

Health Situation and Trend in the Islamic Republic of Iran

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INTRODUCTION

Iran is the largest country in the Middle East. It is bound by Azerbaijan, Armenia, Turkmenistan, and the Caspian Sea to the north, Afghanistan and Pakistan to the east, Iraq to the west, Turkey to the North West, the Gulf of Oman and the Persian Gulf to the south.

Iran covers an area of 1,648,000 square kilometers. The midyear population estimate (2000) is 64,528 60% of which is living in urban areas. The country is divided into provinces (at present: 28), which are further sub-divided into districts (at present: 278). There are more than 60,000 villages scattered throughout the country.

INDICATOR

1. Demographic Indicators

	Year	Value
Midyear population estimate	2000	64525000
Population growth rate	2000	1.24
Total fertility rate	2000	2
Crude birth rate	2000	16.3
Crude death rate	2000	4.4

2. Socioeconomic Indicators

Adult literacy rate (%): Both sexes	1997	81.4*
Males	1997	86.8*
Females	1997	75.9*
Per capita GNP (US\$)	1997	2118
Per capita GDP (US\$)	1997	1460
Population 15 years and over who are regular smokers: Both sexes		
Males	1994	33
Females	1994	7
National health expenditure as % of GNP	2000	4.5
MOH expenditure as % of GNP	2000	3.0

3. Human and Material Resources Indicators

Rate per 1,000 population of: Physicians	1998	1.07
Dentists	1998	0.2
Pharmacists	1998	0.13
Nurses & Midwives	1996	2.6
Hospital beds	1998	1.6

4. PHC coverage (%)

Population with safe drinking water	2000	92
Population with adequate excreta disposal facilities	2000	82
Population with local health care	2000	94
Women attended by trained personnel during pregnancy	2000	91.1

*For population 10 years and over

(at least 2 times and over)		
Deliveries attended by trained personnel	2000	89
Infants attended by trained personnel	2000	62
Women of childbearing age using family planning (Modern Methods)	2000	55.9
Infants fully immunized against: Tuberculosis (BCG)	2000	99
Polio (OPV3)	2000	100
DPT (DPT3)	2000	100
Measles	2000	100
Hepatitis (HBV3)	2000	99
Pregnant woman immunized with TT2	2000	79.2

5. Health Status Indicators

Newborns with birth weight 2500g or more (%)	2000	94
Children with acceptable weight for age (%)	2000	89
Infant mortality rate (per 1000 live births)	2000	28.6
Probability of dying before 5th birthday (per 1000 live birth)	2000	36
Maternal mortality rate (per 100,000 live births)	2000	37.4
Life expectancy at birth (years): Both sexes	2000	69
Male	2000	68
Female	2000	70
Number of reported new cases of: Polio	2000	3
Malaria	2000	19345*
Total Tuberculosis	2000	11780
Pulmonary tuberculosis	2000	8354
AIDS	2000	309
Measles	2000	11874

HEALTH PROBLEMS TREND

A survey on 10 percent of the urban and rural population in 1984 showed that:

Over 42 percent of deaths occurred in under 5 years of age.

Out of these about 80 percent occurred in under one year of age, out of which:

- Approximately one - sixth were due to vaccine - preventable diseases;
- Almost one - sixth were due to infectious diseases, which in most cases are preventable; and
- Nearly one - fifth occurred as a result of diarrheal diseases.

The survey revealed that altogether more than 52% of deaths were due to causes that could easily be prevented.

In response to the above problems, as from 1985, top priority was given to the development and expansion of EPI, CDD and ARI programmes.

As a result of intensive efforts for prevention and control of communicable diseases, both morbidity and mortality from vaccine preventable diseases, diarrheal diseases and acute respiratory infections has drastically reduced. Further more, the incidence and prevalence of all other communicable diseases has significantly decreased; leprosy and neonatal tetanus are eliminated, dracunculiasis has been eradicated and shistosomiasis and poliomyelitis are on the verge of eradication.

Despite these achievements, some of the endemic infectious diseases such as Malaria, Tuberculosis, Cholera, Typhoid, Brucellosis, and Helminthic diseases, are persisting.

For a variety of reasons such as socioeconomic changes, industrialization, urbanization, demographic transitions, change in life style and nutritional habits and an increasing access to health services, the "Health Pattern" in Iran has changed, significantly. On one hand, most of the endemic communicable diseases have been controlled, eliminated or eradicated. on

* Autochthonous

the other hand, due to reduced mortality, increased life expectancy and an increasing elderly population, noncommunicable diseases are appearing on the top of the list of causes of death.

Based on the available information, the three leading causes of death are cardiovascular diseases (CVD), injuries, and cancer.

A household survey carried out in 1997, showed a prevalence of hypertension as being 23.2% for population group 35 to 64 years.

According to the death registration reports, 35% of deaths are caused by cardiovascular diseases (CVD).

During the year 2000, more than 17,000 people died because of traffic accidents.

The number of traffic accidents per 10,000 vehicles is 15 times more than that of industrialized countries.

The most prevalent types of cancer are; cancer of skin, stomach, breast, oesophagus, bladder, lymph nodes, colon, lung, hematopoietic system, and prostate.

Other common noncommunicable diseases are: diabetes, asthma, musculo - skeletal diseases, mental problems and genetic disorders. Both protein - energy malnutrition and micronutrient deficiency disorders are prevalent.

It is a well-known fact that most of the noncommunicable diseases are linked by common preventable risk factors related to lifestyle. These factors are tobacco use, unhealthy diet, and physical inactivity.

Hence, addressing the major risk factors has been given the highest priority in the national strategy for prevention and control of noncommunicable diseases.

NATIONAL HEALTH POLICIES AND STRATEGIES

In the third five-year National Development Plan (2000-2004), the Islamic Republic of Iran has reiterated its commitment to the delivery of comprehensive health care as the right of all individuals. The policy has also outlined its enduring support to the policy guidelines of health for all with targeted adaptation to the prevailing socio - economic and cultural realities of the country. In this framework, the government has made explicit choices as follow:

1. Focus on comprehensive primary health care (PHC) as a priority. At present the entire budget of PHC is met by the public sector. In this endeavor the emphasis was focussed on the rural areas and under privileged localities. Preference in resource allocation was given to primary prevention, over secondary care over tertiary / specialized care.
2. Consolidate the 1985 initiative of integrating the Universities of Medical Science into the Ministry of Health, with the objective to reorient the training of human resources for health to the realities of the health care system and base it on the health needs of the country.
3. Strengthen national strategic policies for the control, elimination and eradication of communicable and non - communicable diseases.
4. Support the basic needs of low - income groups, the disabled and other vulnerable groups that are not covered by insurance and social welfare services to enable these social groups into self -sufficient active members in the society.
5. Promote intersectoral action and community involvement in health and integrated total development for a better quality of life.
6. Pursue the concept of essential drug policies and sustain the generic system of drug labeling to improve efficiency, promote competition and encourage the private sector.
7. Promote food safety, food security and nutrition literacy with emphasis on children, mothers and other vulnerable groups, and sustain micronutrient policies that endeavor to achieve universal coverage.
8. Introduce regulatory norms and quality programmes for continuous education for all categories of health professionals.
9. Strengthen the referral care with expansion specialized outpatient and day care/short stay facilities and improving emergency care referral support.
10. Ensure the comprehensive coverage of the different strata of society with health insurance.
11. Encourage the privatization of health care delivery through cooperative based schemes and/or public-private partnership ventures.
12. Expand the health system research to all levels of the health care delivery system.
13. Strengthen the health management information system for evidence based decision making.
14. Promote national self-reliance in essential drugs manufacturing and procurement of medical supplies and equipment.

MINISTRY OF HEALTH AND MEDICAL EDUCATION

The constitution of the Islamic Republic of Iran recognizes the right of all citizens to health and makes it incumbent on the government to provide health care to the totality of the population on an equitable basis.

According to a law passed by the parliament in 1985, the medical sciences including medical education was excluded from Ministry of Culture and Higher Education and included in the Ministry of Health, hence forming the Ministry of Health and Medical Education.

Since that time the Ministry of Health and Medical Education has been responsible for both health provision and Medical Education at the national level.

The Universities of Medical Sciences and Health Services (at present: 39) are responsible for medical education and health care delivery at the provincial / district level.

Integration of medical education into the Ministry of Health has resulted in a very close coordination and cooperation between the producers and the users of health manpower. The new initiative has among other things paved the way for further development of Community Oriented Medical Education and Health System Research.

PRIMARY HEALTH CARE SYSTEM IN IRAN

The primary health care system in Iran comprises a network of health houses/health posts, and rural/urban health centres, linked by district/provincial health centres and hospitals.

Health Houses (at present; 15987) are manned by a male and a female health auxiliary called "Behvarz". The staff of the health house (Behvarz) are locally selected workers with primary or secondary education plus 2 years training and conduct the following tasks:

- Maternal and child care;
- Family planning;
- Case finding and follow up (tuberculosis, malaria, mental disorders, and recently in some areas, diabetes and hypertension);
- Limited symptomatic treatment;
- Environmental and Occupational health;
- School health;
- Oral health;
- Health education and nutrition promotion.

Each health house averagely covers a population of 1500 and has 2 to 5 satellite villages under its jurisdiction.

Health posts (939 in operation) are the first contact level (the same as health houses) for urban areas and are located in densely - populated areas of the cities or in periurbans. Each health post is staffed by three Family Health Technicians, one Environmental Health Technican and one midwife and covers a population of 12000.

In order to bridge the gap between the health posts and the community, the idea of female health volunteers was raised for the first time in 1991.

At present, there are 54000 Female Health Volunteers liaising between the famalies and the health system.

Each Female Health Volunteer covers 30-50 households and plays a major role in reporting births, deaths, and migrations; health education and social marketing; community participation and women empowerment.

Rural Health Centres (at present 2361 in operation) are staffed by a physician, health technicians, and aid-nurses. The staff of the rural health centre, in addition to the preventive and health promotive activities, provide curative care and receive referrals from the health houses (each rural health centre has under its supervision between 3-6 health houses).

Urban Health Centres (2194 in operation) are the first referral level for the health posts and are staffed by physicians (2-3), Family Health Technicians, Disease Control Technicians, Environmental Health Technicians, Lab Technicians and Assistant - pharmacists. Each urban health centre covers a population of 50,000 - 60,000 and provides supervision to 4-5 health posts.

District Helath Centres (at present: 293) and Provincial Health Centres (at present: 40) are responsible for planning, mornitoring and evaluation of Health programmes at the district and provincial levels, respectively.

The District and Provincial Hospitals are the second and third referral levels for primary health care services.

There are 763 hospitals with 103117 hospital beds. The Breakdown is as follows:

<i>Type of hospital</i>	<i>Number</i>	<i>Beds</i>
Teaching Hospital	504	77997
Private Hospital	122	10023
Others	137	15097

However, the referral system has its own problems and is one of the major challenges to be met in the future.

In brief

- The primary health care system in Iran with its wide coverage (94% access rate) and high popularity has played a crucial role in health development in the country.
- The health houses and rural / urban health centres are the most efficient and successful part of the system. Health houses through the annual census and their routine data collection tools such as the vital horoscope, household folders and monthly report forms are the cornerstone of the PHC information system.
- Community involvement and intersectoral collaboration needs further strengthening.
- Due to socioeconomic development, demographic changes and epidemiological transitions of the past two decades, the system needs to be carefully reviewed and revised accordingly.

ACHIEVEMENTS

Following are the summary of the major achievements

•Improvement of health indicators (1988 - 2000)

- Reduction of infant mortality rate (IMR) from 45 per 1000 to 28.6 per 1000;
- Reduction of under 5 mortality rate from 56 per 1000 to 36 per 1000;
- Reduction of maternal mortality rate (MMR) from 90 per 100,000 to 37.4 per 100,000;
- Increase in life expectancy from 67.7 years to 70 years;
- Reduction of population growth rate from 2.7% to 1.24% .

•Increased access rate to primary health care services

At present, about 90% of rural population and 100% of urban population have access to primary health care services (in 1988, 54% of rural and 70% of urban population had access to PHC services).

•Control, elimination, or eradication of major communicable diseases

In addition to the control of some of the major communicable diseases including measles, pertussis and diphtheria; leprosy and neonatal tetanus have been eliminated, dracunculiasis has been eradicated and schistosomiasis and poliomyelitis are on the verge of eradication.

•High Coverage of EPI

The coverage of immunization for EPI target diseases is close to 100%. This is mainly due to high access to primary health care services.

•Success of the national IDD prevention programme

- Universal salt iodization was achieved in 1995.
- In 1996, a law was passed prohibiting production of non - iodized domestic salt and its elimination from the shops.
- According to the multiple indicator cluster survey of 1997, 93% of rural and 97% of urban households are using iodized salts.
- Compared to the situation in 1990, the prevalence of goiter has reduced by 30%.

•Success in promotion of breast feeding

- The percentage of infants breast fed for at least one year has increased from 65% in 1988 to 86.2% in 1997 and 89% in 2000.
- The number of imported milkpowder cans has decreased from 50 million cans in 1988 to 11 million in the year 2000.

• **Reduction of dental caries in school children (12 years old) from 4.2% in 1988 to 1.5% in 1997**

• **Increased access to safe drinking water and sanitary excreta disposal**

- The access of population to safe drinking water has increased from 78% in 1988 to 82.5% in 1997 and 92% in 2000.
- The percentage of population with adequate excreta disposal facilities has increased from 28% in 1988 to 78% in 1997 and 82% in 2000.

• **Self reliance in vaccine production**

Since the beginning of EPI the country has been self - reliant in vaccine production.

Pasteur Institute has been producing BCG, and Razi Institute has covered all other EPI vaccine.

Hepatitis B vaccine is the only vaccine which is not produced in the country. However, a national project for production of Hepatitis B vaccine is under way and its local production will start in near future.

• **Local production of pharmaceuticals and diagnostic Kits**

- 97% of pharmaceuticals are manufactured in the country;
- Local production of herbal medicines has increased from 30 items in 1994 to 90 items in the year 2000;
- At present, 25 factories are fully involved local production of herbal medicines;
- Up to now, 229 Diagnostic Kits have been locally produced.

• **Increased coverage for health insurance**

- The National Health Insurance System has succeeded in insuring all rural households (free of charge), government employees, the self - employed, students, and the under privileged. Full coverage will be achieved by the year 2002.

• **Expansion of rehabilitation services**

- Out of 32503 disabled children, 14426 of them are covered by the community based rehabilitation programme of the National Welfare Organization;
- Rehabilitation services to the disabled are delivered through 684 governmental and 340 non-governmental rehabilitation centres.

• **Establishment of National Research Centre**

- Further to the establishment of the National Research Centre as a national body for research development, the number of Provincial Research Centres has increased from 17 in 1997 to 36 in the year 2000;
- High priority has been given to the development of health system research (HSR).

• **Development of specialized curative services**

- The number of organ transplantations has increased from 6 cases in 1984 to 14,000 in 2001;
- The number of Kidney transplantations has increased from 250 in 1997 to 1400 in 2001;
- The number of annual liver transplantation has increased from 3 cases in 1998 to 30 cases in 2001.

• **Expansion of national emergency services**

- The National Plan for Development of pre-hospital and hospital emergency services has been revised;
- The number of national emergency posts has increased from 304 in 1998 to 394 in the year 2000;
- The number of ambulances has increased by 50%, and an air-ambulance system for Tehran has been established;
- The time interval between the emergency calls and the team attendance (in Tehran) has been reduced from 25 minutes in 1998 to 15 minutes the year 2000.

• **Development of medical education**

- Integration of medical education in the health system, in 1985;
- Establishment of 39 Universities of Medical Sciences and Health Services;
- Establishment of Ph.D Courses in 29 fields;

- Further establishment of 23 branches of medical specialties since 1985;
- Establishment of 23 research centres;
- Vast expansion of the continuing medical education programme;
- Increase in the number of medical students from 1123 in 1979 to 31311 in 1998. However as the national target in terms of medical graduates had already been achieved, as from October 1997 the admission rate was reduced and the same policy will be followed for the whole period of the third five - year National Development Plan.

FUTURE DIRECTIONS / CHALLENGES

Hereunder are the main directions to be followed and the major challenges to be met:

•Need for establishing efficient organizational structures and managerial system for health development

The increasing demand for health care services is putting a serious pressure on the limited resources of the national health insurance organization, which are primarily subsidized by the public sector. The Ministry of Health and Medical Education has also felt the need to design more efficient organizational structures that can lead to rationalization of available manpower and financial resources and provide the opportunity for public and private partnership in the delivery of PHC.

•Increasing demand for improving the quality of care

The successfully attained high PHC coverage in the rural areas of the country and rapidly growing attempt to achieve comprehensive PHC in urban settings, has created demand for addressing the quality of care at all levels of health care delivery.

Another salient area is the growing demand for a qualified managerial support for the delivery of PHC services. These two components should constitute the core of WHO technical support to PHC and health for all initiatives in the country.

•Prioritizing nutrition and food safety

Although the country has achieved a remarkable success in reducing infant and maternal mortality rates and lowering population growth rate, malnutrition among young children continue to maintain its high burden on the health of this population group. Moreover, the unequal distribution of this deficiency among the different provinces of the country constitutes an additional concern to the MOH & ME. With the growing food industries in the country, food safety has surfaced as a national health priority.

To accelerate national efforts for capacity building, WHO's technical support to the seprogrammes will be needed.

•Weak referral support

In view of the universal accessibility of PHC services, there is a growing need for more efficient referral support, especially at the secondary care level. An area of special concern is the emergency referral care. WHO should continue to provide technical support to this important tier of care delivery.

•Matching community health needs and development of human resource

One of the issues of major concern to the MOH & ME is the mobilization of intersectoral support for health promotion and for improving the quality of life of the people, which is the ultimate aim of the national development process.

Similarly, the direct involvement of the grass roots in integrated developmental schemes that encourage community empowerment, self help and self-reliance is an essential requirement for creating large-scale accountability for sustainable development. To pursue these objectives, the MOH & ME desires the WHO technical support through the implementation of the Basic Development Deeds (BDN) programme in the country. This joint collaboration is expected to provide a catalytic support to this important area of community development.

•Hosting a large number of refugees

The official statistics given by the Bureau of Aliens and Foreign Immigrant Affairs (BAFIA) for December 1998 puts the number of Afghan refugees in Iran at 1,400,722 and that of the Iraqi refugees at 530,610. Only 5% of the refugee population live in thirty designated camps. Most of the refugee population is scattered throughout the country, mainly

in provinces bordering Afghanistan and Iraq as well as major urban centres, and earn their livelihoods in various low skilled jobs.

The Ministry of Interior estimates the cost of providing for the refugees in I.R.Iran over the past 20 years as "more than hundreds of millions of dollars per year".

The high prevalence and incidence of communicable diseases among Afghan refugees such as malaria, tuberculosis, leprosy and vaccine preventable diseases, not only exposes the local populations at risk of these diseases, it also puts a heavy burden on the national health services.

WHO is expected to advocate that the international community - UN agencies – support the Ministry of Health and Medical Education to expand the provision of health services in areas where there are high concentrations of refugees.

• ***Increasing burden of non-communicable diseases due to epidemiological transition***

In the disease control area, the joint collaboration with WHO has taken account of the epidemiological transition and the increasing trend of non-communicable diseases. Hence, in addition to its support to the eradication, elimination and control of communicable diseases, WHO technical assistance should extend the range of its support to NCD control programmes.

• ***Ensuring the quality of essential drugs and rationalizing their use***

As 97% of essential drugs are locally produced, the focus of the joint Government/WHO collaboration should be directed on the rational use of drugs through education and prescription auditing. The technical support should also be extended to the area of good manufacturing practices (GMP). Self-sufficiency in the production of quality vaccines is another national policy that should obtain WHO technical assistance.

• ***Ensuring the relevance of human resource development to the health needs of the community***

Medical education in the Islamic Republic of Iran is fully integrated in the MOH & ME, and Medical Science Universities play a direct role in the management of the health care service delivery throughout the country. To ensure the relevance of their education, research and service delivery to the needs of the community, the MOH & ME has introduced the concept of community oriented medical education and established a programme of continuous medical education for all human resource cadres for health.

• ***Launching a broad based health system research (HSR) where health workers have a direct role in its implementation as a problem solving tool:***

The MOH & ME is pursuing the strategy of demystifying health research, by launching a broad based health system research (HSR) where all levels of health care delivery have a direct role in its implementation as a problem solving tool. The aim is to use the HSR as a tool to improve the delivery of care and resolve technical, managerial and logistic problems that inhibit the efficiency of its implementation.

To broaden the national capacity for health research, the MOH & ME has established the National Institute of Health. Another priority and area of concern is the health management information system with a clear desire to reorganize the system to improve the use of information for decision making.