenditures are a large part of government costs and governments try to find policies and strategies to reduce the expenditures, and the health sector

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↑What is "already known" in this topic:
In the last decade, health expenditure has increased dramatically in all countries of the world. No study has been conducted in order to compare health care expenditure in Iran versus other high spending countries.

→What this article adds:
In Iran, health expenditure per capita has been the lowest in comparison to selected countries, but out of pocket has been higher than those countries.

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is no exception. Due to responsiveness, governments cannot reduce health expenditure significantly, thus, they seek suitable ways to resolve the problem (6). One of these strategies is the appropriate financing of the health sector so that each country could decide about a final financing strategy. Usually, countries use several ways to finance health system such as general revenue, social insurances, private insurances, out- of- pocket (OOP), community based health financing, and external sources (7). Qatar, compared to other countries, spent the lowest cost on health and devoted only 1.8% of GDP on health. Health financing in Qatar is mainly based on out- of- pocket (8). On the other hand, the USA has the first rank for health expenditures and the highest health expenditures per capita among OECD countries so that in 2011 health expenditure per capita was US$ 7212 in the USA. Also, USA has devoted the highest GDP on health but in this country, out- of- pocket is higher than other OECD countries (9).

Like other countries, Iran's health system faces the challenge of the expenditures growth. Overall expenditure index has been raised 30 times during the past 20 years in Iran, while in the health sector, the growth in health expenditures index has been 71 times. This issue confronted Iran's health system with many problems in different aspects (10). Financing in Iran's health system includes a mix of general revenue, social insurance, private insurance, and out- of- pocket. Given that private or public insurances cover more than 90% of Iranians, but studies show that more than 50% of health expenditures have been paid by out- of- pocket (11).

Considering the above mentioned points, it can be stated that health spending varies from country to country and each country spends a different amount of GDP on health based on its circumstances. We selected a country with the highest health spending per capita in several regions of the world health organization to examine health care expenditure in the Islamic Republic of Iran versus countries with high spending.

Methods

This comparative panel study investigated health expenditures in the selected countries. In this study, in accordance with WHO categorization, countries were divided into 6 regions. Then, in each region, the average health expenditure per capita was calculated for all countries during 2004 to 2014, and a country with highest mean was selected. For instance, in Southeast Asia, consisting 11 countries, Maldives was selected. In the West Pacific region, there were 37 countries, among which Australia was selected. Europe region consisted of 55 countries and Luxembourg had the highest heath expenditure per capita in that region. The America region included 47 countries, and the USA was selected among them. In the Eastern Mediterranean and Africa regions with 23 and 47 countries, respectively, Qatar and Southern Africa had the highest health expenditures per capita. Variables of the current study were selected according to the literature reviews and field investigations, and they included health expenditure per capita, total health expenditure as a percentage of GDP, out- of- pocket as a percentage of total health expenditure, public health expenditure as a percentage of total health expenditures, and private health expenditure as a percentage of GDP. Variables have been adjusted based on purchasing power parity (PPP) (9, 12, 13). Data have been collected according to the World Bank. The World Bank publishes a report about economic performance of countries, and the collected data are available in the World Bank (14).

After determining the variables and collecting data, we compared the trends of health expenditures and the mix of these expenditures among Iran and selected countries to identify similarities and differences between the expenditures of the countries.

Results

Table 1 demonstrates the variables and their values. Health Expenditures Trend: Table 1 shows that Iran has

Table 1. Variables of the study

Year	Maldives	Australia	Luxembourg	United States	Qatar	South Africa	Iran
Health spending per person (us $ ppp)							
2004	236	2933	6145	6369	1563	380	145
2008	613	4410	8303	7786	1555	441	315
2011	589	6368	8333	8523	1716	686	545
2014	1165	6031	8137	9402	2106	570	350
Total health spending, % GDP							
2004	5.88	8.57	8.20	15.13	3.60	7.92	5.88
2008	9.3	8.78	7.33	16.02	1.87	7.74	6.28
2011	8.11	9.19	7.34	17.05	1.92	8.61	7.12
2014	13.73	9.42	6.93	17.14	2.18	8.79	6.89
Out- of- pocket share of total health spending (%)							
2004	23.2	18.1	11.6	13.3	15.8	10.84	55.2
2008	18.3	17.9	9.1	12.5	16	8.4	53.5
2011	25.2	17.9	10.5	11.7	13.8	6.9	55.5
2014	18.2	18.8	10.6	11	6.8	6.4	47.8
Public health expenditure, % total health expenditure							
2004	65.8	66.7	84.8	44.2	84.1	40.5	38
2008	75.5	67.4	88.4	45.9	83.9	46.4	38.7
2011	69.1	68.6	85.2	47.3	78.1	47.9	34.7
2014	78.3	67	83.9	48.2	85.7	48.2	41.2
Private health expenditure, % GDP							
2004	2	2.8	1.2	8.4	0.5	4.7	3.6
2008	2.2	2.8	0.8	8.6	0.3	4.1	3.8
2011	2.5	2.8	1	8.9	0.4	4.4	4.6
2014	2.9	3.1	1.1	8.8	0.3	4.5	4

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the lowest health expenditure per capita compared to other countries and the USA has the highest health expenditures per capita. In 2010 and 2011, the growth rate of health expenditures per capita was higher in Iran compared with other countries apart from Maldives. As displayed in Fig. 1, the growth rate of health expenditures per capita was not equivalent in countries, but in the USA and Australia, the growth rate of health expenditures almost experienced a clear and steady trend.

As displayed in Fig. 1, the rate of growth of health expenditures per capita was more than 10% in Iran in 2005, but the trend has decreased by 2009 and it started to increase in 2011 again so that it became to more than 15%. However, the USA had the highest health expenditure per capita compared with other countries in each year, and its growth rate of health expenditure was lower than 5% during 2004 to 2011.

During 2004 to 2014, out- of- pocket was higher in Iran compared with other countries so that in 2004 and 2014, out- of- pockets included 55% and 47% as the total health expenditure, respectively; moreover, in 2004 and 2011, 5.8% and 7.12% of GDP were spent on health sectorial in Iran, respectively.

Figure 2 displays health expenditure per capita of the selected countries according to a percentage of Iran health expenditures per capita. Apart from Maldives, health expenditure per capita in all countries was more than 100%. In addition, health expenditure per capita in Qatar and the USA was 1000% and 4500% more than Iran health expenditure per capita, respectively in 2004.

Discussion

This study was conducted to compare health care expenditure in the Islamic Republic of Iran versus other high spending countries during 2004 to 2014 and to examine the trend of health expenditure per capita, OOP, and public and private health expenditures. Our finding revealed that out- of- pocket (OPP) expenditure on health was the highest in Iran among all the World Health Organization (WHO) member countries. During the study period, more than 47% of health expenditure was out-of-pocket. Studies have indicated that the share of OOP on health expenditure was small in developed countries. For example, a study conducted by Anderson et al. revealed that out- of-pocket spending per capita was less than $1276 in OECD countries (15).

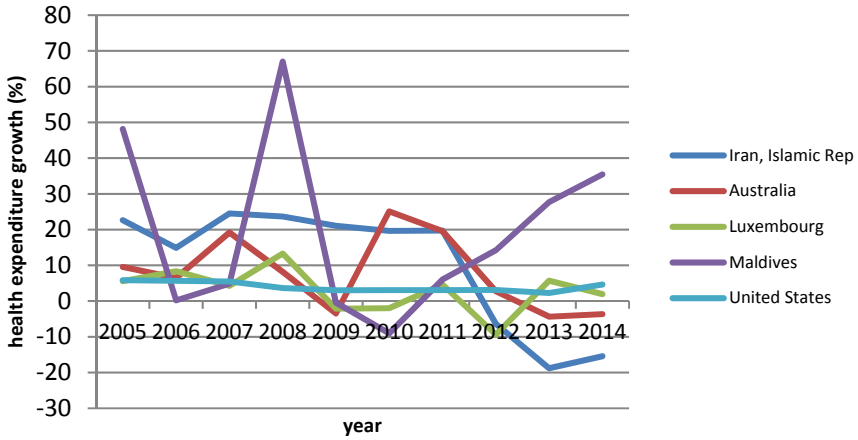

Fig. 1. The growth of health expenditure per person at the selected countries

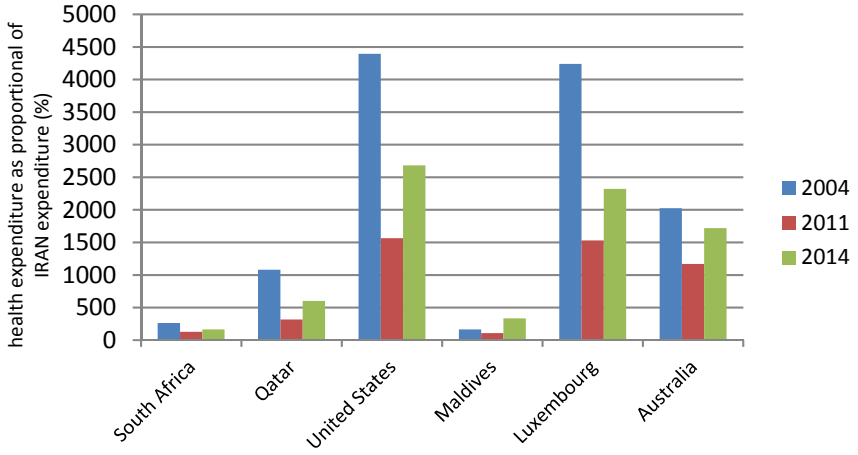

Fig. 2. Health expenditure per capita as a proportion of iran's expenditure

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In Iran, health expenditure share in Gross Domestic Product (GDP) was lower than all countries, except Qatar. Almost all WHO member countries allocated more than 5% of their GDP on the health sector. In countries we studied, the share of health expenditures as a percentage of GDP was higher than 5%. Even in Qatar, less than 5% of GDP were allocated to the health sector during the study period, but Qatar had the highest level of health expenditure per capita in the Eastern Mediterranean Region (16).

The share of public health expenditure in Iran was lower than other countries during 2004 to 2014, compared with the considerable high share of private health expenditure. As an example, the share of private expenditure on health sector for the years of 2004, 2008, and 2014 was about 3.6%, 4.6%, and 4% respectively. Private health expenditure share as a percentage of GDP in Iran was higher than all other countries of our study except the USA and South Africa. Private expenditure on health for the USA was 8.4% and 8.8% in 2004 and 2014, respectively. The share of private health expenditure in Iran was relatively high, but OOP was too high. More than 47% of health expenditure was OOP over the years of this study. While in the USA the share of private health expenditure was higher than other countries, OOP was too low, less than 13% of health expenditure. In the United States, private health expenditure was included in the insurance system (17-19).

Health expenditure per capita in Iran was less than all countries of this study, and it was more than $6000 in the United States and Luxembourg.

The growth rate of health expenditure in Iran during 2004 and 2014 did not show a regular and steady trend. For example, the growth rate of health expenditure was more than 10% in 2005 and decreased in the next years, it even became negative in 2009, and it turned again till reaching 15% in 2011. The growth rate of health expenditure in Iran was not just irregular but it was high. However, the growth rate of health expenditure in other countries except the USA and Australia did not show a steady trend, and this could be due to resource instability in financing of the health sector. Countries with better health outcome showed a regular and steady growth of health expenditure. For instance, the growth rate of health expenditure of the USA was between 5.4% to 6.9% during 1997 to 2005 (19). Martin et al. pointed out that the health spending rate for the United States was 4% to 12% during 1990 to 2011 (20). Thus, the high portion of growth in expenditures was associated with growth in OOP. For example, in Iran in 2005, OOP was 55% and the growth rate of health expenditure was 22%, while in 2014, OOP was 47% and the growth in health expenditure was -15%.

The nature of various levels of health expenditure in countries is different. High level expenditure may have different causes like high inflation rate. For example, the inflation rate in the Maldives was higher than 14% in 2011. The inflation rate of Iran was 14.76% and 20.62% in 2004 and 2011, respectively, while it was less than 5% in other countries (21).

Conclusion

According to the findings of the present study, health expenditure per capita in Iran was only higher than Maldives and it had less health expenditure per capita than other countries during 2004 to 2011. Nonetheless, direct OOP in Iran was higher than other countries. Public health expenditure share in Iran was less than other countries, but the share of private health expenditure was just less than the USA and South Africa.

Conflict of Interests

The authors declare that they have no competing interests.

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