

Population
81.16m
 (2017, IMF)

Officially a Theocratic
 Presidential Islamic Republic
 with Hassan Rouhani ruling
 as President since 2013

Tehran, capital of Iran
 and Tehran Province,
 with a population of around
 8.7 million in the city and
 15 million in the larger
 metropolitan area of Greater
 Tehran, is the most populous
 city in Iran and Western Asia,
 and second-largest metropolitan
 area in the Middle East

Currency Rial (IR);
IR10 = 1 toman.

(Although all government statistics
 are given in rials, in conversation
 Iranians refer to tomans.)
 The dual exchange rate system (one
 official rate managed by the central
 bank and one free market rate)
 was unified in early April

Iran ranks second in the
 world in natural gas
 reserves and fourth in
 proven crude oil reserves

Iran is experiencing
 a youth bulge;
 roughly 30% of the people
 are aged 19 or under,
 60% are aged 20 to 59
 and 10% of over 60

80% Iranians receive
 secondary education
 and the literacy rate
 is more than 98%,
 according to the UN.

Iranians are also highly educated;
 with 44% of the population having
 majored in the STEM fields
 (science, technology, engineering
 and mathematics)

Indicator of Economic
 Freedom - Score:
50,5/100

Reintroduction of sanctions by
 the U.S. government, coupled
 with the fall of oil prices in the
 second half of 2018, has brought
 Iranian economy into recession
 again, with a rebound
 expected in 2020





Iran's Developing Healthcare

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Despite the difficulties of Western-imposed sanctions Iran's healthcare system is far more modern than many would expect. Its Primary Health Network has shown its ability to provide quality healthcare in all areas and overall improvements have been achieved. Nonetheless, the present challenging economic conditions of the country, combined with rapid advances in medical and information technology, individuals' expectations and the young demographic of the population will undoubtedly challenge the sustainability of past improving trends.



In line with the Constitution of the Islamic Republic of Iran, Iranians are entitled to basic healthcare, with the government subsidizing some services, such as prescription drugs, prenatal care and vaccinations. **Its public-governmental system is based on Public Health Insurance, with almost 90% of Iranians having some form of health insurance. The government's focus on expanding healthcare in recent years has made public facilities the main provider for healthcare for primary, secondary, and tertiary health services, especially in rural areas. Although waiting times are often long, public hospitals provide an acceptable standard of service and are considerably cheaper than in Western countries.** Also, the quality of hospitals varies according to location, but in the bigger cities such as Tehran, hospitals meet international standards with well-trained medical staff. Separately, the private sector covers secondary and tertiary health services, mostly in urban areas. Additionally, there are other parallel organizations such as Medical Services Insurance Organizations that act as a relief foundation as well as an insurance firm. Some hospitals, such as Mahak for children's cancer, are also run by charitable foundations. Lastly, many Non-Governmental Organizations offer care for more specialized issues, such as diabetes or childhood cancer.

As a result of Iran's young population boosting growth rate, and together with the increase of noncommunicable diseases, there is a lot of pressure on the public healthcare system as the country faces the common problem of other young demographic nations in the region, which is keeping pace with growth of an already huge demand for various public health infrastructures and services.

Most public hospital facilities are operated by the Ministry of Health and Medical Education (MOHME). The MOHME integrates healthcare and medical education into one organization and system. The MOHME is also in charge of the supervision and regulation of the whole healthcare system in the country, policymaking, production and distribution of pharmaceuticals and research and development. This approach began in 1985 in order to

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improve coordination of medical care and education. Although some support this integration saying it has increased medical education's focus on objective based learning, critics say it has politicized medical education, negatively affecting independent training for medical students.

National Public Healthcare System - The public healthcare system in Iran is composed of a healthcare network called "Health and Treatment Network" (HTN) covering most of the urban and rural areas in the country. One of the most important parts of Iran's healthcare system is the Primary Health Care program. **The Constitution of the Islamic Republic of Iran, established following the 1979 Revolution, includes a constitutional mandate to provide universal access to basic health services in Article 29. Subsequently, to address the vast divergence of healthcare access between rural and urban areas, the Primary Health Care (PHC) program was created in the 1980's.** Prior to the establishment of this program, Iran's rural population faced a severe lack of healthcare infrastructure and was forced to travel large distances to receive basic care. Iran has a four-level public healthcare network system. **The primary access point for rural residents to obtain health services is through health houses (level I-a), small medical facility that provides basic health services to the surrounding rural community.**

Most facilities include at least two medical personnel, common pharmaceuticals and basic medical equipment. There are over 17,000 health houses in rural areas of Iran, or approximately one for every 1,200 residents, who constitute 26% of the total population. Behvarz, or trained medical workers, are individuals with associate degree trained to provide primary care for the residents in the area before they are given the responsibility. **Typically, Behvarz handle vaccinations, family planning services, maternal healthcare and child healthcare. Oral health evaluation and oral hygiene instructions are also among the services provided by the Behvarz.** Behvarz are trained at the district level, with tuition covered by the government in return for at least four years of service at their respective health house. More complex health issues are referred to *rural health centers* (Level II-a), independent medical units covering multiple villages with the population of about 10,000 individuals in remote areas, which are staffed by physicians, dentists, health technicians and administrators. The oral healthcare personnel, including dentists and other healthcare providers working in the Health Centers are supervised by a Family Physician.

In urban areas, there is a similar structure with approximately 2,783 *health posts* (Level I-b) providing preliminary and basic healthcare and *health centers* (Level II-b) handling more complex health issues. **Oral healthcare is provided at all Health Posts as one of the elements of integrated health services.**

Health concerns too complex for the rural and urban health centers are referred to the *district health centers* (Level III). Along with the *district general hospitals* (Level III), the district health centers are managed by the district health network. Furthermore, each province has a university of medical studies which have specialized schools and teaching hospitals (Level IV). There are 58 public medical universities with numerous specialized schools and teaching hospitals. Even if the government has worked to eliminate the disparities in coverage between urban and rural areas, urban areas still have better health resources and they necessarily have a higher density of healthcare personnel; this is also because nearly 75% of Iranians



live in urban areas. The 954 hospitals in Iran are located primarily in cities, making access to specialized health issues easier for urban residents even if public hospitals are often too crowded and appointment date is too long for specialist visits. Moreover, the private sector is nearly completely focused in urban areas, so urban residents have the advantage of choosing between public and private facilities. Wealthier Iranians opt to use private clinics and hospitals which offer higher standard of care, better facilities and speedier service. Even if more expensive, private healthcare in Iran is still quite cheap compared to other neighboring countries.

While urban areas still see improved healthcare access for more serious or complicated health matters, the disparity between urban and rural healthcare for basic healthcare has dramatically declined over the past 40 years thanks to the health house model.

Health indicators have improved every year since the PHC program was established, even if access and availability of healthcare continues to be somewhat limited in lesser developed provinces and noticeable health inequalities still exist within provinces in life expectancy and for almost all indicators excluding the vaccine coverage and access to primary healthcare which are above 90% nationwide. **In the two decades since 1990, Iran's life expectancy increased approximately eight years. By 2008, more than 90% of the rural population had access to primary health services. Over 90% of the population has access to clean drinking water and over 80% has access to sanitary facilities.** The infant mortality rate has also dropped to 13 per 1,000 live births in 2016, down from nearly 80 in the early 1980's.



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Public Health System - Iran has four main public health insurance options. The Social Security Organization is the most common, responsible for insuring employed citizens in urban areas and their dependents, as well as self-employed persons who voluntarily join. It also insures retired people. People insured under this program are quite well covered and hospital care related to this organization is totally free. The Medical Service Insurance Organization covers government employees, students with

at least one parent covered under this insurance and most inhabitants of rural areas, including freelance workers. Almost all health service providers accept this insurance. The *Emdade-Emam Committee* provides health insurance for the uninsured low-income population, while the *Military Personnel Insurance Organization* provides health insurance to members of the armed forces. Beyond these schemes, there are several private and semi-public insurance programs that cover the more affluent members of society.

In general, health insurance covers 70% of the cost of drugs on the insurers' coverage list and 90% of public hospital costs, with extra provision for those with rare diseases or in remote areas. Out-patient services are subject to co-payments. Emergency care is however not covered unless you have insurance. **While approximately 10 – 15% of the Iranian population remains uninsured, this number has fallen significantly, from as high as 60% in the 1990's. Also, costs for those covered by government health insurance dropped significantly from an average of 37% of total treatment costs to as low as 6%.** Still, due to the high government cost of the plan, some critics question whether it is sustainable in the long run. Additionally, many doctors and nurses are growing frustrated with increasing responsibilities yet stagnant salaries. In 2015, there were 1.1 physicians per 1000 population according to the World Bank (11.4 per 10,000 according to WHO), 46% of which are women. Even if the number of health professionals has increased dramatically in the past three decades, meeting the country's needs, the challenge of their sustainability in remote under-developed areas is still prominent. The burden of this problem has become less for nurses, midwives and general physicians in recent years with the policy of indigenous participation of students in these disciplines. While the problem is growing for specialist physicians as many of them want to live in larger cities.

As the amount of public budget devoted to health is limited, the health-care system is usually faced with shortage of financial resources for its programs. Total health spending in 2017 was equivalent to 6% of its

GDP, of which 39% came from public resources. System inefficiency, high administrative costs and lack of specifically trained managers represent a further challenge.

Iran is the only country with a legal organ trade. The government-sponsored system brings together donors and patients and facilitates the payment of donors. Regardless, many criticize the potential for exploitation of the lower classes in need of money as well as the use of money illegally. Thanks to the program however, the waiting list for kidney transplants was completely eliminated by 1999 and today, a majority of transplants performed are from living non-related donations.

Iran also boasts a well-developed pharmaceutical production capability (mainly generic drugs) even if the

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country still relies on imports for raw materials and many specialized drugs. Sanctions have in fact enabled Iran to build a self-sufficient and large drug production infrastructure, meeting 96% of domestic demand. While most drug facilities do not meet international good manufacturing standards, the Iranian government has pushed out a few initiatives to address these issues. R&D focuses mainly on new generic drugs, al-

though investment in novel products is increasing. In order to establish itself as a biotechnology hub, Iran is also building a government funded USD 2 billion "Industrial Pharmaceutical City" near Tehran. It will house incubators and startups under the same roof as research labs and biotech producers. To add further attractiveness for international investors, foreign companies will be exempted from taxes. **There are about 100 companies in Iran that are active in the pharmaceutical industry. As of 2010, 50% of raw materials and chemicals used in the drug manufacturing sector are imported.** Although over 85% of the population use an insurance system to reimburse their drug expenses, the government heavily subsidizes pharmaceutical production/importation in order to increase affordability of medicines, which tends also to increase over-consumption, over-prescription and misuse of drugs.

Though most of Iran's medicines are domestically manufactured, much of the primary materials, many of them imported, are in short supply. And even if the state provides universal healthcare, some of the treatments needed for critical cases cannot be covered by state insurance. Lack of vital drugs results in corruption and black market. Naserkhosro, in south Tehran, is an example of a famous street where most unavailable drugs can be purchased, though at higher prices. In recent years, sanctions are also causing shortages for chronic diseases drugs such as Multiple Sclerosis or Alzheimer. Officially, the sanctions exempt humanitarian goods, such as food, medicine and medical equipment but in the reality, according to CNN reporting, shortages in essential goods have affected households across the country. **Because of U.S. sanctions, Iran's health sector is in fact struggling to keep up with soaring prices of medications and medical instruments and it is not uncommon to see long lines of people outside facilities waiting to obtain state-funded medications.** Medical companies must resort to paying intermediaries exorbitant sums to secure needed supplies, including imported medicines and medical instruments which have more than tripled in value during Iran's rapidly dropping currency. Patients and their families are

doubly affected by plummeting purchasing power across the country and even when families can afford medical equipment they often join long waiting lists, health professionals tell CNN.

The MOHME is also responsible for supervising imports of medical equipment, but the import and distribution of such equipment is mostly handled by the private sector. Iran has undergone the primary stages of development in terms of industrialization and a rather strong indigenous manufacturing capability exists in the country. **Therefore, one can expect to find a handful of local producers for basic medical equipment, making it very hard for similar imported products to penetrate the Iranian market.** There are over 100 Iranian companies representing international suppliers in this market, handling both promotion and the after-sales service of the products. Iran is a mature market when it comes to medical equipment. Most of the major international players in this sector are present in the Iranian market.

Oral Healthcare

Despite progress, Iran's healthcare insurance system has experienced piecemeal development over the years and is characterized by a complexity of revenue-collection schemes, fragmented insurance pools and passive purchasing of dental services. Dental services are therefore provided by both the public and private sectors in Iran. **In cities, where over 70% of the population resides, about 80% of dental services are provided by private practices, while in rural areas well over 70% of oral health services are delivered by the governmental sector. On this regard, the integration of oral health in the Primary Health Care (PHC) system was implemented over 20 years ago (1996), with the aim of oral health promotion at the community level.** Since 1972, major health improvements have been achieved and the prevention of common oral diseases is the main evidence-based strategy currently used by the Ministry of Health and Medical Education (MOHME) in Iran. Two target groups have been selected to provide regular preventive services, primarily in the Health Houses, Health

Dentist-population ratio 1997-2017		
Year	Dentists	I Dentist
1997	10,000	6,000
2007	20,000	3,500
2017	between 25,000-30,000	2,667

Source: www.jocms.org/index.php/jcms/article/view/460
 Figures refer to dentists and dental specialists

Posts and Health Centers: (i) pregnant women and lactating mothers as well as (ii) children under age 14. Furthermore, the integration of oral health was revisited and further improved in the "2015-Oral Healthcare Reform". **Children under the age of 14 years and pregnant or lactating mothers, making up the target groups, are entitled to receiving subsidized basic oral healthcare in public dental clinics. Those aged 14 years and over meet all costs for oral healthcare out-of-pocket according to a fixed fee schedule which is determined by the MOHME.** The cost of services in public clinics for the target population is about 80 to 90% less than the cost of the same service in private clinics without insurance and for all others outside the target groups it is 50% less than in the private sector. There is a four-level dental healthcare network in Iran; the first level is of primary prevention at 'health houses' through Behvarz, or trained medical workers, at the next level (level II), oral hygienists and dentists in health centers perform basic oral healthcare services such as fillings, scaling and extractions. At the third level, dentists manage and treat oral diseases in urban health centers, while the last level (IV level) is for advanced treatment by specialists in university health centers in the big cities. Except for those covered by special institutions (that offer supplemental coverage to their insured members) and some groups that can afford commercial supplementary insurance, for the rest (at least half) of the population the dental benefit package is limited to the approved basic package, which does not meet people's needs. **Resource scarcity has been the driving factor to replacing many services, which were once included, resulting in in-**

adequate dental insurance coverage. The inclusion of tooth extraction but not tooth restoration for adults may be an example and may well result in the loss of teeth that could be perfectly saved. Among the dental services in the basic package that must be covered by all funds are: dental examinations, radiography (periapical/bitewing), extraction of untreatable primary and permanent teeth, supragingival scaling and oral hygiene instruction, subgingival scaling (only for those older than 14 years), tooth polishing, restoration of first molar teeth for 6- to 14-year-old children. These services are also included as a component of a national plan called the "Family Physician plan" that provides full medical coverage to populations living in the remote and underserved areas of the country. Therefore, anyone with rural insurance coverage can obtain all covered dental services free of charge in the rural areas. Similarly, urban citizens can benefit all covered services by paying 30% co-payment. **The 2015 reform is mainly focused on all three levels of preventive care, the primary, secondary and tertiary prevention. However, due to resource limitation, the permanent dentition of the over 7 million primary school children has been the initial target population of the National Oral Healthcare Reform at the time being.** The major objective is the prevention and early diagnosis of dental caries, periodontal diseases and provision of early treatment for any existing conditions by referral to dentist. In 2015, through a formal ceremony in one of the primary schools in Tehran, a memorandum of understanding was signed between the Minister of Health and the Minister of Education to facilitate the initiation of free preventive oral

healthcare in all primary schools nationwide. Based on this reform plan, all students will be checked two times a year for receiving intraoral examination, oral health education, oral hygiene instruction, fluoride varnish application, as well as referral to dentist if sealant therapy or other treatments are needed.

In accordance with new policies of the 2015 Oral Healthcare Reform, level I preventive dental services are mainly provided during the morning shifts in order to comply with new regulations and level II or therapeutic services are provided during the afternoon shifts. Dentists can use the public facilities in order to provide dental treatments with no limitation of services in the afternoon shifts, as long as dental materials and dental assistants are provided by the dentist. The government-established fee schedules are used at these facilities and from each payment 20% is deducted by the government and the rest is considered provider's income. For the morning shift contract, there are additional fee incentives based on remoteness of assigned location and deprivation category of the geographical area. Using these payment models, the combination of income from morning and afternoon shifts have been well accepted and considered satisfactory by most recruited dentists. **These assignments are usually given to new dental graduates who need to fulfil 2 years of duty service for government in return for free dental education (before being able to have a private practice).** The MOHME is responsible for distributing these young dentists according to its priorities. Along with dentists completing the mandatory practice stage, there are dentists who are employed by the government, permanently, and work in urban public dental clinics. Both groups earn a monthly salary which is less than the amount earned by the dentists in private sector, and they provide simple care services. **Regardless of the high number of dentists in the private sector, their contribution to the insurance scheme is minor, as such dentists/clinics are in short supply in the public sector.**

With its developing healthcare system and treatment-oriented insurance schemes Iran experiences a higher utilization of services when patients have trouble with their teeth or gums. The

DMFT Index among Iranians (INOHS-2012)					
Age Group	DMFT	Urban	Rural	Caries-free	Periodontal Diseases
5-6	5.16	4.94	5.78	12.7%	9.7%
12	2.09	2.02	2.29	35%	26.9%
15	3.29	3.26	3.42	0.4%	33.8%
35-44	13.20	12.99	13.98	-	55.5%
65-74	25.71	25.29	27.25	-	60.9%

DMFT= Decayed, Missing or Filled Teeth
 Source: www.jocms.org/index.php/jcms/article/view/460

policies of either public or commercial insurance include no obligation to attend regular dental check-ups, representing only around 16% of visits to the dentists. Data from surveys in the past two decades show a marked decline in dental caries from DMFT (Decayed, Missing or Filled Teeth) of 4 to 2.09 in 12-year-old children while periodontal diseases and tooth loss are increasing compared with previous data. Caries-free status is sharply declining from 12 to 15 years old and number of edentulous people is exceeding 50% in 65-74-year-old age groups. **The general level of oral health is not satisfactory, indicating the urgent need for proper interventions in all age groups, especially in children.** The percentage of caries-free children among 5-6-year-olds is 12% and over 60% of 12-year-old children have caries experience, with the decayed component being the greatest component. **The declaration of "2015-Oral Healthcare Reform" has paved the way for oral health promotion in children under age 14 at the national level. The target is to halt the progression of oral diseases and maximize the promotion of oral health and quality of life by the year 2025 for the target population.** The behavior of visiting a dentist regularly for check-ups has its origins in one's childhood to continue into adulthood.

Over the past 60 years, the number of dental schools training dental specialists, dentists as well as other dental health technicians has increased from five

schools to 66 dental schools that are currently fully functional. The number of local graduates is about 1,500 annually. Additionally, about 500 foreign graduates begin practicing in Iran each year. The workforce is developing rather fast and the total number of graduates is expected to increase by 8-10% annually. **The role of the dental hygienists and oral health technician are the keys to success of the National Oral Healthcare Reform. The initiative for training hundreds of such mid-level personnel is currently underway, to provide level-I preventive services in local communities, focusing on target population groups.**

Public health dentists, dental hygienists and oral health technicians, responsible to visit the local primary schools and provide preventive oral healthcare in urban areas, are not enough to cover all primary school children and dental students are helping to provide such preventive care. **As the provision of preventive care expands, more manpower is obviously needed. Ideally, it would be best if private dental practitioners would be involved. About 90% (27,000) of the dentists in Iran are in the private sector and mostly into solo practice.** Through public-private-partnership more primary school children can receive early dental restorations (level I preventive care) if proper policy were in place. There is still very low interest among the private dentists to sign a contract with insurance companies. The main problem for such



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outlook is the low rate of insurance reimbursement and delay in payments for services provided by dental practitioners. Two main dental insurance systems are available: public and commercial. **The public insurance system is overseen by the Ministry of Welfare and Social Security, since all companies under**

% Tooth Loss and Dental Prosthesis		
Age group	Tooth Loss	Complete Edentulous
35-44	40%	4%
65-74	84%	52.2%

Source: www.jocms.org/index.php/jcms/article/view/460

Treatment Needs By Age And Place Of Residence (INOHS-2012)			
Age group	Total	Urban	Rural
5-6	84.3%	81.9%	88.2%
12	75.1%	72.3%	79.6%
15	76.0%	73%	81.2%
35-44	86.1%	84.4%	88.9%
65-74	45.9%	43.7%	49.4%

Source: www.jocms.org/index.php/jcms/article/view/460





the Labor Law must insure their employees. About 80% of the insured people in Iran have this kind of insurance, but it covers only basic oral healthcare services. The employees' compulsory premium is deducted from their wages or incomes, to contribute to health and social services.

Commercial insurance is also playing an increasing role in healthcare financing (around 17% of Iranians are covered by commercial health insurance). **Since the 1990s firms and factories can buy health insurance for their staff from the same commercial insurance companies which insure their goods and services.** For health insurance, the employers pay the total premiums for the employees and their families (employer-sponsored) as a fringe benefit. This amount of money which is paid by employers as the premium will be subtracted from the taxes that the company must pay. Oral healthcare services are provided by a contract between commercial insurance companies and dentists practicing in private dental clinics. Recently, following the privatization policy, several commercial insurance companies have been established with a variety of oral healthcare benefits.

The High Council for Health Insurance

is responsible for making changes to the social insurance provisions of each scheme and sets the fee according to its own fixed tariff schedule. The fee for oral healthcare services in insurance schemes is obviously lower than that in the private sector (approximately 50% lesser). All health insurance schemes use the same fee schedule. Public health insurance benefits continue after retirement. For commercially insured people this benefit will be stopped at their retirement. It seems however that there is a need for better administration, mainly to improve equity in premium contributions within and between social funds. **Meanwhile, according to data, in two major funds (MSIF and SSO) covering about 80% of total population, the dental share was about 1% of their total health expenditure. Such low share of dental expenditures in these major funds is consistent with the high out-of-pocket payments for dental care by Iranian households.** The escalating cost of treatment will greatly impact low income individuals and communities. There is strong evidence that the cost of preventive care is much less than the treatment, for both individuals and governments. On this regard, the declaration of the National Oral Healthcare reform, as a fully

integrated program in PHC, has greatly facilitated better public access to preventive oral care.

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The American Iranian Council was founded in 1990 with the goal of furthering dialogue and understanding between the United States and Iran. It is incorporated as a [501 C (3)] nonprofit and nonpartisan educational organization to provide research, policy analysis, public education, and community mobilization. The AIC seeks to help policymakers and citizens improve their understanding of those two great countries and their long, sometimes difficult, relationship. In order for the AIC to be a positive catalyst for a change, it must have relevant programs. For full report: www.us-iran.org/resources/2018/8/27/myth-vs-fact-irans-health-care

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