CHAPTER 17 - HEALTH

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Chapter 17

Health

17 HEALTH

I. INTRODUCTION

17.01 The objective of the health services is to raise and continuously improve the health status of individuals, families and communities. During the Seventh Malaysia Plan period, the scope and coverage of programmes ranging from health promotion, disease prevention as well as curative and rehabilitative services were further improved, while health infrastructure development focused more on rural and remote areas. The delivery of health services was also made more efficient with the application of information technology (IT). In addition, the growth of private health sector services complemented the public health sector. Privatized pharmaceutical and hospital support services were also closely monitored to ensure quality.

17.02 During the Eighth Malaysia Plan period, primary healthcare will remain the focus of national health development while concerted efforts will be continued to improve equity and quality in the provision of health services for the population. This will include further development and expansion of the scope of primary, secondary and tertiary healthcare, greater use of IT in the delivery of health services as well as more emphasis on increasing the quantity, capacity, capability and quality of health personnel to meet the demand of the rapidly expanding health sector. Specific programmes such as occupational safety and health, geriatric care, mental health and prevention and control of emerging diseases and re-emerging infections will be expanded. Research and development (R&D) in health services will be further enhanced during the Plan period. In addition, the governance of the health sector will continue to be strengthened to ensure efficient and effective utilization of resources and balanced development of the sector.

II. PROGRESS, 1996-2000

17.03 During the Plan period, the thrust of the health sector was focused on improving the health status of the population. Emphasis, therefore, was placed on the promotion of health with the support and commitment of the community and improving access to health facilities. Besides meeting basic needs, health programmes also took into account the changing pattern of diseases, escalating cost and rising public expectations. The public sector continued to expand health facilities and services as well as increased the number of health and allied health professionals, while the private sector complemented the public sector, particularly in the provision of curative health services.

Promotive and Preventive Health Services

17.04 Health *promotion and disease prevention programmes* continued to be accorded high priority during the Plan period. The activities were carried out with better integration and cooperation of the private sector and non-governmental organizations (NGOs). The programmes took into account the increasing affluence of society and its sedentary and stress-filled lifestyles. They emphasized the promotion of a healthy lifestyle, better nutrition, immunization, safe water supply as well as food quality and safety. These efforts led to significant improvements in the health status of the population as evidenced by the increasing life expectancy at birth and reduction of infant and toddler mortality rates, as shown in *Table 17-1*.

17.05 The immunization programme in 1999 achieved a 100 per cent coverage for Bacille Calmette-Guerin (BCG), while it was 94.1 per cent for the triple antigen vaccine (diptheria, pertussis and tetanus), 93.4 per cent for poliomyelitis and 86.2 per cent for measles. Malaysia was declared a polio-free area in October 2000. In addition, activities that focused on the wellness paradigm, emphasizing nutrition and the inculcation of a healthy lifestyle, were promoted in schools through the supplementary food programme and dental health services. Consistent with the concept of shared responsibility for health development, health promotive activities were organized by government agencies, voluntary organizations, the NGOs and Parent-Teachers Associations.

TABLE 17-1

SELECTED INDICATORS OF HEALTH STATUS, 1995 AND 2000

Indicator	*1995*	*2000*[1]
Life Expectancy At Birth (in years)		
Male	69.4	69.9
Female	74.2	74.9
Crude Birth Rate (Per 1,000)	25.9	24.4
Crude Death Rate (Per 1,000)	4.6	4.4
Infant Mortality Rate (Per 1,000)	10.4	7.9
Toddler Mortality Rate (Per 1,000)	0.8	0.1
Maternal Mortality Rate (Per 1,000)	0.2	0.2
Perinatal Mortality Rate (Per 1,000)	9.8	7.5[2]
Neonatal Mortality Rate (Per 1,000)	6.8	5[2]

Notes:

[1] Figures for 1999

[2] Figures for 1998

17.06 The *healthy lifestyle campaign* was continued with emphasis on the prevention of diabetes, promotion of healthy diet and nutrition, exercise and fitness, road safety, safety at home and the workplace, health and safety of children as well as the promotion of mental health. The healthy lifestyle campaign disseminated information on incidents and prevention of contagious diseases such as human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), tuberculosis and dengue as well as diseases caused by the Nipah and Coxsackie viruses. In addition, the *Program Sihat Tanpa AIDS Untuk Remaja* (PROSTAR) on the prevention of HIV/AIDS, established 458 PROSTAR clubs, mainly made up of 23,780 adolescents as peer group tutors in 339 schools and 119 districts.

17.07 Surveillance and control of infectious diseases was further strengthened through capacity and capability building as well as greater collaboration and coordination between various agencies. During the recent out-break of the Nipah

virus, rapid response and greater collaboration efforts were established through the inter-ministerial committee and networking with international bodies such as the World Health Organization (WHO) and the Control Disease Center in Atlanta. Efforts to establish the Infectious Disease Centre was started in 1999 with the upgrading of the Disease Surveillance Unit in the Ministry of Health, Infectious Disease Research Centre in the Institute of Medical Research (IMR) in Kuala Lumpur, and the National Public Health Laboratory in Sungai Buloh, Selangor.

17.08 During the Seventh Plan period, the scope of the *family health programme* was expanded to promote and maintain the optimal health status for the individual, family and community through the promotion and provision of healthcare as well as appropriate health services for those with special needs. In addition, the introduction of the Family Medicine Specialist Services in 1997 helped to ensure the early detection of diseases and provision of appropriate management of patients at primary healthcare level and reduced unnecessary referrals to hospitals. The provision of a comprehensive healthcare at the primary healthcare level was further strengthened through the decentralization of outpatient departments from hospitals to health clinics.

17.09 The *programme on food and nutrition* was further strengthened through the implementation of the National Action Plan on Nutrition which emphasized food safety production from source to marketing and consumption as well as equitable access to nutritional food. The Action Plan also emphasized healthy eating habits, especially among school children and adolescents. In addition, beginning 1997, the *school health service programme* was further strengthened by integrating the roles of the Ministry of Education and Ministry of Health in promoting environmental health activities as well as nutritional balance and exercise to avoid obesity. By 2000, 1,960 health workers and teachers were trained to promote and implement the integrated school health service. The curriculum for health education was revised to emphasize and inculcate the practice of healthy lifestyles at an early age. In addition, special nutritional programmes for children in rural areas were also undertaken to supply nutritious supplementary food baskets, salt and adequate micro nutrients.

17.10 Under the *environmental health and sanitation programme,* full coverage of piped water supply was achieved for urban areas and 84 per cent for rural areas in 2000. Under the Water Supply and Environmental Sanitation Programme (BAKAS), more community wells were provided, while rain water collection schemes and the tapping of groundwater sources for the supply of safe water were

undertaken in the rural areas. This helped to achieve a coverage of 93.5 per cent by 2000. In order to maintain water quality, the National Drinking Water Quality Surveillance Programme was expanded and by 2000, covered 98 per cent of the public water supply system. The rural sanitation programme under BAKAS covered 99.0 per cent or 1,731,800 households in 2000, compared with 94.9 per cent in 1995. These efforts contributed to a reduction in the incidence of water- borne diseases from 3,500 in 1995 to 2,100 in 1999. In 1997, the National Clinical Waste Management System was implemented to provide clinical waste management needs of public and private health facilities. In addition, the completion of three public health laboratories further enhanced food and water quality testing.

17.11 Out of 146 local authorities, 52 transferred their functions on public health matters to the Ministry of Health. This helped to upgrade the quality of health care services through more effective inspection of cleanliness of food and market premises, introduction of efficient preventive methods on the spread of communicable and contagious diseases and reduction of environmental health hazards. Better detection methods also improved the screening and recording of infections, thereby controlling the spread of communicable and contagious diseases, particularly malaria where the incidence rate declined from 286.1 per 100,000 in 1995 to 60.8 in 1999.

17.12 The *occupational safety and health programme* was strengthened with a view to further reducing occupational accidents and diseases. The Department of Occupational Safety and Health (DOSH) reviewed and formulated new regulations and guidelines to strengthen its enforcement capability. In addition, the National Institute of Occupational Safety and Health (NIOSH) also intensified training and education sessions within factories and work sites to ensure the attainment of a high standard of occupational safety and health. The National Council for Occupational Safety and Health with the cooperation of DOSH also organized three national occupational safety and health campaigns in 1996, 1998 and 2000. In addition, employers also instituted measures which ensured safer working environment as provided under the Occupational Safety and Health Act 1994. These measures resulted in the decline of occupational and workplace incidents from 114,130 in 1995 to 92,100 in 1999. Accidents at the workplace also decreased from 99,410 in 1995 to 73,760 in 1999. In 2000, the Social Security Organization (SOCSO) provided medical benefits, disability allowances and pensions to 209,820 workers and their dependents compared with 182,760 in 1995. SOCSO's coverage was also expanded to include compensation for those involved in accidents while commuting to and from the workplace.

Medical Care Services

17.13 Medical care services, comprising primary, secondary and tertiary care were provided through a wide network of health clinics and hospitals. These included outpatient and inpatient care services ranging from primary care at the health clinics to the advanced medical care at tertiary care centres in the hospitals. During the Plan period, a total of 33 hospital projects was approved for construction. These included two IT-based specialist hospitals in Selayang, Selangor and Putrajaya, which were commissioned in 2000. Work also began on the construction of six hospitals incorporating the computerized Total Hospital Information System (THIS), namely in Ampang, Serdang and Sungai Buloh, Selangor; Alor Setar and Sungai Petani, Kedah; and Pandan, Johor. In addition, 25 small-and medium-sized hospitals, including 12 in Sabah and Sarawak with capacities ranging from 76 to 499 beds, incorporating the computerized Health Information System (HIS) were in various stages of planning and development. The distribution of the hospital projects under various stages of implementation is as shown in *Table 17-2*. A total of 11 hospitals was also upgraded and refurbished to provide better healthcare with clinical support facilities. As a result, public health facilities and coverage improved during the Plan period, benefiting the entire population, as shown in *Table 17-3*. To facilitate the development of IT in the health sector, the Telemedicine Act was enacted in 1997, which among others, made provision for the regulation and control of the practice of telemedicine, such as confidentiality of information of patients and the requirements of medical practitioners to obtain the consent of the patient before telemedicine is practised.

17.14 During the Plan period, the diagnostic and support facilities such as imaging, pathology and haematology services were further improved. In this context, the National Blood Centre was established in Kuala Lumpur in 2000, and Blood Transfusion Units were upgraded in all state hospitals. In addition, one Bone Densitometer in Hospital Pulau Pinang, four Magnetic Resonance Imaging (MRI) machines in hospitals in Kuala Lumpur, Ipoh, Johor Bahru and Selayang; 19 Computerized Tomography (CT) Scanners in all state hospitals as well as additional 14 mammography equipment were installed and commissioned in selected state hospitals and hospitals in large districts such as Muar, Sibu and Taiping.

17.15 Under the rural health programme, comprehensive coverage of basic health services for rural and remote areas was given priority. This included the construction of new primary healthcare clinics as well as the upgrading and

TABLE 17-2

LIST OF HOSPITAL PROJECTS APPROVED DURING THE SEVENTH PLAN PERIOD

State	*Hospital*	*Number of Beds*	*Scope of Services*
Johor	Pandan	704	Full secondary care with tertiary care on Radiotherapy and Oncology, and Haematology
	Tampoi	1,228	Psychiatric care
Kedah	Alor Setar	660	Full secondary care with tertiary care on Urology, Nephrology, Haematology, Neurology, Cardiology, and Plastic Surgery
	Sungai Petani	498	Full secondary care
	Sungai Petani	400	Psychiatric care
Kelantan	Jeli (Phase 1)	24	Primary care
Melaka	Jasin	76	Basic secondary care
Negeri Sembilan	Jempol	108	Basic secondary care
Pahang	Cameron Highlands	76	Basic secondary care
	Temerloh	490	Full secondary care
	Pekan	108	Basic secondary care
Perak	Slim River	246	Full secondary care
Pulau Pinang	Kepala Batas	108	Basic secondary care
Sabah	Keningau	200	Full secondary care
	Kunak	76	Basic secondary care
	Kuala Penyu	76	Basic secondary care
	Lahad Datu	268	Full secondary care
	Nabawan	76	Basic secondary care
	Pitas	76	Basic secondary care
Sarawak	Belaga	76	Basic secondary care
	Bintulu	298	Full secondary care
	Dalat (Phase 1)	8	Primary care
	Lawas	108	Basic secondary care
	Sri Aman	268	Full secondary care
	Sarikei	268	Full secondary care
Selangor	Ampang	562	Full secondary care with tertiary care on

State	*Hospital*	*Number of Beds*	*Scope of Services*
			Respiratory Medicine and Endocrinology
	Cheras	150	Rehabilitative and Geriatric Care
	Selayang	960	Full secondary care with tertiary care on Hand and Micro Surgery, Hepatobiliary, Nephrology and Urology
	Serdang	620	Full secondary care with tertiary care on Cardiology and Cardiothoracic
	Shah Alam	500	Tertiary care
	Sungai Buloh	620	Full secondary care with tertiary care on Infectious Disease, Neurology, Neurosurgery, Plastic Surgery and Burns, and Maxilofacial
Terengganu	Setiu	76	Basic secondary care
Wilayah Persekutuan Putrajaya	Putrajaya	250	Full secondary care

Notes:

1 Primary care services comprise of outpatient department as the first point of contact, including maternal child healthcare, dental services, school health services and support services such as clinical and imaging facilities, pharmacy and registration.

2 Basic secondary care services comprise of General Medicine, General Surgery, Obstetrics and Gynaecology, and Paediatrics. The services are run by resident medical officers and visiting specialists.

3 Full secondary care services comprise of General Medicine, General Surgery, Obstetrics and Gynaecology, Paediatrics, Orthopaedics, Anaesthesiology, Psychiatry, Dermatology, Medical Rehabilitation, Pathology, Imaging, Dental, ENT, Opthalmology and Geriatrics. The services are run by medical officers and resident specialists.

4 Tertiary care services are highly specialized care in areas such as Cardiology, Cardiothoracic Surgery, Geriatrics, Paediatric Surgery, Neurology, Neurosurgery, Respiratory Medicine, Urology and Nephrology, Plastic Surgery and Burns, Maxilofacial, Haematology, Radiotherapy and Oncology, and Endocrinology.

refurbishing of community and midwife clinics into health clinics. The health clinics were equipped with basic imaging and laboratory diagnostic facilities and teleprimary IT systems. A total of 172 new health and community clinics was in various stages of planning, development and construction during the Plan period, of which 12 were completed, while 304 existing health and community clinics, and midwife clinics cum quarters were renovated and upgraded to provide a comprehensive range of primary healthcare services. In addition, mobile dispensary services were provided with more equipment and medicine to better serve the remote areas. Ambulance services were also upgraded with new and well equipped vehicles to provide quick access for referral cases from clinics and hospitals in districts to specialist centres.

17.16 Systematic regulatory control of the pharmaceutical products and other medicines was continued with the implementation of the Control of Drugs and Cosmetic Regulation 1984 by the Drug Control Authority to ensure safe, efficacious

TABLE 17-3

PUBLIC HEALTH FACILITY AND COVERAGE, 1995 AND 2000

Category	*Number*		*Facility Ratio to Population and Coverage (%)*	
	1995	*2000*[1]	*1995*	*2000*[1]
Health Facilities				
Rural Health Facilities				
Community Clinics[3]	1,987	1,992	1: 4,717	1: 4,758
Health Clinics	721	725	1: 12,998	1: 13,194
Mobile Units[4]	284	194		
Urban Health Facilities				
Maternal & Child Health Clinics	102	107	-	-
Health Clinics	51	54	1: 22,909	1: 25,853
Patient Care Services				
Hospitals	118	119		
Acute Beds[5]	24,454	24,780	1: 846	1: 495
Dental Units[6]	2,327	2,597	1: 8,891	1: 8,540
Beneficiaries ('000)				
Outpatient Visits[7]	24,290	27,039		
Inpatients[7]	1,448	1,543		
Rural Water Supply	7,397	8,398[2]	*85.8*	*93.5*[2]
Sanitary Latrines (Rural)	8,132	8,761[2]	*94.9*	*99.0*[2]
School Dental Clinics	2,808	4,029	*63.4*	*83.1*
Supplementary Feeding	510	528	*19.0*	*18.4*
Immunization (Under one year)				
BCG	554	479	*100.0*	*100.0*
Diphtheria, Pertussis and Tetanus (3rd dose)	501	499	*93.7*	*94.1*
Hepatitis B (3rd dose)	485	483	*90.7*	*91.1*
Measles	458	457	*85.5*	*86.2*
Polio (3rd dose)	500	495	*93.5*	*93.4*

Notes:

[1] Figures for 1999

[2] Figures for 2000

[3] Includes *klinik desa* and midwife clinics which were upgraded into community clinics.

[4] Refers to Dispensary Services, Village Health Teams, Flying Doctor Services and Mobile Dental Services.

[5] Refers to hospital beds under the Ministry of Health and does not include chronic beds.

[6] Refers to dental chairs in Government Clinics.

[7] Refers to attendances in public health facilities.

and quality products for consumption. The National Pharmaceutical Control Bureau was entrusted with the quality control assessment of the health products, licensing of manufacturers, importers and wholesalers as well as monitoring adverse reactions of drugs. The drug registration exercise included the registration of scheduled poison, non-poison as well as traditional medicine products.

17.17 The private health sector also expanded during the Plan period. The number of hospitals and beds increased from 197 and 7,192 in 1995 to 225 and 9,098, respectively in 1999, compared with the public sector which had 127 hospitals and 34,000 beds in 1999. However, 97.8 per cent of the private hospital beds were located in urban areas. In addition, these hospitals provided specialist services and were equipped with the latest diagnostic and imaging facilities. In 1999, 23 out of 27 MRI equipment, 67 out of 86 CT Scanners, 67 per cent of physicians, 66 per cent of surgeons and 80 per cent of obstetricians and gynaecologists were in the private sector. This created unequal distribution of medical services and difficult access for communities in rural areas. Consequently, the Private Healthcare Facilities and Services Act was enacted in 1998, among others, to improve access to healthcare, correct the imbalances in standards and quality of care as well as rationalize medical charges in the private health sector to more affordable levels.

17.18 The Quality Assurance Programme was given emphasis during the Plan period to improve quality, efficiency and effectiveness in the delivery of services, clinical training, research and development to meet the demand of patients seeking increasingly higher quality services. In this regard, the National Strategic Plan for Quality in Health was formulated in 1998, and the National Implementation Plan for Quality launched. The Plan included the development of life-long wellness management and care plans, the introduction of outcome assessment measures as well as accreditation of healthcare professionals and facilities.

17.19 In order to increase the efficiency of hospital services, five support services were privatized in 1996, which included hospital cleansing, clinical waste management, bio-medical equipment maintenance, facility maintenance, as well as linen and laundry services. In addition, the privatization of medical stores facilitated the local manufacturing of medical and pharmaceutical products, thereby increasing locally manufactured medicine from 250 to 320 and reducing the number of imported drugs from 372 to 309 in 1999. The medical screening of foreign workers was privatized in 1997 to ensure the employment of healthy workers. A total of 1,213,220 workers was screened during the Plan period. To

effectively supervise and monitor the privatized and corporatized medical and non-medical services, the Government developed regulatory guidelines and systems such as the computerized management information model and rapid feedback monitoring to manage and regularly evaluate the quality and cost of services.

17.20 With the increasing number of traditional medical practitioners and greater consumption of related medical products, the Ministry of Health undertook measures to monitor quality and safety to protect consumer interests. A standing committee was established during the Plan period to ensure the standard and quality of traditional/complementary medicine. In addition, all traditional practitioners were required to register their practices, credentials and products so that their operations could be monitored to ensure their products are safe for consumers.

Health Manpower

17.21 Manpower development was accorded high priority during the Plan period, to support the expansion and delivery of quality health services as well as address the acute shortage of various categories of health manpower. Six public universities and the three private medical colleges expanded their capacity to produce doctors, dentists and pharmacists. A total of 5,900 graduates was trained during the Plan period, compared with 3,250 in the Sixth Plan period. In addition, the Government also sent students for medical education abroad.

17.22 In spite of these efforts, there was still a shortage and unequal distribution of health manpower, which affected the quality of services provided. Although the doctor-population ratio improved from 1: 2,153 in 1995 to 1:1,465 in 1999, the disparities between the states remained high, with the Federal Territory of Kuala Lumpur at 1:372, compared with 1:4,120 in Sabah, as shown in *Table 17-4*. In 1999, 44 per cent of doctors, 59 per cent of dentists and 85 per cent of pharmacists were in the private sector compared with 55 per cent, 51 per cent and 74 per cent in 1995, respectively. In order to overcome the shortage, the public sector recruited 151 foreign doctors as well as 104 foreign specialists in various fields such as surgery, paediatrics, obstetrics and gynaecology, as a short-term measure to avert the shortage. In addition at the end of 2000, 41 retired specialists were employed on contract basis. The public sector also purchased medical services, such as radiotherapy and cardiothoracic surgery from the private sector in Pulau Pinang and Sabah. Private surgeons and anaesthesiologists were also engaged on a sessional basis to provide services in public hospitals.

17.23 There was also a shortage of various categories of allied health professionals such as nurses, medical assistants and radiographers. Therefore, 11 new nursing colleges and 16 allied health professional training centres were approved for construction while eight existing colleges and centres were expanded during the Plan period to cater for 1,080 trainees. In addition, as a short-term measure, the Ministry of Health outsourced training for additional allied health professionals with the cooperation of the private institutions. These efforts improved the manpower supply for the health sector, as shown in *Table 17-5*.

TABLE 17-4

NUMBER AND RATIO OF DOCTORS TO POPULATION BY STATE, 1999

State	*Public Sector*			*Private Sector*	*Total*	*Ratio of Doctor to Population*
	MOH	*Non MOH*	*Total*			
Johor	725	7	732	745	1,477	1: 1,808
Kedah	457	4	461	364	825	1: 1,915
Kelantan	378	232	610	166	776	1: 1,962
Melaka	271	20	291	243	534	1: 1,111
Negeri Sembilan	326	4	330	245	575	1: 1,455
Pahang	389	2	391	221	612	1: 2,110
Perak	738	24	762	666	1,428	1: 1,483
Perlis	102	-	102	31	133	1: 1,701
Pulau Pinang	483	11	494	679	1,173	1: 1,063
Sabah	456	5	461	260	721	1: 4,120
Sarawak	465	25	490	281	771	1: 2,629
Selangor	704	55	759	1,469	2,228	1: 1,431
Terengganu	352	1	353	118	471	1: 2,194
Wilayah Persekutuan Kuala Lumpur	1,605	882	2,487	1,292	3,779	1: 372
Malaysia	**7,451**	**1,272**	**8,723**	**6,780**	**15,503**	**1: 1,465**

Note: Public sector includes Ministry of Health, other government agencies, local authorities and universities

TABLE 17-5

SELECTED HEALTH MANPOWER DISTRIBUTION AND REQUIREMENTS, 1995 AND 2000

	1995		*2000*		*2000*	
	Number	*Ratio*	*Number*	*Ratio*	*Requirement*[1]	*Deficit/ Surplus*
Doctors[2]	9,608	1: 2,153	16,468	1: 1,413	23,264	-6,796
Dentists[2]	1,741	1: 11,881	2,001	1: 11,627	3,231	-1.230
Pharmacists[2]	1,939	1: 10,667	2,801	1: 8,306	3,102	-301
Dental Technicians	362	1: 57,139	521	1: 44,656	598	-77
Dental Surgery Assistants	980	1: 21,106	1,463	1: 15,903	1,672	-209
Medical Laboratory Technologists	1,698	1: 12,181	2,399	1: 9,698	2,705	-306
Nurses & Medical Assistants	24,468	1: 845	39,890	1: 518	55,224	-15,334
Occupational Therapists	113	1: 183,046	148	1: 157,202	245	-97
Physiotherapists	217	1: 95,319	263	1: 88,463	394	-131
Public Health Inspectors	1,425	1: 14,515	1,549	1: 15,020	1,812	-263
Radiographers	422	1: 49,015	645	1: 36,071	791	-146

Notes:

[1] Based on norms

[2] Includes public and private sectors

Medical Research and Development

17.24 During the Plan period, there was increasing emphasis on medical research activities for the diagnosis, treatment, prevention and control of diseases and conditions such as HIV/AIDS, the hand, foot and mouth disease, the Nipah virus and the health effects of haze. In this regard, the Government established the Environmental Health Research Centre at the IMR, and the research capacities of the National Institutes of Health (NIH) were upgraded. The IMR achieved a major breakthrough with the discovery and commercialization of *Bacillus thuringiensis* which destroyed the larva of mosquitoes. The IMR also contributed significantly to the polio eradication efforts of the WHO in the Western Pacific Region.

17.25 During the Plan period, research activities under the Intensified Research in Priority Areas (IRPA) programme emphasized health implications associated with lifestyles and demographic changes, occupational safety and environmental health, vector-borne and other communicable diseases, new technologies in health, health care systems and industries as well as development of medical biotechnology. The universities concentrated their research on HIV/AIDS and its socioeconomic impact, food production and biotechnology. In addition, a major study covering the occupational safety and health of the self-employed, particularly those in the agricultural and forestry sector was launched by DOSH and NIOSH in 2000.

17.26 The Government also completed two major studies during the Plan period, namely the National Household Health Expenditure Survey (NHHES), 1996 and the Second National Health Morbidity Survey. The NHHES assessed household expenditures on health services. The findings, among others, showed that while private healthcare costs were higher, private facilities were the most frequently utilized sources of care for acute conditions. For inpatient care, consumers, particularly the low income group tended to utilize services provided by the public health sector. The Second National Health Morbidity Survey analyzed the major causes of morbidity arising from selected diseases amongst the population. It showed increasing incidences of non-communicable diseases such as hypertension, diabetes and obesity as well as mental disorders. There was also a possibility of undiagnosed cases among the population. Therefore, further health promotion and risk management activities were emphasized with the view to promoting wellness during the Plan period.

III. PROSPECTS, 2001-2005

17.27 During the Eighth Plan period, the focus of health sector development will be to further improve the health status of the population, particularly the low income and the disadvantaged groups and optimize utilization of resources in the delivery of healthcare. This will entail integrated planning to ensure equitable distribution of healthcare services between rural and urban areas and public and private sectors. The role, responsibility and regulatory functions of the Ministry of Health will be strengthened to improve the mechanism for effective governance of the health sector. Priority will be given to the recruitment and training of additional health professionals and allied health professionals in the public and private sectors. The regulations in the Private Healthcare Facilities and Services Act 1998 will be enforced to further improve quality as well as access to health services provided by the private sector.

17.28 The strategies for health sector development during the Eighth Plan period will include the following :

- ❑ *improving accessibility to affordable and quality healthcare;*
- ❑ *expanding the wellness programme;*
- ❑ *promoting coordination and collaboration between public and private sector providers of health care;*
- ❑ *increasing the supply of various categories of health manpower;*
- ❑ *strengthening the telehealth system to promote Malaysia as a regional centre for health services;*
- ❑ *enhancing research capacity and capability of the health sector;*
- ❑ *developing and instituting a healthcare financing scheme; and*
- ❑ *strengthening the regulatory and enforcement functions to administer the health sector, including traditional practitioners and medical products.*

Promotive and Preventive Health Services

17.29 The Government will continue to emphasize promotive and preventive health services as an important component of the health development programme. The focus will be more on addressing the changing pattern of diseases, from communicable to non-communicable, which are related to affluent lifestyles, accidents at the workplace and homes as well as the containment of new and re-emerging strains of communicable diseases. Health promotion, education and awareness programmes will be given priority in order to disseminate information to a wider audience. In this regard, the mass media and the internet will be utilized to disseminate current information on the health status of the population and health promotion activities. Increasing population, particularly in urban and industrial zones, will require environmental health programmes such as pollution control and indoor air quality maintenance to eradicate the prevalence of respiratory and circulatory diseases. In addition, the registration of traditional medical practitioners and the documentation of their medical products will be undertaken to ensure quality, safety, efficacy and affordability.

17.30 The *healthy lifestyle campaign* will be continued during the Plan period, with emphasis on promoting healthy behaviour, as well as prevention of diseases. This strategy will be in line with the wellness paradigm programme and will take into account the determinants of health such as environmental, occupational, structural, socioeconomic and behavioural factors in developing the annual thematic lifestyle campaign. In 2001, the theme will feature the promotion of healthy families, while in 2002 the theme is on environmental health. The PROSTAR will be continued and 20,000 more peer group tutors will be trained to cover 2.6 million adolescents in 2001.

17.31 The *immunization programme* will feature as an integral component of the preventive health programme. Under this programme, vaccination for BCG, whooping cough, poliomyelitis, and measles will continue to be made available for children, while yellow fever and hepatitis vaccinations for adults will be encouraged.

17.32 At the school level, the emphasis on general health, quality of life and nutritional supplementation will continue to be given priority. The integrated s*chool health service programme,* which includes regular medical check-ups, dental hygiene, nutritional improvement, promotion of sports and recreation, will be continued under the Plan period. Safety of children at homes and recreation grounds will also form an important component of the health agenda. More PROSTAR clubs will be formed and peer group tutors will be trained to promote healthy lifestyles, prevent the emergence of contagious diseases, particularly HIV/AIDS as well as prohibit smoking and drug abuse.

17.33 The *food and nutrition programme* will continue to emphasize the importance of improving the standard and quality of health. The National Council on Food Security will be established to serve as the coordinating body and one-stop centre to guide all agencies involved in food production as well as to implement and monitor the National Action Plan on Nutrition. In this regard, legislation and enforcement, including food labelling, testing and standards, will be strengthened. This will be supported by the upgrading of nine food quality laboratories and the construction of two additional laboratories in Kota Bharu, Kelantan and Johor Bahru, Johor. In addition, efforts will be taken to inculcate good eating habits through educational programmes as well as hygienic practices and quality cooking promoted through training sessions for the food handlers.

17.34 During the Plan period, the Ministry of Health will continue to take over the responsibilities of the remaining 94 local authorities in areas pertaining to public health such as inspection of food premises, food preparation and handling.

In this regard, the number of public health inspectors will be increased from 1,549 in 2000 to 4,109 in 2005 and more enforcement officers will be recruited. An additional three public health laboratories will be constructed in Kota Bharu, Kelantan; Kota Kinabalu, Sabah and Kuching, Sarawak to further enhance public health quality and safety.

17.35 The provision of *safe water* for rural and remote areas under the BAKAS programme will continue to be given priority through the development of infrastructure facilities to tap groundwater as well as rain water collection schemes. These sources of water supply will be gradually phased out as piped water is extended to rural areas. In addition, the National Drinking Water Quality Surveillance Programme will be expanded to cover all rural areas.

17.36 The *occupational safety and health* programme will continue to emphasize the creation of safer and healthier work culture and environment. The National Council for Occupational Safety and Health will also review and reformulate the National Policy on Occupational Safety and Health. The DOSH will expand occupational safety and health research to cover the fishery, transport and service sectors, with emphasis on small- and medium-scale enterprises. In addition, the NIOSH will set up more branches nationwide to intensify its training and extension activities.

Medical Care Services

17.37 Medical care services will continue to be improved to support primary healthcare services and meet the demand for quality care. It will focus on susceptible population groups and address diseases such as those related to cardiovascular conditions, diabetes mellitus and cancer. In addition, trauma management; maternal and perinatal health; diagnostic services in pathology and imaging services; and intensive care facilities, rehabilitative care and geriatric care will be upgraded. Efforts will also be taken to create centres of excellence in specialized areas such as cardiothoracic surgery; radiotherapy, oncology and nuclear medicine; and nephrology and urology services.

17.38 To cater for an increasing number of patients seeking treatment for heart diseases, an additional cardiac centre will be established at the Serdang Hospital in Selangor to cater for the central region while existing cardiac centres in Johor

Bahru, Johor, Kuching, Sarawak and Pulau Pinang will increase their bed capacity from 350 to 1,000. To improve the quality of treatment for cancer patients and enhance access to cancer care, radiotherapy facilities will be built in the Pandan Hospital, Johor and Alor Setar Hospital, Kedah. Psychiatric services will also be improved with the construction of two psychiatric hospitals in Sungai Petani, Kedah and in Tampoi, Johor to replace Permai Hospital, Johor and increase the bed capacity by 1,628. The Mental Health Act will also be amended to encourage the private sector to establish mental health treatment facilities to complement those of the public sector. To spearhead medical rehabilitation services, a new rehabilitation hospital will be built in Cheras, Kuala Lumpur. In order to further improve accessibility to medical care, two new hospitals will be constructed in Kluang, Johor and Shah Alam, Selangor. The new hospital projects will be IT-based to support the implementation of a telehealth network. The construction of 31 new hospitals, with additional 10,262 beds will be completed during the Plan period.

17.39 New multidisciplinary and self-contained ambulatory care centres will be built in selected hospitals to ensure the optimum utilization of diagnostic and therapeutic support services. These centres will further improve patient care services by providing day care and day surgery so that patients do not require to be warded in hospitals. To enhance the quality of care for patients with chronic debilitating diseases and terminal illnesses, extended medical care services, which included inpatient care, day care and services at homes, will be expanded.

17.40 During the Eighth Plan period**,** a total of 40 health clinics will be constructed to provide a comprehensive range of outpatient services, under the decentralized outpatient services concept. More rural and urban health clinics will continue to be constructed and the scope of services offered will also be expanded to include alternative birthing services, geriatric care, post operative care, rehabilitative medicine, community-based mental healthcare and health education. In addition, selected clinics and centres in Johor, Negeri Sembilan, Sabah, Sarawak and Wilayah Persekutuan Kuala Lumpur will be equipped with a teleprimary healthcare network connected to state and district hospitals. This will facilitate teleconsultation and access to specialized diagnostic services such as radiology and pathology as well as quick reference to pharmacology divisions in the hospitals.

17.41 The private health sector will be encouraged to expand its services to complement public sector efforts. In this regard, regulations under the Private Healthcare Facilities and Services Act 1998, will be enforced to improve the quality of and access to private health services. Among others, the Act will

provide for equitable distribution of accredited facilities, the deployment of qualified health and allied health professionals and the maintenance of affordable medical charges. In this regard, the role and responsibility of the Ministry of Health will be reviewed in order to increase its regulatory, licensing, quality assurance and standard setting functions so as to ensure that private medical institutions and clinics comply to the desired standards and deliver quality care.

17.42 Further development of the health sector, particularly tertiary medical care in private sector hospitals, will provide a conducive environment for the promotion of health tourism. In this regard, the use of telehealth network will also optimise the utilization of the various categories of specialist manpower in the health sector. The National Committee on Health Tourism will leverage on the health manpower and infrastructural development that are in place to further promote health tourism.

17.43 Cost sharing concepts through healthcare financing schemes will be introduced to provide consumers with a wider choice in the purchase of health services from both the public and private sectors. In this regard, a suitable mechanism to institute and manage a healthcare financing scheme will be implemented. This process will include the institution of a national health account for the health sector, as a whole, and the implementation of commercial accounting in all public hospitals.

Health Manpower

17.44 During the Plan period, efforts to address the severe shortage and unequal distribution of health manpower will be intensified, mainly through the expansion of public sector training institutions and the outsourcing of training. In addition, *Universiti Putra Malaysia, Universiti Malaysia Sarawak* and *Universiti Islam Antarabangsa* will expand their medical faculties and teaching hospital facilities. The *Universiti Sains Malaysia* will also establish a faculty of dentistry in Kubang Kerian, Kelantan. The public and private medical schools are expected to produce 5,374 graduates in medicine, 708 in dentistry and 1,855 in pharmacy, during the Plan period. About 200 students a year will continue to be sent overseas to complement training by local institutions.

17.45 Postgraduate specialization in speciality and subspecialty areas will be intensified under the Continued Medical Education (CME) programme through greater cooperation among public and private hospitals and medical schools. The CME will also utilize Information and Communications Technology (ICT) to gain

access and establish linkages with foreign universities and R&D institutions. A total of 500 medical officers will also be sent overseas to be trained in postgraduate fields such as paediatrics, orthopaedics and surgery.

17.46 A total of five new institutions to train allied health professionals will be established in Alor Setar, Kedah, Johor Bahru, Johor, Kota Kinabalu, Sabah, Kuching, Sarawak and Sungai Buloh, Selangor. Inservice training for the allied health professionals will be enhanced at the primary, secondary and tertiary care levels as well as in the teaching hospitals, during the Plan period. Private sector hospitals will also be encouraged to set up their own training facilities as well as expand existing ones to meet their manpower requirements. Greater emphasis will be given to the post-basic training of allied health professionals in areas such as anaesthesiology, paediatrics, oncology and radiotherapy.

17.47 Efforts will be undertaken to encourage all categories of health manpower to remain in the public sector. In this regard, the Government will further increase the supply of health manpower as well as continue to review and improve the terms and conditions of service for health and allied health professionals. In addition, a more conducive working environment will be provided by improving and upgrading the facilities in the hospitals and clinics. More accommodation facilities will be built in the rural and remote areas as well as in major towns where rental rates are high. In addition, greater opportunities will be provided for skills upgrading and postgraduate training, particularly in areas such as cardiothoracic surgery, rehabilitative medicine and neurosurgery.

Medical Research and Development

17.48 The focus of the R&D during the Plan period, will be to intensify quality research in public health including clinical health systems, health management and health promotion and epidemiology as well as biomedical technology. In biomedical research, the focus will be on eradication of infectious diseases including emerging and re-emerging infections, cancer, allergy, cardiovascular conditions and diabetes as well as herbal medicines, environmental health and nutrition. Research will also concentrate on areas relating to the ageing population and occupational safety and health.

17.49 The capacity of the five institutes under NIH will be further strengthened to undertake R&D. The IMR will expand its biomedical research capabilities, while the Centre for Clinical Research will further develop its capabilities in clinical research and evidence-based practice. This will include the upgrading

of the research centre to intensify research on traditional and herbal medicine to ensure their efficacy and safety, as well as better utilize the locally available herbal resources. The Public Health Institute will focus its research efforts on the health system and public health. The Institute of Health Management will focus on health management research, and the Institute of Health Promotion on behavioural research and health education.

IV. ALLOCATION

17.50 During the Eighth Malaysia Plan, a total of RM5.5 billion or 5.0 per cent of the social sector development budget will be allocated to further develop the health services, as shown in *Table 17-6*. This amount constitutes an increase of 47.3 per cent compared with the Seventh Plan allocation, reflecting the importance given to the development of the health sector. Medical care services development is accorded higher priority as 95 per cent of the allocation has been set aside for financing the ongoing construction and equipping of new hospitals and clinics. A total of RM714.5 million will be allocated for rural and environmental health.

TABLE 17-6

DEVELOPMENT ALLOCATION FOR HEALTH SERVICES, 1996-2005
(RM million)

Programme	*7MP*		*8MP*
	Allocation	*Expenditure*	*Allocation*
Patient Care Services	**2,691.85**	**2,640.04**	**4,169.00**
New Hospitals	1,510.86	1,447.39	2,284.60
Upgrading and Renovation	1,180.99	1,192.65	1,884.40
Public Health Services	**889.32**	**917.91**	**1,020.60**
Urban Health	375.15	456.37	306.10
Rural Health	500.17	447.54	708.30
Environmental Health	14.00	14.00	6.20
Other Health Services	**155.93**	**167.55**	**310.40**
Training	150.93	162.55	285.40
Research and Development (R&D)[1]	5.00	5.00	25.00
Total	**3,737.10**	**3,725.50**	**5,500.00**

Note: [1] Excludes allocation under IRPA

V. CONCLUSION

17.51 While the Seventh Plan focused on an expansionary development programme, the Eighth Plan will concentrate on improving the quality of public health and curative services. Emphasis will be given to an equitable distribution in the delivery of services and better utilization of manpower and resources through greater cooperation between the public and private health sectors. A healthcare financing mechanism will also be put in place to ensure appropriate cost sharing, thereby ensuring maximum benefits to the consumers.