

## Health System in Iran

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### Background

Iran is an ancient country located in the Middle East, a region between Asia, Europe, and Africa. Iran is located in a special geostrategic situation by connecting the eastern and western parts of the world. Persian civilization was established more than 3,000 years ago. The area of Iran is 1,648,195 Km<sup>2</sup> which makes it the 17th largest country in the world. Iran is divided into 30 provinces and 336 districts. Tehran, the capital of Iran, is one of the most populous cities in the world, holding a population of 9 million.

Iran is bordered on the East by Pakistan and Afghanistan, on the North by Turkmenistan, Azerbaijan, and Armenia as well as the Caspian Sea, on the west by Turkey and Iraq, and on the south by the Persian Gulf and the sea of Oman.

Iran with a population of almost 70 million, of which more than 65% are urban dwellers, stands as the 17th populous country in the world.<sup>1</sup> Iran's population is young; almost one third of the population is less than 15 years old and only almost 5% is over 60 years. The population annual growth rate in 2006 was 1.2%.

More than 95% of Iranians are Muslim. Iran has an important position in international energy production and reserves of oil and natural gas. Iran is the fourth producer and the fifth exporter of oil and has the third main proved reserves of oil in the world. It is also the fifth producer and has the second proved reserves of gas in the world. Industry and agriculture are other important contributors to Iran's economy. Iran's gross domestic product (GDP) at purchasing power parity (PPP) per capita was 9,200, 9,800, and 11,700 US \$ in 2005, 2006, and 2007 respectively.



### Iranian Health System Outlook

As an important point, Article 29 of the Constitution of the Islamic Republic of Iran emphasizes that every Iranian has the right to enjoy the highest attainable level of health. The Ministry of Health and Medical Education is mandated to fulfill this goal through designing and implementing a national-level health policy. Yet, the Ministry of Health and Medical Education delegates its implementation to medical universities across the country. There is at least one medical university in every province. The president of a medical university is the highest health authority in the province who reports to the Minister of Health and Medical Education. The president of the medical university is in charge of public health, health care provision in public facilities, and medical education. Health care and public health services are provided through a nation-wide network (Fig. 1). This network consists of a referral system, starting at primary care centers in the periphery going through secondary-level hospitals in the provincial capital and tertiary hospitals in major cities.

The public sector provides primary, secondary, and tertiary health services. The emphasis of the government on primary health care over the last two decades has made the public sector the main provider of primary health care services across the country. Some primary health care services such as prenatal care and vaccination are

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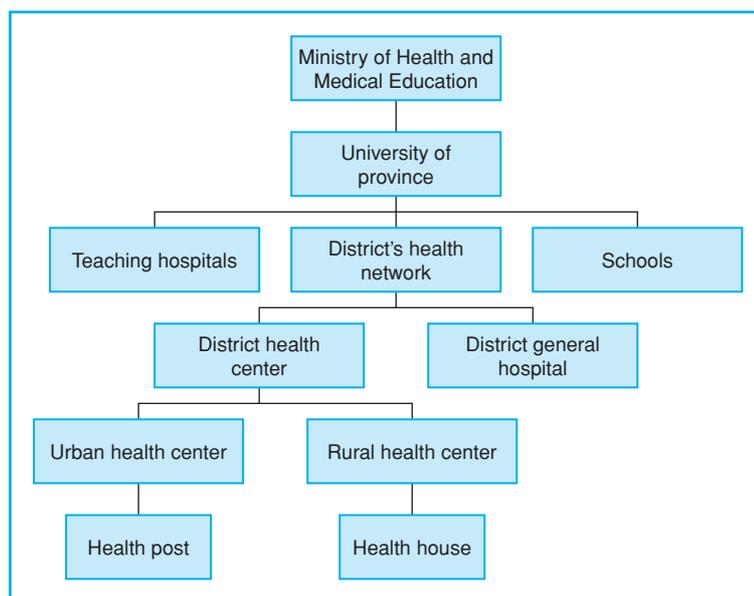


Fig. 1 Health system network in Iran

provided free of charge in public facilities. The public sector also provides a considerable part of secondary and tertiary health services in the province.

The private sector plays a significant role in health care provision in Iran. The private sector mainly focuses on secondary and tertiary health care in urban areas. There are many nongovernmental organizations (NGOs) active in health issues in Iran. NGOs are mainly active in special fields like children with cancer, breast cancer, diabetes, thalassemia, and so on.

## Health System Organization

### Integration of the health system and medical education

The Ministry of Health (MOH) is responsible for planning, monitoring, and supervision of 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. In 1986, the government integrated medical education into the MOH; hence, it is now called the Ministry of Health and Medical Education. The main purpose of the integration was to establish a more coordinated approach to health care provision and medical education. From the very beginning, this initia-

tive gave rise to considerable controversy, which after more than two decades still lingers in health policy debates. The proponents of the policy argue that integration has boosted the quality of health services around the country. They posit that using objective-based learning lies at the heart of quality improvement. On the other hand, opponents of the integration maintain that integration has had a negative impact on medical education. They contend that the political clout behind the care provision shifts resources away from the training of health professionals. Moreover, the workload in teaching hospitals causes attending professors to reconsider the training priority sets for interns and residents. Due to a lack of systematic studies to substantiate the arguments, the debate on integration remains unsettled.

### Medical education

As mentioned above, the main part of the mandate of the Ministry of Health and Medical Education is education and training of health care personnel in Iran. This mandate is fulfilled through 41 public medical universities, comprising 36 medical schools, 45 nursing and midwifery schools, 32 schools of public health, 13 dentistry schools, 10 pharmacy schools, 22 schools of paramedics, and six schools of rehabilitation sciences.<sup>2</sup> The medical schools offer a wide range of residency programs

**Table 1 Investment in health in Iran during the last decade<sup>3</sup>**

	1995	2000	2006	% Change
Gross national income per capita (PPP international \$)	5,550	6,820	9,800	+ 77
Per-capita total expenditure on health (PPP international \$)	231	364	731	+ 216
Total expenditure on health as % of GDP (gross domestic production)	4.7	5.9	7.8	+ 66
Per-capita government expenditure on health (PPP international \$)	115	135	406	+ 253
General government expenditure on health as % of total expenditure on health	49.9	37.0	55.6	+ 11
General government expenditure on health as % of total government expenditure	9.3	9.6	9.2	- 1

and fellowships in their affiliated hospitals. Many of these schools have been established during last three decades, some with questionable quality of medical education. Azad University is a major semi-private university supported by the government. This university has many branches in different provinces and districts. Some of these branches offer health-related programs.

In 2005, there were nine physicians, 16 nurses and midwives, two dentists, and two pharmacists per 10 thousand population in Iran. The distribution of health care personnel is an important issue. The health care personnel density in urban areas is more than in rural areas, and that in large cities is more than in small cities. The Ministry of Health and Medical Education tries to improve the distribution of health care personnel around the country by obligating young physicians to work in more deprived areas; nevertheless, there is shortage of health care providers in some parts of the country, especially peripheral areas, and a surplus of them in some other parts such as large cities. Medical public universities do not charge the students. The students are required by law to provide services for a certain time in a place assigned by the MOH in return for the tuition provided. The concept of this policy is to cover impoverished areas and marginalized communities by these young graduates.

## Health System Financing

### Investment in health

Iran has increased investment in health during

the last ten years. Table 1 reports the trend of investment in health in Iran during this period.

Accordingly, almost all health investment indices have improved during the above-mentioned period; in some cases, the index has tripled. In spite of government spending on health, out-of-pocket expenditure on health remains as high as 55%.

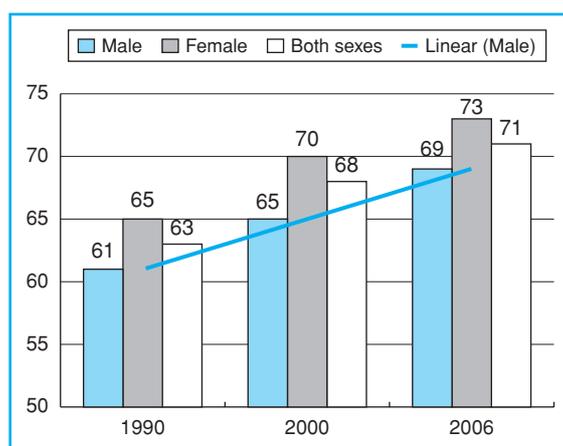
### Health insurance system

According to official data, more than 90% of Iranian people are under the coverage of at least one kind of health insurance. The main public health insurers are as follows:

1. The Social Security Organization is one of the largest health insurers in Iran. All the people employed in the formal sector, except for government officials and service people, contribute to the fund and receive benefit from this organization. This organization owns and runs many clinics and hospitals in urban areas. Medical services in these clinics and hospitals are offered either free of charge or at very low cost for policy holders.
2. The Medical Service Insurance Organization provides health insurance for government employees, students, and rural dwellers. The rural population not covered by any insurance became entitled to receive benefits at will in 2000. Most of the health care providers accept patients holding this kind of medical insurance. Patients are subject to copayment at the point of service.
3. The Military Personnel Insurance Organi-

**Table 2 Comparison of health indices 1990–2006<sup>3</sup>**

Health Index	1990	2000	2006	% Change
One year olds immunized with three doses of DPT (%)	91	99	99	+ 8.8
One year olds immunized with three doses of hepatitis B (%)	62	99	99	+ 59.7
One year olds immunized with MCV (%)	85	99	99	+ 16.5
Infant mortality rate (per 1000 live births)	54	36	30	- 44.4



**Fig. 2 Life expectancy for males, females, and both sexes in Iran**

zation provides health insurance for military personnel.

4. The Emdade-Emam Committee provides health insurance for the uninsured poor.

Although a small percentage of Iranian people are not covered by any of the health insurance organizations, some people have enrolled in two different health insurance plans, encouraged by a small premium. Different insurance systems provide different levels of service coverage. So enrollment in different plans makes it easier to shop for services at lower cost.

There are some semi-public insurance companies whose policies mainly cover copayments for costly inpatient services. Almost 5% of the middle-class population holding any of aforementioned insurances buys their policy.

## Health Status

### Population health achievements

WHO reports praise on the Iranian health system, saying: “Over the past 20 years, the Islamic

Republic of Iran has made remarkable progress in the health sector with much improvement in various health indices.”<sup>4</sup> While some health indicators such as child immunization have considerably improved, other indicators such as the infant mortality rate is still far from the Millennium Development Goals. Table 2 shows changes in some different indices between 1990 and 2006 and Fig. 2 shows changes in life expectancy for males, females, and both sexes during this period.

### The most important causes of mortality

Cardiovascular diseases are the first cause of mortality in Iran. Based on official data, more than 45% of deaths in Iran are related to cardiovascular diseases. The second cause of mortality is accidents, accounting for almost 18% of all deaths. Road accidents are a major cause of death, injury, impairment, and disability in Iran, especially for the young. Death due to cancers comes to 14% of total deaths. The fourth and the fifth causes of mortality in Iran are neonatal and respiratory diseases, each accounting for nearly 6% of deaths.

## Health System Challenges

The health condition of Iran has improved during the last decades; however, many challenges threaten the health system. Some of most important challenges are as follows:

### Financial

The Iranian Development Plan set the goal for out-of-pocket payment to as low as 30% in 2008. Nonetheless, almost 55% of health spending is still paid out of pocket.

### Health status

Road accidents as a major cause of death and injury have a significant impact on Iranians’ life

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expectancy and cause a lot of disability and impairment among people, especially young men. Parallel with the decrease in the prevalence and incidence of communicable diseases, non-communicable diseases loom large. Cardiovascular diseases, diabetes, osteoporosis, nutritional disorders, and psychological disorders are some examples of diseases that need more attention in the coming years.

### Lack of information in the health system

There is an acceptable registry system for births, deaths, cancer, and many communicable and non-communicable diseases and immunization in Iran. Lack of an integrated health information system is a stumbling block on the way to con-

ducting systematic analysis of the health system. Apart from analysis of the process and outcome, patients' satisfaction is a cornerstone of health system performance. Lack of accurate data on patients' satisfaction is a major impediment in the health policy-making process in Iran. Despite efforts to measure patients' satisfaction, the current information system is far from optimum. The quality of services and efficiency of the health system are two major issues that need more attention.

### Acknowledgements

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