HEALTH

23.1 INTRODUCTION

In recognition of the importance of providing healthcare to improve health standards and health capacities of citizens in all regions, strategic interest in the development of healthcare has been a cornerstone of successive development plans. Article 31 of the Basic Law emphasised responsibility of the state for providing healthcare to every citizen. Provisions of successive health regulations have ensured support for and development of this vital sector.

A network of health facilities provides preventive, curative and rehabilitative healthcare services around the country. At the forefront are the facilities of the Ministry of Health (MOH), the main body entrusted with providing comprehensive integrated healthcare covering all regions. Alongside the MOH, other government agencies and the private sector also provide health services.

Under the Eighth Development Plan, healthcare services improved, both by expanding their infrastructure and by raising performance. Curative healthcare was enhanced by establishing and equipping more general and specialist hospitals, as well as primary healthcare centres to provide family medicine services to members of the community. As a result, rates of communicable diseases and child mortality declined and life expectancy increased.

The Ninth Development Plan envisages continued efforts to raise health standards for the entire population, through expanding health facilities to cope with population growth, and improve performance, quality of service and user satisfaction. The plan adopts a set of policies and programmes directed towards furthering the role of cooperative health insurance to cover more segments of society; achieving more decentralization in management and operation of health facilities; and supporting primary-healthcare facilities and their integration with secondary, specialist and referral care, and facilitating their availability to the entire population in all regions.

This chapter reviews the current conditions of healthcare services and facilities, along with key developments under the Eighth Development Plan. It also reviews key issues and challenges that need to be addressed under the Ninth Development Plan, forecasts demand for health services, presents the future vision for the health sector and reviews the objectives, policies and targets set for it under the Ninth Development Plan.

23.2 CURRENT CONDITIONS

23.2.1 Overall Performance

- ***Primary healthcare***

Primary healthcare services are provided through primary healthcare centres, which provide all members of the community with first-level preventive, curative, and rehabilitative healthcare services. In 2008, these centres numbered 1,986; an increase of 8.9% over 2004. To support further expansion, approval was given to establish 1,499 new centres during the Eighth Development Plan, under the funding from the budget surplus programme, in order to replace leased centres and respond to increase in demand. Of the approved centres, work on establishing 860 centres had started by 2008.

Primary healthcare centres provide services to family members of all age groups, and they are linked to general and specialist hospitals, through a referral system; thereby ensuring that curative services are integrated, from first-level care all the way to highly specialised care. The centres provide comprehensive prenatal and postnatal care for mother and child and they are responsible for mothers and children immunization against infectious diseases. In addition, they pursue prevention of communicable and endemic diseases, and care for patients suffering non-communicable diseases; especially chronic diseases, such as hypertension and diabetes. In 2008, the number of patient visits to these centres was about 47.5 million; an average of 24 thousand visits per centre, while referral ratio was 3.63% of the total number of visits.

In spite of the increase in the number of primary healthcare centres and their distribution over all regions under the Eighth Plan, there is still a need for more centres to meet the actual needs for basic health services. With the completion of the primary healthcare centres being established, the population / centre ratio is expected to improve in all regions.

- ***Curative healthcare***

Curative services are offered by specialist health facilities provided with well-qualified medical and healthcare capabilities, in addition to the necessary equipment needed to provide comprehensive diagnostic services. In comparison with 2004, by the end of the fourth year of the Eighth Development Plan (2008), the number of hospitals increased from 350 to 393, the number of beds from 49,184 to 53,819, the number of physicians from 38,496 to 47,919, and the number of male and female nursing staff increased from 74,114 to 93,735.

Table 23.1
Health Facilities and Employment
Eighth Development Plan*

Description	2004	2008	index for 2008 (2004 = 100)
Hospitals	350	393	112.3
Beds	49184	53819	109.4
Health Centres**	1824	1986	108.9
physicians	38496	47919	124.5
Nursing Staff	74114	93735	126.5
Ancillary Medical Workers	44558	51288	115.1

* Up to the end of the fourth year of the Eighth Development Plan.
** Number of health centres affiliated to MOH.
Source: MOH and Ministry of Economy and Planning.

The expansion led to improvement of health indicators. For example, during the period 2004–2008, the average number of physicians per

10,000 population rose from 17 to 20, and the number of nursing staff from 33 to 39, while the average number of hospital beds per 1000 population improved slightly from 2.169 to 2.174 beds.

The MOH is the major provider of health services. In 2008, it provided 58.9% of hospital beds, 47.3% of physicians, and 54.6% of nursing staff, while other government agencies provided 20.1% of hospital beds, 22.6% of physicians, and 22.9% of nursing staff. The private sector provided 21% of hospital beds, 30.1% of physicians, and 22.5%of nursing staff (Table 23.2).

Table 23.2
percentage Contribution of Health Sectors
Eighth Development Plan*

Description	Beds		Physicians		Nursing Staff	
	2004	2008	2004	2008	2004	2008
MOH	28751	31720	17623	22643	38019	51188
Other Government Agencies	10300	10828	9331	10808	20142	21462
Private Sector	10133	11271	11542	14468	15953	21085
Total	**49184**	**53819**	**38496**	**47919**	**74114**	**93735**

* Up to the end of the fourth year of the Eighth Development Plan.

Source: MOH.

In 2007, the number of outpatient visits to hospital clinics and health centres and dispensaries was about 122.7 million; 48% of which was to MOH establishments, 16.5% to other government agencies' health establishments and 35.5% was to private health sector establishments. The number of inpatients in hospitals was 2.8 million, of whom 1.6 million were in MOH hospitals, 0.5 million in other government agencies' hospitals, and 0.7 million were in private-sector hospitals (Table 23.3).

Table 23.3
percentage Contribution of Health Sectors
Outpatients and Inpatients
2007

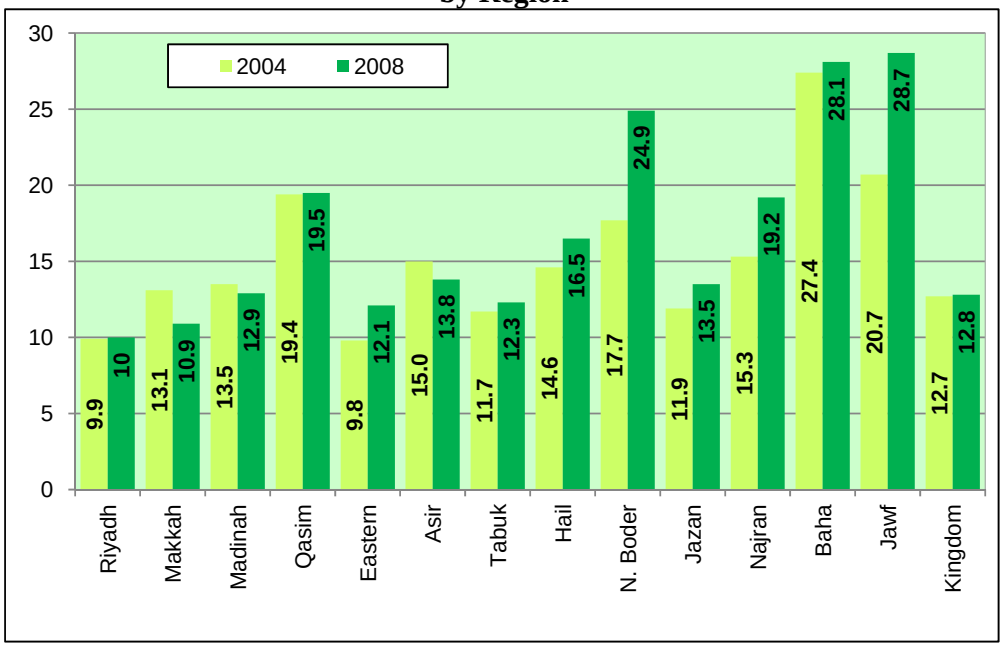
Description	Patient visits		Inpatients	
	Number (Million)	Relative Contribution %	Number (Million)	Relative Contribution %
MOH	58.9	48.0	1.6	57.1
Other Government Agencies	20.3	16.5	0.5	17.9
Private Sector	43.5	35.5	0.7	25.0
Total	**122.7**	**100.0**	**2.8**	**100.0**

Source: MOH.

Efforts by the MOH to deliver health services to all regions continued under the Eighth Development Plan. However, more efforts are needed, in order to achieve a better distribution of healthcare services among the regions. Figures 23.1, 23.2 and 23.3, which show the number of hospital beds, physicians and nursing staff of MOH per 10,000 of population by region for 2004 and 2008, indicate variations. While the indicators for physicians and nursing staff over the country as a whole improved, the number of MOH hospital beds per 1,000 population increased only slightly from 1.27 to 1.28. However, with the completion of the new hospitals being established, this indicator (hospital beds / population) is expected to improve over the next five years.

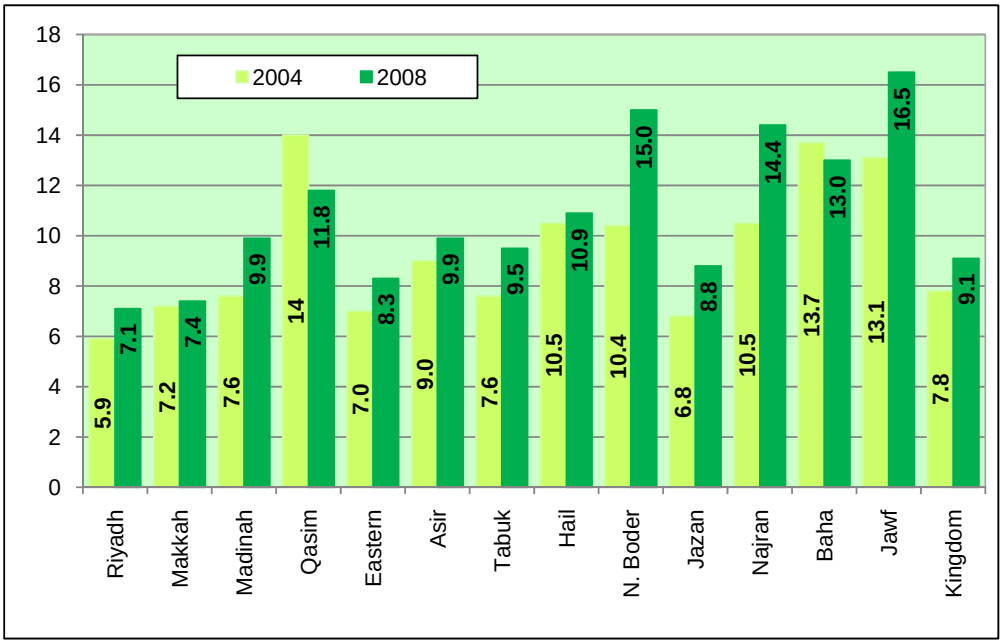
The statistical data on MOH services indicate that healthcare indicators are high in areas with low population densities, compared with areas with high population densities. However, urban areas with high population densities have more treatment services provided by other government agencies and the private-health sector.

Figure 23.1
MOH Beds per 10 Thousand of Population
by Region



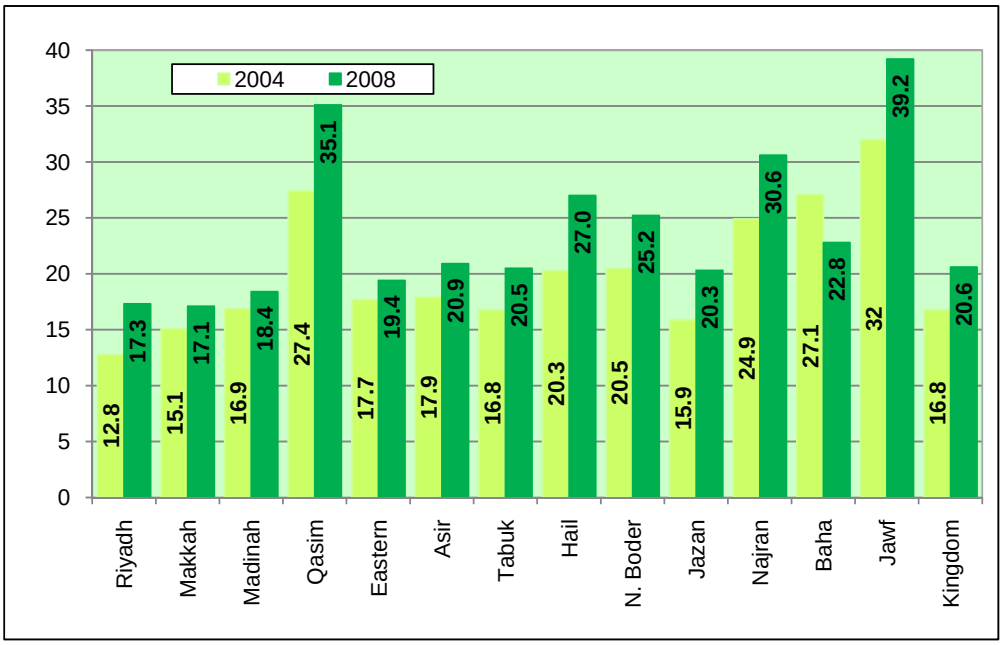
Source: MOH.

Figure 23.2
MOH Physicians per 10 Thousand of Population
by Region



Source: MOH

Figure 23.3
MOH Nursing Staff Per 10 Thousand of Population
By Region



Source: MOH

❑ *Healthcare performance indicators*

Growth of healthcare facilities and activities under the Eighth Development Plan was accompanied by improved healthcare performance and coverage of population groups of all ages in all regions. The 2009 report of the World Bank on the performance of the health sector pointed out that rates of maternal and childcare are remarkably high compared with many countries in the region. Targets set by the Eighth Development Plan for children immunization against infectious diseases were achieved at levels ranging between 99% and 107%, while provision of healthcare for pregnant mothers by health professionals was achieved at a rate of 98%, and deliveries attended by healthcare professionals reached a level of 100% (Table 23.4).

Implementation of healthcare programmes for children and mothers led to improvement in the relevant health indicators. Mortality of the under-fives fell from 44 cases per thousand live births in 1990 to 21.1 in 2008, while infant mortality dropped from 34 cases per thousand live births to 17.4. Maternal mortality decreased to 1.46 cases per ten

thousand live births, and the rate set by the Millennium Development Goals (MDGs), which is 1.2 cases per ten thousand live births, is expected to be attained in 2010, i.e., five years before 2015, the date set by MDGs.

Table 23.4
Maternity and Child Healthcare Indicators

Indicator	Eighth Plan Target	Attained 2008	Index 2008 (Eighth Plan Target =100)
Pregnant women provided with healthcare by health professionals (%)	98	96	98
Deliveries attended by health professionals (%)	97	97	100
DPT (Diphtheria, Pertussis and Tetanus) child Immunization (%)	95	97.6	102.7
Immunization of mothers against Tetanus (%)	90	96.1	106.8
Child Immunization against Poliomyelitis (%)	95	97.6	102.7
Child Immunization against Measles, German Measles and mumps (%)	98	97	99
Child Immunization against Hepatitis B (%)	98	96.1	99.6
Child Immunization against TB (%)	98	97.8	99.8

Source: MOH.

Development of healthcare services led to a decrease in the incidences of communicable diseases targeted by immunization. Incidences of poliomyelitis dropped to zero and incidences of other diseases dropped by varying degrees (Table 23.5).

As a result of the rise of health standards over the successive development plans and proliferation of health services and institutions in all regions, life expectancy rose from 71.4 years in 1999 to 73.7 years in 2008. This indicator sums up the good performance of the sector, especially when compared with regional and global indicators.

Table 23.5
Incidence of Communicable Diseases
Targeted by Immunization

Indicator	2004	2007
Incidence of Poliomyelitis per 100000 population	0.0	0.0
Incidence of Diphtheria per 100000 population	0.01	0.01
Incidence of Pertussis per 100000 population	0.54	0.28
Incidence of Tetanus per 100000 population	0.30	0.02
Incidence of Mumps per 100000 population	3.40	0.33
Incidence of Measles per 100000 population	7.86	5.44
Incidence of Hepatitis B per 100000 population	19.65	18.20
incidence of Neonatal Tetanus per 1000 live births	0.07	0.04

Source: MOH.

23.2.2 Health Insurance

Considerable progress was achieved towards providing modern healthcare insurance facilities to expatriate residents; most notably the Cooperative Health Insurance Scheme, which was established by the Council of Ministers Resolution No. 71 of 1999. The scheme aims to provide and regulate healthcare to all expatriate residents, with the possibility of extending it to citizens by a Council of Ministers Resolution. Article 4 provided for establishment of the Council of Cooperative Health Insurance to oversee implementation, through licensing of cooperative health insurance companies, accrediting health institutions that provide health insurance services, and issuing the resolutions necessary for implementing the provisions of the scheme.

The 2008 data show that 1,393 health facilities were accredited to provide healthcare for the insured, distributed as follows: 139 hospitals, 835 clinics and dispensaries, 215 pharmacies, and 204 other facilities. The number of people covered by health insurance under the Cooperative Health Insurance Scheme was 5.27 million, the number of companies and institutions that provide health coverage for their employees was 59,541, and the number of insurance companies licensed by the Council to provide health insurance was 29.

23.2.3 Emergency Medical Services

The Saudi Red Crescent Authority (SRCA) provides emergency medical services to the population, as well as to pilgrims (Hajj and Umrah). The following are the most important achievements of the Authority under the Eighth Development Plan:

- 54 new emergency centres were established, bringing the total to 273.
- The total number of ambulances operating was 925, and the total number of operating service vehicles was 311.
- 79 emergency centres were established to replace leased centres, which achieved 88% of the target set by the Plan.

23.2.4 Advanced Specialist Treatment Services

King Faisal Specialist Hospital and Research Centre (KFSH) provides advanced specialist treatment and conducts medical research to continuously improve performance. Up to the end of the fourth year of the Eighth Development Plan, the hospital achieved the following:

- The number of hospital beds reached 901, and the number of physicians 559.
- Expansion of telemedicine to cover 19 hospitals and sites in various regions.
- Expansion of the transplant programme to about 216 stem cell transplants and 145 kidney transplants annually; in addition to increases in heart and liver transplants under the Eighth Development Plan.
- 44 new research works focussed mainly on cancer, and genetic and communicable diseases.
- Expansion of the cooperative health programme activities in regional MOH hospitals. In 2008, 978 surgical operations were conducted by KFSH consultants, and 6,307 inpatients and 2,016 outpatients were seen in their own locales.

23.2.5 Food and Drug Control

The Saudi Food and Drug Authority (SFDA) contributes to health protection and enhancement. The main purpose of SFDA is to monitor the safety, security, and effectiveness of foods and drugs, and the safety of medical devices and their impact on public health. Since its establishment in 2003 and the issuance of its regulations in 2007, the SFDA made a number of achievements, the most significant of which are preparing studies and regulations, gradually transferring food and drug control functions from other agencies to itself, commencing to set up facilities and laboratories, and training technical and administrative staff who assume supervision and control tasks.

23.2.6 Institutional and Organizational Development

Through a network of services covering all regions, MOH is the major government agency entrusted with providing comprehensive, integrated primary, secondary, and tertiary (specialist and referral services) healthcare. In addition, several autonomous government agencies contribute to the provision of preventive and curative healthcare to beneficiaries, conduct heath research, and train and qualify medical and health staff. These are:

- Military and security agencies provide integrated medical services to their staff, as well as to other segments of the population.
- KFSH (public institution) receives cases requiring advanced specialist treatment and conducts health research.
- Through their medical colleges and hospitals, the universities provide specialist curative services, medical education, and training programmes and conduct health research.
- The Saudi Red Crescent Authority provides emergency medical services to residents, as well as to pilgrims (Hajj and Umrah).
- Health facilities of the General Organization for Social Insurance and the General Presidency for Youth Welfare provide medical services to certain categories of the population; and the health facilities of Saudi Aramco and the Royal Commission for

Jubail and Yanbu provide health services to employees and other categories of population.

- The Saudi Centre for Organ Transplantation operates directly under the Health Services Council.
- The Saudi Food and Drug Authority, which undertakes monitoring the safety, security, and effectiveness of foods, and scrutinizes standards and safety of medical and diagnostic devices.

In addition to MOH and other government health agencies, the private sector provides health services around the country.

To ensure high standards of performance, the Health Services Council is entrusted with coordinating and integrating the work of all healthcare agencies. The Council, which was established by Article 16 of the Health Regulations, has the task of preparing the healthcare strategy, and establishing adequate regulations for ensuring the efficiency, performance, quality and standards of hospitals.

Established under the Cooperative Health Insurance Scheme, the Health Insurance Council has the responsibility of overseeing the scheme, which has been applied to companies and institutions employing more than 50 persons, and work has started to extend its application to smaller companies and institutions.

Under the Eighth Development Plan, a number of other regulatory legislations relating to healthcare were issued, including Council of Ministers Resolution No. 19 of 2008 approving the establishment of the Waqf Fund, which aims to encourage voluntary contributions to healthcare.

In pursuing the development and restructuring of the sector and its services in line with the evolving needs, a set of developmental measures pertaining to the organizational aspects of the health sector were taken, including:

1. A study by the MOH on restructuring and developing the health sector and a detailed plan for restructuring the MOH; based on

concentration on planning, monitoring, evaluation and control role, while continuing to provide preventive and primary healthcare.

2. Establishment of the Central Council for accreditation of health facilities and formation of sub-councils in the regions to oversee quality standards. The key tasks of the Central Council include: developing consolidated standards for health facilities and monitoring and evaluating their activities; developing medical practice standards; preparing studies and field researches to develop standards and methods of their application; establishing rules of professional practice; and cooperating with medical associations in each medical discipline to develop clinical guidelines for practice and disseminating these guidelines in hospitals.
3. Issuance of a system of professional health practice under Royal Decree No. M / 59 of 2005 and the executive regulations of the system by Council of Ministers Resolution No. 39644/1/12 of 2006.
4. Continuation of networking among various health facilities as a step towards developing a health information system that meets all planning needs and helps improve the efficiency and quality of health services.

23.2.7 Saudization of Health Sector Manpower

The number of physicians, nursing staff and ancillary medical workers in the health sector increased from 162,529 in 2004 to 192,942 in 2008; an increase of 18.7%, with the share of Saudi manpower increasing from 29.7% to 35.1%. During the same period, the total number of physicians increased by 19% and the share of Saudi nationals increased slightly from 21.3% to 21.6%, while the total number of nursing staff increased by 19.3% and the share of Saudis rose from 23.9% to 28.8%, and the total number of ancillary medical workers increased by 17.4%, and the share of Saudis went up from 47.7% to 59.1%. Data on Saudization of workers in the health sector by employer (MOH, other government health agencies, and the private sector) show variations that require appropriate solutions. While total numbers and percentages

of Saudi physicians, nursing and ancillary medical workers increased in MOH establishments, the proportion of Saudi physicians and nursing staff in other government health agencies decreased, in contrast with Saudi ancillary medical workers whose numbers increased. The private health sector stands out as the weakest in terms of employment of Saudis, who, in 2008, constituted only 4.5% of total employment. Moreover, over the past four years, the absolute numbers of Saudi physicians and ancillary medical workers in the private health sector declined, which clearly requires more Saudization efforts.

23.2.8 Role of Private Sector

The Kingdom clearly supports expansion of the role of the private sector in providing healthcare services. Introduction of the Cooperative Health Insurance Scheme constituted an important development in this regard. In 2008, the private sector provided 21% of total hospital-bed capacity, compared with 20.6% in 2004; 30.1% of total physicians, compared with 30% in 2004; and 22.5% of the total nursing staff, compared with 21.5% in 2004. In the same year, the private health sector comprised 123 hospitals, with a total of 11,271 beds; 2,478 dispensaries and clinics; 84 laboratories; 44 physiotherapy centres; 4,747 pharmacies; and 398 drug warehouses (Table 23.6).

Table 23.6
Development of Private-Sector Health facilities
Eighth Development Plan*

Description	2004	2008	Index 2004=100
Hospitals	110	123	112
Hospital Beds	10133	11271	111
Dispensaries	1041	1152	110
Clinics	1172	1326	113
Laboratories	70	84	120
Physiotherapy Centres	25	44	176
Pharmacies	3851	4747	123
Drug Warehouses	350	398	114

* Up to the end of the fourth year of the Eighth Development Plan .

Source: MOH, Ministry of Economy and Planning.

In 2008, the private sector provided 35.5% of all outpatient visits and cared for 25% of total inpatients.

Despite continued support by MOH, there remains a need for encouraging the private health sector to expand effectively Saudization of medical and health employment, as well as for reinforcing technical monitoring of its activities to ensure quality.

23.3 ISSUES AND CHALLENGES

23.3.1 Increased Demand for Healthcare Services

Demand for health services is affected by several factors; key among which is the steady growth in population. According to the 2004 census, the population was about 22.7 million; an increase of 33.8% compared with 1992 and reflecting an average annual growth rate of 2.4%. Moreover, growing health awareness by the community and changes in morbidity contribute to increased demand.

The projected steady increase in demand for healthcare services calls for continued expansion, as well as implementation of policies and mechanisms for structural transformation of the health system through extending the Cooperative Health Insurance System to cover citizens, along with separation of funding from service provision. Structural development would include the following elements:

- Continuing expansion of Cooperative Health Insurance to cover citizens.
- Managing MOH hospitals and operating them by one or more public institutions that operate on the basis of economic returns and quality of the service.
- Establishing a fund to finance the services provided to community members not covered by the health insurance scheme that is financed by licensed insurance companies and institutions.

- Expanding the role of the private sector in building, equipping and operating hospitals and medical complexes.
- Concentrating the role of MOH on monitoring, quality control and the provision of primary healthcare services.

23.3.2 Medical and Health Employment

Provision and Saudization of medical and health employment have been central themes. In 2008, the share of Saudi nationals in medical and health employment was 21.6% for physicians, 28.8% for nursing staff, and 59.1% for ancillary medical workers. Clearly, rates of indigenization of jobs in health are still low, especially for physicians and nursing staff. Given that these rates are much lower in the private health sector than in the public sector, the issue is a matter of urgency for the former.

Over the first four years of the Eighth Plan, there was a slight increase in Saudization rates. For nursing staff, it increased from 23.9% in 2004 to 28.8% in 2008, and for ancillary medical workers from 47.7 % to 59.1%. However, for physicians, the increase was minimal, from 21.3% to 21.6%, which is attributed to bringing more expatriate physicians to operate new hospitals and health centres. All in all, Saudization of the health workforce is still below target levels for this vital service, which depends mainly on the human element.

Through coordination and cooperation among the MOH, the Ministry of Higher Education, the Institute of Public Administration, and the medical education facilities in the private sector, educational and training programmes are being developed for qualification of medical capabilities in various competencies, consistent with the projected medium- and long-term growth of health service facilities.

Pending availability of national healthcare manpower, there will be a need for bringing in expatriates to operate health facilities. Given the importance of ensuring high efficiency of medical and health workers, an effective and efficient mechanism is needed to ensure that expatriate medical and health workers have a high level of training and professional practice.

In view of the importance of increasing availability of Saudi healthcare manpower, it is necessary to continue:

- Increasing the absorptive capacity of colleges of medicine, pharmacy, applied sciences and nursing; along with opening new colleges for these specializations, and increasing the number of health-science colleges and the absorptive capacity of established colleges and institutes.
- Expanding provision of scholarships abroad in various health specialties.
- Encouraging and supporting the establishment of private-sector medical and health science colleges, to graduate physicians, nursing staff and medical ancillary workers; and fostering partnerships between national and foreign investment for establishing such colleges, especially in conjunction with distinguished foreign universities.
- Broadening the base of postgraduate medical studies and medical fellowships to cover all regions, while taking into consideration the academic and practical requirements at this high level of studies, in order to provide opportunities for raising the qualifications of the largest possible number of Saudi medics in various disciplines.
- Using modern technologies in training, qualification and continuing education.

23.3.3 Improving Quality of Health Services

With the increasing need for quantitative expansion of health services in response to demographic growth, improving the quality emerges as one of the main challenges over the coming period, since experience shows that high rates of quantitative expansion are often achieved at the expense of quality. It is useful to note that development of health-service quality is not limited to training and qualification, but extends to establishing an integrated system covering many aspects , including:

- Structuring medical and health capacity and distributing it among regions and health institutions.

- Academic qualification and knowledge and vocational skills of the workforce.
- Quality of the various administrative levels and skills.
- Efficacy of regulations and procedures governing the sector.
- Professional work manuals for medical and healthcare practice.
- An effective accreditation system of health service institutions.
- Mechanisms to protect patients and safeguard their rights.

A number of these elements already exist and are adopted by the health sector. However, they need to be kept up-to-date, viewed from a comprehensive, integrated perspective, and applied, enforced and monitored.

23.3.4 Health Information System

Availability of information and data is crucial for coordination, integration, planning, monitoring, and evaluation; it is essential for conducting studies of development and raising efficiency of services; and for combating and prevention of communicable and non-communicable diseases. Absence of an information system that links health sector agencies and units deployed in all regions has implications for efficiency of service delivery, planning, coordination, monitoring and evaluation.

Hence, there is a need for:

a. Expanding and facilitating the use of health information systems in the service of efficiency and effectiveness of healthcare programmes.
b. Adopting a consolidated, integrated health information system covering all health service sectors, facilities and service units such as hospitals and primary healthcare centres, to provide timely data for: coordination, integration, planning, monitoring and evaluation, research, studies, continuing medical education, national health accounts and cost accounting, and disease control and prevention measures.

c. Establishing a health information network that links health sectors and facilities throughout the country, through which telemedicine may be applied and disseminated. Moreover, it is important to provide this service on a large scale, especially in curative facilities, in order to provide accurate information to be shared among all health services, along with the use of smart card technology; all within a national health information system coordinated and overseen by a National Centre for Health Information.

d. Enhancing and supporting research studies, particularly of health systems.

e. Promoting ways of developing, reviewing and updating health indicators constantly, especially those based on field research, and periodically publishing these indicators to serve as a source of official information and a reference for assessing health conditions.

23.3.5 Healthcare Management and Operation

Health activities provided by various agencies need effective coordination and integration, through strategic objectives and policies set at the national level, and an information system to assist in planning, monitoring, evaluating and decision taking to raise service efficiency and provide it on a large scale while rationalizing usage.

Improving management methods is important and necessary for raising the level of performance in order to reach high levels of efficiency and adequacy, which, in turn, would lead to optimal returns on health-service inputs, both preventive and curative. However, the financial and administrative system currently in place is centralized, leading often to an inability to take timely appropriate decisions or measures, especially in the management of units that provide direct service, such as hospitals, where conditions and data in each vary. This calls for adopting the following policies and mechanisms:

a. Providing a management style that incorporates all the elements necessary for achieving efficacy and efficiency, including:

coordination, integration, planning, monitoring, evaluation, supervision and quality control. Such elements need tools and methods, the most important of which are: an integrated information system, appropriate qualification of management personnel, and distribution of administrative competencies and powers in line with the requirements of decentralized and centralized management as appropriate for the needs of the service.

b. Reviewing the prevailing financial and administrative systems in health agencies, to adapt them to the needs and requirements of efficient operation of health facilities, while providing adequate managerial flexibility to enable adaptation to changing and emergent needs and data.

c. Studying the administrative aspects of health-service performance and formulating a clear management system to accompany restructuring the administrative organization of MOH, taking into account evolution of the health system, in particular implementation of the Cooperative Health Insurance Scheme; hospital management and operation; and provision of basic healthcare, particularly preventive care.

d. Reinforcing and activating the Health Services Council, which was established under Article 16 of the Health Regulations issued by Council of Ministers No. 76 of 2002, to coordinate and integrate health services.

23.4 DEMAND FORECASTS

Several variables affect the volume of demand for healthcare services, including:

- Population growth, with statistical estimates projecting a total population of about 28.2 million by 2014.
- Changes in the age structure of the population towards an increase in the proportion of older persons due to improvement of health conditions.

- Increased incidence of chronic diseases, such as diabetes and high blood pressure, due to new pressures caused by changes in lifestyle, lack of physical exercise, and change in consumption patterns.

To address these changes, the Ninth Development Plan seeks to expand and increase efficiency of curative and primary health services, by increasing hospital beds and health employment rates to the rates prevalent in developed countries, to enable the service to meet requirements of development of the health system, which is set to complete implementation of health insurance to cover the entire population.

23.4.1 Curative Care

❑ ***Hospital beds***

In 2008, the total number of hospital beds was 53,819, i.e., 2.2 beds per one thousand people. Meeting the demand by the end of the Ninth Plan requires 97,535 hospital beds, i.e., 3.5 beds per one thousand people (Tables 23.7 and 23.8).

Table 23.7
Target Number of Hospital Beds
by the end of 2014

Description	2008		2014		increase by End of Ninth Plan 2014
	Number	Average per One Thousand of Population	Number	Average per One Thousand of Population	
MOH	31720	1.3	56379*	2	24659
Other Government Agencies	10828	0.45	20296	0.72	9468
Private Sector	11271	0.47	20860	0.74	9589
Total	**53819**	**2.2**	**97535**	**3.5**	**43716**

* The actual number expected to be operational by end of 2014 is about 46,653 beds; building the rest would start during the Plan. Consequently, the total targeted number of beds will be 87,800.

Source: Ministry of Economy and Planning.

Table 23.8
Target Number of MOH Hospital Beds by the End of 2014
by Region

Region	Population 2014	Number 2008	Target Number 2014
Riyadh	7008765	6074	14018
Makkah	6981792	6800	13964
Madinah	1928161	2158	3856
Qasim	1260229	2168	2520
Eastern Region	4096704	4398	8193
Asir	2049415	2515	4099
Tabuk	895173	951	1790
Hail	640476	939	1281
Northern Borders	338588	750	677
Jazan	1541658	1796	3083
Najran	552794	910	1106
Baha	440211	1119	880
Jawf	455540	1142	911
Total	**28189506**	**31720**	**56379**

* The average number of MOH hospital beds targeted is 2 beds per one of thousand people. Distribution of hospital beds over regions accords with actual needs as determined by geographic and demographic factors and health conditions.

Source: Ministry of Economy and Planning.

❑ *Physicians*

In 2008, the total number of hospital physicians was 32,040 tending 53,819 beds, i.e., 0.6 physician per bed. Meeting the demand during the Ninth Development Plan requires about 66,135 physicians to tend 87,800 beds, i.e., 0.75 physician per bed (Tables23.9)

Table 23.9
Target Number of Physicians in Hospitals
By the End of 2014

Description	2008		2014		Increase by End of 2014
	Number	Average per Bed	Number	Average per Bed	
MOH	16113	0.52	32657	0.7	16544
Other Government Agencies	10057	0.93	18875	0.93	8818
Private Sector	5870	0.52	14602	0.7	8732
Total	**32040**	**0.6**	**66135**	**0.75**	**34095**

Source: Ministry of Economy and Planning.

❑ *Nursing Staff*

In 2008, the total number of male and female nursing staff was 70,467 tending 53,819 beds, i.e., 1.3 nurses per bed. Meeting the demand by the end of the Ninth Development Plan in 2014 requires about 131,051 male and female nurses to tend 87,800 beds, i.e., 1.5 nurses per bed (Table 23.10).

Table 23.10
Target Number of Nursing Staff in Hospitals
by the End of 2014

Description	2008		2014		Increase by End of 2014
	Number	Average per Bed	Number	Average per Bed	
MOH	37652	1.2	65314	1.4	27662
Other Government Agencies	19511	1.80	36533	1.8	17022
Private Sector	13304	1.18	29204	1.4	15900
Total	**70467**	**1.3**	**131051**	**1.5**	**60584**

Source: Ministry of Economy and Planning.

❑ ***Ancillary Medical Workers***

In 2008, the total number of ancillary medical workers was 37,007 tending 53,819 beds, i.e., 0.7 per bed. Meeting the demand by the end of the Ninth Development Plan requires about 74,659 ancillary medical workers to tend 87,800 beds, i.e., 0.8 per bed (Table 23.11).

Table 23.11
Target Number of Ancillary Medical Workers in Hospitals by the End of 2014

Description	2008		2014		Increase by End of 2014
	Number	Average per Bed	Number	Average per Bed	
MOH	18234	0.6	32657	0.7	14423
Other Government Agencies	14577	1.35	27400	1.35	12823
Private Sector	4196	0.37	14602	0.7	10406
Total	**37007**	**0.7**	**74659**	**0.8**	**37652**

Source: Ministry of Economy and Planning.

23.4.2 Primary Healthcare

a. In 2008, the number of primary healthcare centres was 1,986, i.e., one centre per 9,122 Saudis. In order to raise the standard of the services, one centre per 7,000 Saudis is envisaged by 2014.. Thus, meeting the demand by the end of the Ninth Plan requires about 2,958 centres; an increase of 972 centres from 2008 (Table 23.12).

b. In 2007, there was one primary healthcare physician per 3,324 Saudis. Services include first-level preventive care, health education, maternal and childcare and curative care. Physicians in these centres serve as family doctors. One physician per 2,000 Saudis was adopted to estimate requirements, which then amounted to about 10,351 physicians in 2014.

Table 23.12
Target Number of MOH Healthcare Centres
by the End of 2014

Region	Saudi Population 2014	Number of Centres 2008	Target Number of Centres 2014*
Riyadh	4798282	363	685
Makkah	4340239	288	620
Madinah	1442617	135	206
Qasim	1015001	149	145
Eastern Region	3178295	222	454
Asir	1741654	290	249
Tabuk	790604	62	113
Hail	559284	89	80
Northern Borders	302871	42	43
Jazan	1285968	144	184
Najran	469763	61	67
Baha	382503	91	55
Jawf	395455	50	56
Total	**20702536**	**1986**	**2958**

* The target is one primary healthcare per 7000 people. Distribution of centres over regions accords with actual needs as determined by geographic and demographic factors and health conditions.

Source: Ministry of Economy and Planning.

c. In 2007, there was one male or female nursing staff in primary healthcare centres per 1,489 Saudis. The target of one nurse per 1,000 people was used to estimate demand. Thus, in 2014, about 20,703 male and female nurses in primary healthcare centres would be required.

d. In 2007, there was in primary healthcare centres one ancillary medical worker per 3,324 Saudis. Given the importance of the role of ancillary medical workers in primary healthcare, a target of one per 2000 people was adopted. Thus, in 2014, about 10,351 ancillary medical workers would be required (Table 23.13).

Table 23.13
Target Number of Workers in MOH Primary Healthcare Centres by the End of 2014

Description	2007		2014		Increase by End of 2014
	Number	Health Workers per Saudi Population	Number	Health Workers per Saudi Population	
Physicians	5481	3224	10351	2000	4870
Nursing Staff	11872	1489	20703	1000	8831
Health ancillary workers	5316	3324	10351	2000	5035

Source: Ministry of Economy and Planning.

23.5 DEVELOPMENT STRATEGY

23.5.1 Future Vision

To provide comprehensive, integrated, high-quality healthcare services, with a balanced distribution among regions, covering all individuals and social groups, administered and supervised by competent, efficient health sector, in order to improve the health of citizens and their quality of life.

23.5.2 Objectives

- Achieving the best possible level of health by improving the general health of the population.
- Providing comprehensive, integrated healthcare to all people, and facilitating access and delivering a fair, good, safe and affordable healthcare.
- Finding new funding channels to support government funding and contain cost.
- Developing advanced health information systems and expanding their use in all health sectors and facilities.
- Enhancing and developing the national health capacity and indigenizing health jobs.

- Improving the quality and raising performance of management and operating systems in health facilities.
- Enhancing the role of MOH in supervising and monitoring performance, setting health policies, and ensuring provision of health services to all population groups, with each health agency performing the task entrusted to it.
- Enhancing the role of the private sector, as parallel and complementary to the role of the state in financing, operating and delivering health services.
- Promoting comprehensive health, through assuring and developing primary healthcare activities.
- Raising the efficiency of emergency medical services to the maximum level possible in all circumstances and in all regions.
- Providing and developing therapeutic and rehabilitative health services and establishing referral services in the regions.
- Assuring a balanced distribution of health services, both geographically and demographically, and facilitating access to them.

23.5.3 Policies

- Introducing multiple sources of funding for health activities, through the Cooperative Health Insurance Scheme, as well as through enhancing the role of civil charities and the Waqf, while rationalizing government spending and ensuring optimal use of resources; with the state budget remaining the major source of funding for basic government health services.
- Supporting information systems in health sectors by advanced information technology to make data available at both the sectoral and national levels.
- Implementing mechanisms for increasing national employment in health to achieve self-sufficiency.
- Developing appropriate management and operation systems in health facilities and achieving efficient management and service

standards, through adopting decentralized management; allocating separate budgets for health areas, specialist and referral hospitals, and other health agencies; and applying appropriate methods and procedures to achieve rationalization and raising efficiency.

- Implementing decentralization in management by the MOH and ensuring application of quality standards and provision of integrated comprehensive healthcare for the entire population in a fair, affordable manner; coordinating with other health agencies through the Council of Health Services, with other governmental health agencies being committed to performing their role within the objectives and policies of the healthcare strategy.
- Strengthening the role of the private health sector in complementing public health sector efforts to achieve the goals and policies of the healthcare strategy.

- Supporting and developing the primary healthcare services provided by MOH and other health sectors as the cornerstone of the health system, in such a way, as to raise efficiency and apply the integrated, comprehensive healthcare approach for the entire population.
- Raising efficiency of the emergency medical services to meet the needs in normal situations and in disasters.
- Supporting and developing curative care within an integrated, comprehensive healthcare framework that consists of four curative levels: primary, secondary, specialist and referral services.
- Achieving balanced distribution of health services, including specialist services, both geographically and demographically to meet the health needs of all individuals and groups in all regions.
- Ensuring quality and efficiency of health services by adopting methods to improve performance and quality and assess returns, and applying these methods in all health facilities.

- Ensuring adequacy and efficiency of the services provided to patients by all employees of health institutions, in order to safeguard the rights of patients and protect them from wrongful health practices, and ensure client satisfaction.
- Providing effective monitoring and control over production, import and circulation of foods and drugs.
- Stressing commitment to safe handling of medical waste.
- Applying measures to rationalize energy and water usage in health facilities.

23.5.4 Targets

- Based on forecasts of demand for healthcare services that take into account expansion of services and increasing their efficiency, the Ninth development Plan aims to achieve the following by 2014:

  – Increasing the number of MOH hospital beds to 56,379, in other government agencies to 20,296 and in the private sector to 20,860; thereby attaining a ratio of 2, 0.72 and 0.74 beds per one thousand people, respectively.
  – Increasing the number of MOH physicians tending curative hospital beds to 32,657, in other government agencies to 18,875, and in the private sector to 14,602; thereby attaining a ratio of 0.7, 0.93, and 0.7 of a physician per bed, respectively.
  – Increasing the number of MOH nursing staff tending hospital beds to 65,314, in other government agencies to 36,533, and in the private sector to 29,204; thereby attaining a ratio of 1.4, 1.8 and 1.4 nurses per bed, respectively.
  – Increasing the number of MOH ancillary medical staff tending hospital beds to 32,657, in other government agencies to 27,400, and in the private sector to 14,602; thereby attaining a ratio of 0.7, 1.35, and 0.7 ancillary medical staff per bed, respectively.

  - Increasing the number of MOH primary healthcare centres to 2,958; thereby attaining one centre per 7,000 people.
  - Increasing the number of physicians in MOH primary healthcare centres to 10,351, the number of male and female nurses to 20,703, and the number of ancillary medical staff to 10,351; thereby attaining one physician per every 2,000 people, one nurse per 1,000 people, and one ancillary medical staff per 2,000 people.

- Continuing to maintain children immunization against infectious diseases rates of at least 97% for diphtheria, whooping cough, neonatal tetanus, poliomyelitis, measles, rubella, mumps, tuberculosis, and hepatitis B.
- Reducing incidence of infectious diseases per hundred thousand people to: 0.005 for diphtheria, 0.001 for whooping cough, zero for polio, 5.0 for measles, 0.05 for mumps, 10.0 for Hepatitis B, and reducing incidence of neonatal tetanus to 0.005 per thousand live births.

- Reducing infant mortality to less than 12 deaths per thousand live births.
- Reducing children-under-five mortality to less than 15 deaths per thousand live births.
- Reducing the proportion of below-normal-weight babies to less than 5% per thousand live births.
- Reducing maternal mortality per 10,000 live births to less than 1.3.
- Increasing the rate of providing healthcare to women of childbearing age by health professionals to at least 98%.
- Increasing the rate of pregnant mothers provided with healthcare by health professionals to at least 98%.
- Increasing the rate of immunization of pregnant mothers against tetanus to at least 98%.
- Increasing the number of deliveries tended by health professionals to at least 98%.

- Increasing the rate of mothers provided with postnatal healthcare by health professionals to at least 98%.
- Reducing incidence of malaria to less than 0.5 cases per hundred thousand people, in areas where transmission of malaria is most likely to occur.
- Reducing incidence of bilharzias to less than 1.5 cases per hundred thousand people in areas where it is endemic, and to less than 3 cases per hundred thousand of population in areas of high endemism, while keeping other areas free from infection.
- Achieving a rate of recovery from tuberculosis to more than 85%:
  - Achieving a tuberculosis detection rate of more than 70%.
  - Reducing incidence of pulmonary tuberculosis to 8 cases per hundred thousand people by the end of the Plan.
- Reducing the rate of infection with HIV / AIDS through:
  - Raising awareness of the disease, targeting high-risk groups, reducing risk through intensive counselling and testing clinics, ensuring safety of blood transfusions, and preventing transmission of infection due to health practices.
  - Opening 20 clinics for counselling and voluntary testing, and establishing 8 specialist treatment centres, and carrying out surveys.
- Implementing a health awareness programme consisting of lectures, seminars, press material, and publications.
- Opening 400 first-aid centres, at a rate of 80 per year.
- Completing Saudi Red Crescent projects currently in progress, namely: buying helicopters, leasing and operating helicopters, establishing 559 first-aid centres, establishing 13 branches in the regions, establishing 13 hangers and aircraft maintenance workshops and 106 emergency landing strips for helicopters, and establishing 6 relief warehouses.
- Completing King Faisal Hospital and Research Centre projects currently underway, the most important of which are: establishing and equipping King Abdullah Centre for Tumours

and Liver Diseases; constructing a building for tumours; establishing a building for neurology, neurosurgery and medical support services; and establishing a Children's Hospital.

- Establishing referral laboratories and a research centre in Riyadh for the Saudi Food and Drug Authority, and constructing buildings and laboratories at all points of entry to the country by land, sea and air.

23.6 FINANCIAL REQUIREMENTS

Under the Ninth Development Plan, the value of the financial requirements of the health sector for the operational plans of MOH, the Saudi Red Crescent, King Faisal Specialist Hospital, the Research Centre (public institution), and the Saudi Food and Drug Authority is SR242.7 billion, apart from the financial requirements of the medical services of other government agencies.