



# Annual Report

MINISTRY OF HEALTH MALAYSIA

# 2007





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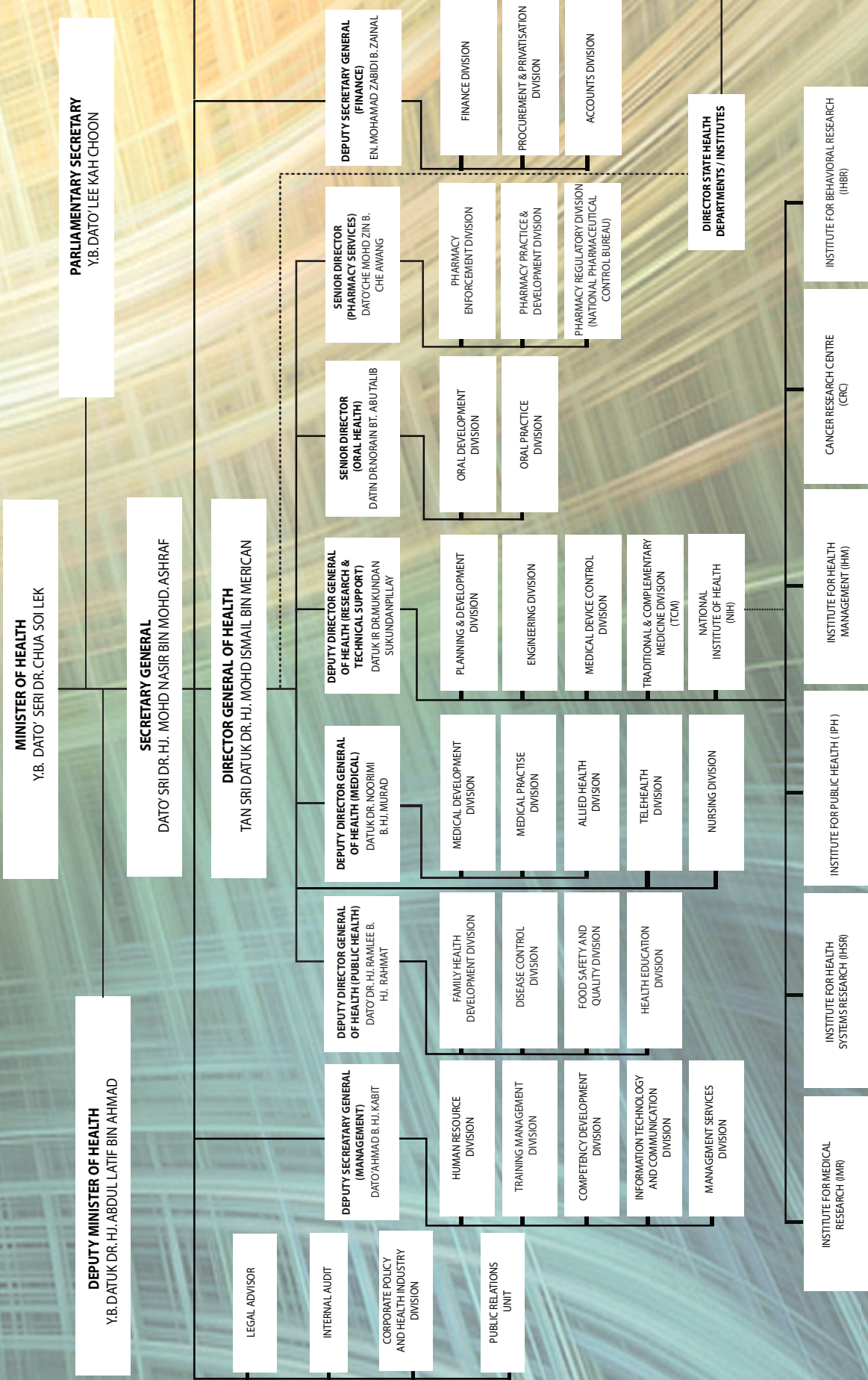
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# ORGANISATION CHART OF MINISTRY OF HEALTH MALAYSIA 2007



## **Vision for Health**

Malaysia is to be a nation of healthy individuals, families and communities, through a health system that is equitable, affordable, efficient, technologically appropriate, environmentally adaptable and consumer-friendly, with emphasis on quality, innovation, health, promotion, and respect for human dignity and which promotes individual responsibility and community participation towards an enhanced quality of life.

# Mission of the Ministry of Health

The mission of Ministry of Health is to build partnerships for health to facilitate and support the people to :

- Attain fully their potential in health.
- Motivate them to appreciate health as valuable asset.
- Take positive action to improve further and sustain their health status to enjoy a better quality of life.



# HEALTH STATUS



## **HEALTH STATUS**

### **INTRODUCTION**

Malaysia is a vibrant and dynamic country enjoying continued economic growth and political stability since its independence 50 years ago. Malaysians today are generally healthier, live longer, and are better disposed to be more productive. The overall level of health attained is one of the key measures of the success of our country. Good health enables Malaysians to lead productive and fulfilling lives. In addition, a high level of health contributes to increased prosperity and overall social stability.

### **Population Structure**

The population of Malaysia in 2007 was 27.17 million with an average annual population growth rate of 2.0 per 100 population. The total population in 2007 increased by 0.53 million as compared to 26.64 million recorded in 2006. The geographical distribution of population showed that Selangor (including Federal Territory Putrajaya) had the highest population of 4.96 million, while Federal Territory Labuan recorded the lowest population of 0.09 million (Table 1). However, Terengganu recorded the highest growth rate of 2.5 per 100 population, followed by Selangor (including F.T. Putrajaya) at 2.3, Sabah (2.2) and Johor (2.2), while Perak recorded the lowest rate of 1.4. In 2007, 63.4% out of the total population lived in urban area, while 36.6% lived in rural area (Table 2).

Overall, the population in Malaysia is relatively young, with 43.6% of the total population were below 20 years of age, and only 6.8% of the population aged 60 years and above (Table 2). In 2007, the economically-productive population which consists of population aged 15 to 64 years was 17.2 million or 63.4% of the total population, while the economically dependent i.e age below 15 years and 65 years and above was 9.9 million or 36.6% of the total population.

Health status can be gauged by the use of health status indicators. Indicators such as life expectancy at birth, mortality and morbidity status of the country were among the indicators that can be measured, and serve as an indication of the state of health of individuals, and thus the health of the overall population.

**TABLE 1**  
**Total Population and Average Annual Population Growth Rate by State, Malaysia,**  
**2006 - 2007**

State	Population (Thousand)		Average Annual Population Growth Rate (per 100 population)
	2006	2007	
Johor	3,170.5	3,240.9	2.2
Kedah	1,882.0	1,918.7	1.9
Kelantan	1,530.7	1,560.5	1.9
Melaka	725.3	738.8	1.8
Negeri Sembilan	961.8	978.2	1.7
Pahang	1,454.9	1,483.6	2.0
Perak	2,283.0	2,314.6	1.4
Perlis	228.0	231.9	1.7
Pulau Pinang	1,492.4	1,518.5	1.7
Sabah	2,997.0	3,063.6	2.2
Sarawak	2,357.5	2,404.2	2.0
Selangor*	4,850.1	4,961.6	2.3
Terengganu	1,042.0	1,067.9	2.5
F.T. Kuala Lumpur	1,580.0	1,604.4	1.5
F.T. Labuan	84.9	86.3	1.6
<b>Malaysia</b>	<b>26,640.20</b>	<b>27,173.6</b>	<b>2.0</b>

Note : \* includes Federal Territory Putrajaya

Source : Department of Statistics, Malaysia

**TABLE 2**  
**Statistics Related to Population, 2006 – 2007**

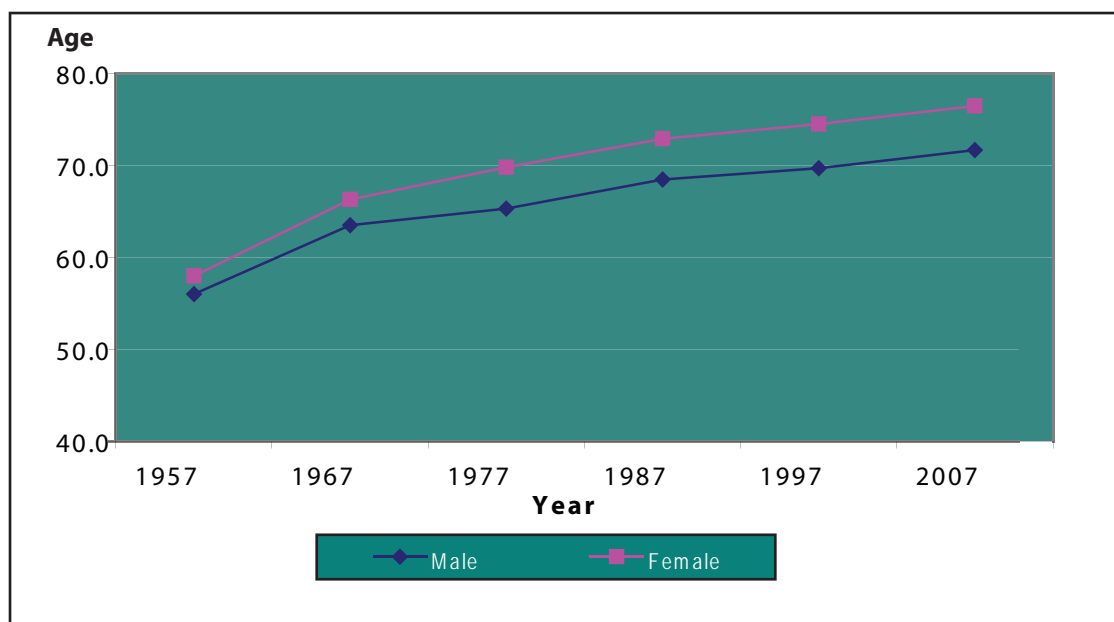
Population	2006		2007	
	Number (Thousand)	% of Total Population	Number (Thousand)	% of Total Population
Male	13,562.6	50.9	13,833.0	50.9
Female	13,077.6	49.1	13,340.6	49.1
Youths (below 20 years)	11,187.8	42.0	11,837.6	43.6
Elderly (60 years and above)	1,786.9	6.7	1,853.7	6.8
Economically-productive (age 15-64 years)	16,858.6	63.3	17,237.9	63.4
Economically-dependent (age below 15 & above 64 years)	9,781.6	36.7	9,935.6	36.6
Urban	16,838.5	63.2	17,221.6	63.4
Rural	9,801.7	36.8	9,952.0	36.6

Source : Department of Statistics, Malaysia

## Life Expectancy at Birth

Life expectancy is a measure of the number of years, on an average, that a person can expect to live. With the improvement in the nutritional and socio-economic status of the population, Malaysians can expect to live much longer than in the past. The life expectancy at birth in 2007 has increased to 71.7 years for male and 76.5 years for female as compared to 56 years for male and 58 years for female recorded in 1957. Figure 1 shows the upward trend of life expectancy for both male and female in Malaysia from 1957 to 2007.

**FIGURE 1**  
**Life Expectancy at Birth (in Years) by Gender, Malaysia, 1957-2007**



Source : Department of Statistics, Malaysia

## Mortality

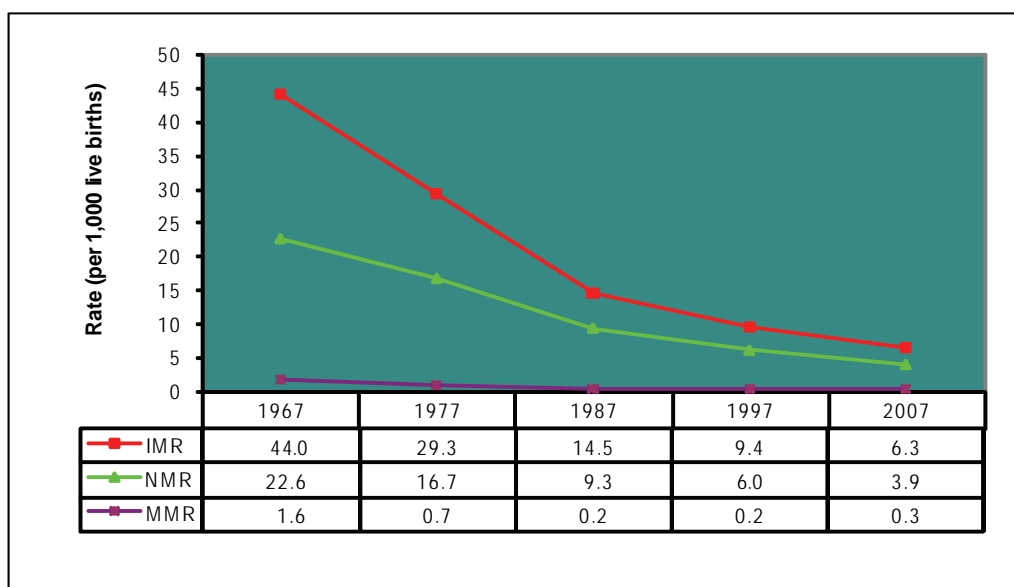
Mortality data provides an useful endpoint for measuring health. These data provide a comprehensive picture of the health of the community, since it covers every individual. Many different types of measures are used to provide views of health from differing perspectives.

For the past 40 years (1967-2007), the mortality rates in Malaysia had been decreasing. In 2007, crude death rate per 1,000 population had decreased to 4.5 as compared to 7.2 recorded in 1967.

The trend of maternal mortality ratio (MMR), infant mortality rate (IMR) and neonatal mortality rate (NMR) in Malaysia are shown in Figure 2. The MMR, which refers to the ratio of deaths occurring in women during pregnancy, childbirth or within 42 days after childbirth, due to causes directly or indirectly related to the pregnancy or childbirth, showed an apparent decrease from 1.6 per 1,000 live births in 1967 to 0.2 in 1987 and 1997. This decrease may be due to the improved reporting system introduced in 1990, with the establishment of the Confidential Enquiry into Maternal Deaths (CEMD) by the Ministry of Health Malaysia. However, there was a slight increased in the MMR in 2003 to 0.3 per 1,000 live births and the rate thereafter has stabilized for the past 5 years, i.e from 2003 to 2007.

Infant mortality rate per 1,000 live births had improved from 44.0 in 1967 to 6.3 in 2007. Besides that, neonatal mortality rate per 1,000 live births for the same period dropped to 3.9 as compared to 22.6 in 1967.

**FIGURE 2**  
**Infant Mortality Rate (IMR), Neonatal Mortality Rate ( NMR ) and Maternal Mortality Ratio (MMR), Malaysia, 1967-2007**



Source: Department of Statistics, Malaysia

Another indicator which showed an improvement was the under five mortality rate which recorded 8.1 per 1,000 live births in 2007 as compared to 8.7 in 2003 (Table 3). Intensive immunization efforts and other related programmes carried out by both the public and private sectors contributed to these improvement.

**TABLE 3**  
**Mortality Rates in Malaysia, 2003 - 2007**

Indicator	2003	2004	2005	2006	2007
Crude Death Rate (per 1,000 population)	4.5	4.5	4.5	4.5	4.5
Maternal Mortality Ratio (per 1,000 live births)	0.3	0.3	0.3	0.3	0.3
Infant Mortality Rate (per 1,000 live births)	6.6	6.5	6.6	6.2	6.3
Neonatal Mortality Rate (per 1,000 live births)	3.2	3.7	3.9	3.7	3.9
Under Five Mortality Rate (per 1,000 live births)	8.7	8.5	8.5	7.9	8.1
Toddler Mortality Rate (per 1,000 population aged 1 – 4 years)	0.5	0.4	0.5	0.4	0.4
Stillbirth Rate (per 1,000 births)	4.2	4.2	4.4	4.6	4.5
Perinatal Mortality Rate (per 1,000 births)	6.8	6.8	7.2	7.3	7.3

Source: Department of Statistics, Malaysia

Similarly, the toddler mortality rate also showed a decline from 0.5 per 1,000 population aged 1 to 4 years in 2003 to 0.4 in 2007. The declining trend can be attributed to the improved nutritional status of the children, improved immunity, and better environmental conditions.

However, perinatal mortality rate per 1,000 births increased to 7.3 in 2007 from 6.8 recorded in 2003. The stillbirth rate also showed an increase from the year 2003 (4.2) to 2006 (4.6), however it dropped to 4.5 per 1,000 births in 2007.

## Morbidity

The health status of a community is usually measured in terms of morbidity, which focuses on the incidence or prevalence of disease, and mortality, which describes the proportion of death in a population.

Hospitalisation indicates the severity of disease that needs further treatment, stabilization of patients or the need of isolation in order to prevent the spreading of the diseases to others. For the period of 2000-2007, the number of admissions in Ministry of Health (MoH) Hospitals had increased by 26.3% to 1,964,903 in 2007 from that of 1,555,133 in 2000. The 10 principal causes of hospitalisation in the MoH Hospitals for 2007 is shown in Table 4.

In 2007, normal delivery (14.47%) was the top leading causes of admissions to MoH hospitals followed by Complication of Pregnancy, Childbirth and the Puerperium (12.31%).

**TABLE 4**  
**10 Principal Causes of Hospitalization in Ministry of Health Hospital, 2007**

Principal Causes	No. Of Discharges	Percentage
1. Normal Delivery	284,261	14.47
2. Complication of Pregnancy, Childbirth and the Puerperium	241,942	12.31
3. Accident	172,494	8.78
4. Diseases of The Respiratory System	145,025	7.38
5. Diseases of The Circulatory System	139,528	7.10
6. Certain Conditions Originating in the Perinatal Period	131,977	6.72
7. Diseases of the Digestive System	104,138	5.30
8. Diseases of the Urinary System	69,970	3.56
9. Ill-Defined Conditions	64,049	3.26
10. Malignant Neoplasms	63,447	3.23
<b>Total Admissions</b>	<b>1,964,903</b>	<b>100.00</b>

Source : Health Informatics Centre, MoH

Similarly, the number of deaths (for all causes) in MoH Hospitals for the period of 2000-2007 increased from 30,319 in 2000 to 43,089 in 2007. As for the 10 top causes of death in government hospitals, Heart Diseases and Diseases of Pulmonary Circulation was the top cause of death recorded in 2007 (16.49%), followed by Septicaemia (13.38%) and Malignant Neoplasms (11.28%). The 10 principal causes of deaths in the MoH Hospitals for 2007 is shown in Table 5.

**TABLE 5**  
**10 Principal Causes of Death in Ministry of Health Hospital, 2007**

Principal Causes	No. Of DEATHS	Percentage
1. Heart Diseases and Diseases of Pulmonary Circulation	7,104	16.49
2. Septicaemia	5,764	13.38
3. Malignant Neoplasms	4,862	11.28
4. Cerebrovascular Diseases	3,664	8.50
5. Pneumonia	3,203	7.43
6. Accident	2,240	5.20
7. Diseases of the Digestive System	2,096	4.86
8. Certain Conditions Originating in the Perinatal Period	1,771	4.11
9. Nephritis, Nephrotic Syndrome and Nephrosis	1,763	4.09
10. Ill-Defined Conditions	1,099	2.55
<b>Total Deaths (All Causes)</b>	<b>43,089</b>	<b>100.00</b>

Source : Health Informatics Centre, MoH

## Health Facilities and Facility Utilisation

As for Health Facilities, there were 806 Health Clinics, 1,927 Community Clinics and 97 Maternal and Child Clinics in 2007. There were 130 government MoH hospitals and 6 Institutions with total beds complement of 32,149 and 5,000 respectively. Overall Bed Occupancy Rate (BOR) for MoH hospitals and Institutions in 2007 was 64.23% (Table 6).

**TABLE 6**  
**Health Facilities by Type, Total Bed Complements and Bed Occupancy Rate, 2003-2007**

Facility	2003	2004	2005	2006	2007
No. of MoH Hospital	117	119	122	128	130
No. Special Medical Institution	6	6	6	6	6
Total Beds Complement <sup>1</sup>	34,089	34,414	34,761	35,739	37,149
Bed Occupancy Rate(%) <sup>1</sup>	63.66	64.90	66.93	65.07	64.23
No. of Health Clinic	864	859	809	807	806
No. of Community Clinic	1,847	1,924	1,919	1,919	1,927
No. of Maternal and Child Clinic	95	93	89	88	97

*Note: <sup>1</sup>refers to beds complement and BOR in MoH Hospitals including Special Medical Institutions*

*Source : Health Informatics Centre, MoH*



# MANAGEMENT PROGRAMME



## **MANAGEMENT PROGRAMME**

### **INTRODUCTION**

Management Programme consists of two (2) Sections; Management and Finance. The Management Section comprises of five (5) Divisions, namely, Human Resource, Training Management, Competency Development, Management Services, Information and Communication Technology. The Finance Section has three (3) Divisions; Finance, Accounts and Procurement and Privatisation. The main objective of this programme is to facilitate and support the achievement of the MoH policy and objective by supporting the other programmes through an efficient and effective service system, human resource management, information technology management, competency development, training and career advancement and financial management.

### **ACTIVITIES AND ACHIEVEMENTS**

#### **MANAGEMENT SECTION**

##### **Human Resource Planning and Development**

Human resource planning and development in health sector is the responsibility of Human Resource Division (HRD) in the Ministry of Health. The function of HRD is to ensure that MoH encompasses a well structured organization and optimum manpower utilization. All the activities conducted by HRD are aimed to strengthen the workforce and to further enhance their commitment level in order to achieve an efficient and excellent services delivery system.

##### **Establishment**

Reorganization of structure and function is carried out to ensure that optimum utilization of human resources and efficiency of the service delivery are achieved. In line with this objective, a total of 20 reorganization exercises were conducted in 2007 which include the restructuring of Planning and Development Division, Public Health Institute and Engineering Services Division. This also includes the establishment of Health Promotional Board of Malaysia, Nursing Division, and the Core Team Unit for National Cancer Institute. A number of 17,856 new posts were created in 2007 which brings to the total number of 177,877 posts in MoH as of 31st December 2007.

##### **Scheme and Allowance Review**

Several initiatives had been taken by HRD to attract and retain health human resource on public sector. In accordance with these objectives, several proposals had been submitted and approved by the Public Service Department (PSD) which include Post Basic Incentive for Paramedics. This incentive covers 26 clinical specializations and is given to Paramedics with Post Basic qualification and who are engaged in their field of specialization on a full time basis. The rate of incentive given is RM100.00 per month.

## **Human Resource Management Information System (HRMIS)**

As of 31st December 2007, a total of 13 modules and 48 sub modules were established in the HRMIS application. Out of the 48 sub modules, a total of 8 sub modules were then implemented at MoH. These sub modules include the Establishment Data Sub module, Service Profile Sub module, Personnel Record Sub module, Leave Management Sub module, Asset Declaration Sub module, Medical Management Sub module, Management – Employee Relations Sub module and Psychology and Counselling Sub module.

In the year 2007, training sessions regarding the Leave Management Sub Module were held for personnel from the MoH Headquarters, Putrajaya Hospital and Selangor State Health Department. Management of basic data involving new centres of responsibility with priority given to new hospitals in Sabah was also an activity carried out in 2007. Updating of establishment data, personnel record and service record was executed and categorized by Institutions and State Health Departments. Monthly updates of the HRD website were carried out, as well as implementation and rolling - out of new sub modules from the HRMIS Application at the MoH Headquarters.

### **Promotion**

Promotion and acting exercise is listed as one of the quality procedures for the implementation of MS ISO 9001 : 2000 in HRD. It is also one of the Key Performance Indicator for HRD. In 2007, 94 promotion exercises were carried out involving 1,592 officers and 92 acting exercises involving 1,974 vacant posts for Management and Professional Group. As matters pertaining to superintend, 1,611 applications were approved in 2007. As for Support Group (I and II), 46 acting exercises involving 3,159 officers and 40 promotional involving 2,367 were carried out.

Acting exercises were implemented through zoning to ensure efficiency and transparency of posting and promotion exercises for officers within the respective zones. Workshop on Management of Promotion, Acting and Superintending was also conducted for the Health State Departments and Institutions to further enhance the quality, efficiency and effectiveness of the delivery system.

### **Disciplinary Action and Integrity**

Efficient, effective and transparent governance will ensure an excellent organizational performance. To achieve this, several preventive, integrity monitoring and punitive actions had been taken throughout the year 2007. As of December 2007, 26 cases (44.8%) out of 58 cases related to disciplinary violation which were reported among the officers from the Management and Professional Group have been solved. Meanwhile, a total of 169 cases involving officers from the Support Group have been solved while 222 cases were still pending. Other integrity related matters such as permission to take part in outside employment and property declaration had been carried out which includes 18 matters among Management and Professional Group and 141 matters among the Support Group.

## **Service Matters**

In 2007, the HRD carried out 27,617 exercises pertaining to service matters for the Paramedic and Auxiliary personnel. The HRD also carried out 11,644 exercises for the Management and Professional Group, 856 exercises for Upper Management and Specialists Group, and 20,210 exercises for the Common User and Support Group. These exercises include amongst others, matters pertaining to confirmation in service, confirmation of appointment, extension of probation period, and conferment of pension status.

## **Recruitment and Post-Filled**

To ensure the smooth service delivery provided by MoH, the HRD has taken an active approach towards the filling of vacant posts. In 2007, Public Service Commission (PSC) empowered the Ministry to recruit a total of 3,658 personnel of Support Group (II), comprising of Health Attendants, cooks, office assistants and general workers. In addition, a total of 2,561 vacancies were filled by personnel supplied by PSC, PSD and other agencies.

## **Courses Employment**

In an effort to offset the shortage of Medical Officers and Paramedic Personnel, the Government has allowed the Ministry to recruit personnel on a contract basis. A total of 16 contract Medical Officers were appointed upon mandatory retirement in 2007. Meanwhile, 34 Medical Officers were newly-appointed on a contract basis, of whom 10 officers were Malaysian citizens and 24 were non-citizens. A total of 571 contract Paramedic and Auxiliary personnel were also appointed in 2007.

## **Training**

In 2007, the HRD successfully organized several courses to equip officers with the necessary knowledge and skills in order to improve their capability and competency to contribute to the organization. A total of 2 leadership courses, entitled 'Improving Personality Dynamics' and 'Leadership and Organizational Effectiveness' were held for Administrative and Diplomatic Officers (Grades M48 to M52). Other courses organized by the HRD include Orientation for Medical Officers (Grade U41), Service Management and Pension for officers from the Management and Professional Group, as well as IT courses.

## **Naziran (Inspectorate)**

There were 2 recruitment inspectorate sessions conducted in 2007, involving the Terengganu State Health Department from 25-27 August 2007 and the Federal Territory of Kuala Lumpur Health Department on 18 November 2007. A total of 2 inspectorate sessions were also conducted concerning service matters involving the Terengganu State Health Department (27 August 2007), Kedah (10-11 September 2007), and Perlis (12 September 2007). A specific inspectorate pertaining to service matters of the Paramedic and Auxiliary Group was conducted in 2007 involving all states in Peninsular Malaysia, Sabah and Sarawak. All units under the HR Management and Development Branch were involved in this particular session.

## Implementation of MS ISO 9001:2000

The HRD has made efforts in strengthening the Quality Management System by obtaining the MS ISO 9001:2000 certifications. The Quality Management System was implemented on 1 October 2007 and the Adequacy Audit was carried out by SIRIM on 12 December 2007. The Compliance Audit is scheduled to take place from 13-15 February 2008.

## Financial Management

During the 2007 financial year, the HRD spent a total of RM2,323,363.32 (98%) of its Operating Budget. The total expenditure for training management alone was RM87, 846.00.

## Improvisation and Innovation

The Human Resource Department (HRD) constantly promotes an environment that encourages innovative and creative ways of working that could enhance the management quality, service delivery and work processes. Improvisations and innovations established and implemented by the HRD include:

- The improvisation of the current Medical Officer Career Development Book which has been translated into Tamil and Mandarin; and the publication of Career Development Book for Dental Officers and Pharmacist which were released in Bahasa Malaysia and English.
- The introduction of a Response Glossary (*Glosari Maklumbalas*), a system developed for the HRD to manage feedbacks from the general public efficiently. The first phase (Assessment phase) was completed in the middle of December 2007. The second phase (Implementation phase) involving several units in HRD will begin in January 2008, with the aim to collect input and feedbacks pertaining to the system. This system is expected to be completely implemented by March 2008.
- The preparation of a "Videography of Medical Officers" as an added value to the current Medical Officer Career Development Book. It is aimed to enlighten the undergraduates and current Medical Officers about the advantages of working in the public sector. It would also be an excellent platform to visually deliver the Ministry's aims and objectives and is expected to be fully completed by the middle of 2008.
- The compilation of profiles of the top management of MoH for the purpose of record, providing information for the PMO as well as promotional exercises.
- The creation of Integrity Management Report System (*Sistem Pelaporan Pengurusan Integriti* or SPPI), enabling integrity management reports to be maintained via online by the Health State Departments / Institutions.
- The compilation of "Allowances and Facilities of the Ministry of Health Workers" and the preparations of an index of policy papers.

- The creation of the Online Intake System (*Sistem Pengambilan Atas Talian* or SPAT) aimed to hinder delays whilst ensuring that the intake process is done systematically. This system is expected to hasten the intake processes of Support Group II within two (2) months as compared to the current period of six (6) months. Phase one of the online registration was implemented in December 2006 and the second phase is expected to be implemented in late 2008.
- The creation of "Mailing Records and Service Surveillance" (*Sistem Rekod Surat dan Pemantauan Urusan Perkhidmatan* or *Sistem Pre9*) aimed to facilitate mailing records and to print out letters of acceptance automatically besides actively monitoring service matters of MoH staff sent for processing. This system also enables the officer in-charge to give prompt response regarding the matter at hand without the hassle of consulting third parties. The pilot project is currently on trial at the Common User and Support Unit before it is expanded to the other units in HRD.

## TRAINING MANAGEMENT

The Training Division (TD) is responsible in developing the human capital of the Ministry of Health (MoH) through the many training program drawn up with the objective of supporting an efficient health delivery system. The broad agenda of the TD for the overall management of training and human resource development in MoH was to provide and ensure that its human resources are competent, disciplined, highly skilled and imbued with strong ethics, work values and commitment to excellence.

The strategies of the TD in training and human resource development had also taken into consideration their capacity to provide services in response to the dynamic changes in health needs and demands. The TD had taken cognisance of the importance of training and human resource development to be planned in an optimal manner, as it would help in dealing with the issues of shortages and maldistribution of health manpower and also to the improvement of the overall health system management. In this respect, the focus of the TD is to increase opportunity for quality training and education to strengthen the human resource base.

In the year 2007, the TD had implemented various training activities, reviewed certain training policies and also had developed or restructured and evaluated the curriculum and the management of examination of some of the Basic and Post Basic training programmes. These initiatives were taken to ensure that the training provided could meet the demands from new health care services and facilities that have developed rapidly and extensively over the years. The training colleges of MoH had been consolidated in line with efforts to ensure that their education and training functions were carried out effectively to produce quality Allied Health Science Personnel (AHSP) to meet the critical manpower needs in the health care sector.

The following are the priority issues of TD in 2007:

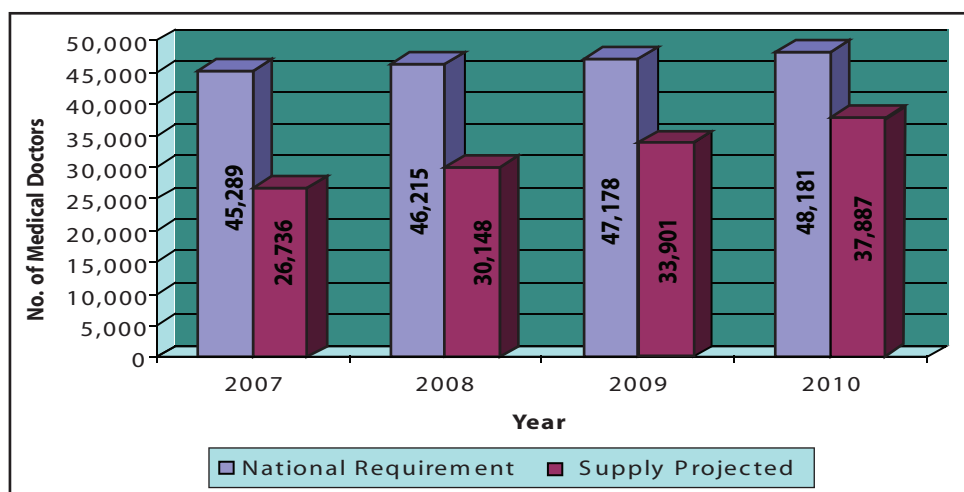
- a) Manpower Planning;
- b) Training Programmes;
- c) Management of Examinations;
- d) Curriculum Development; and
- e) Management of the Training Colleges of MoH

In the year 2007, there were 173 posts in the TD. There were 1,258 posts of training colleges tutors (including those posts in TD). In TD, 133 (77%) posts were filled. The number of training colleges tutors posts filled was 839 (67%).

### Manpower Planning

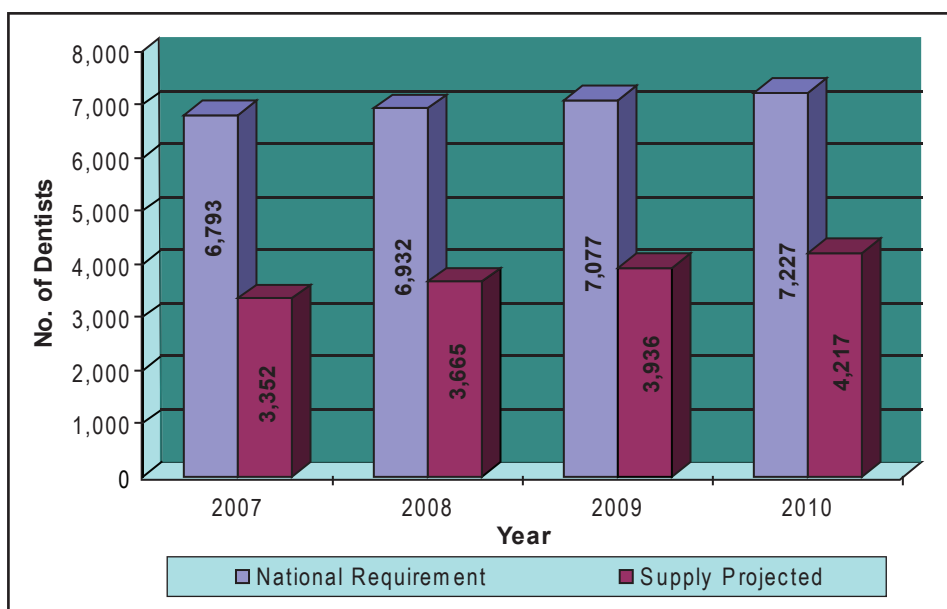
A review was conducted on the projection for the requirements and supply of Medical Doctors, Dentists, Pharmacists, and the AHSP for the period of 2007 to 2010. The indication from the projection is that the increase in the supply of Medical Doctors, Dentists, Pharmacists, and the AHSP for the next few years to come would still be inadequate to meet the increasing needs of the nation. However, the deficits between the supply and demand of those categories of health human resources are expected to steadily reduce over the years. Figure 1, 2, 3 and 4 showed the current and projected national requirement and stock of Medical Doctors, Dentists, Pharmacists, and the AHSP respectively.

**FIGURE 1**  
**Current and Projected Requirement and Supply of Medical Doctors to Population on the Ratio of 1:600**



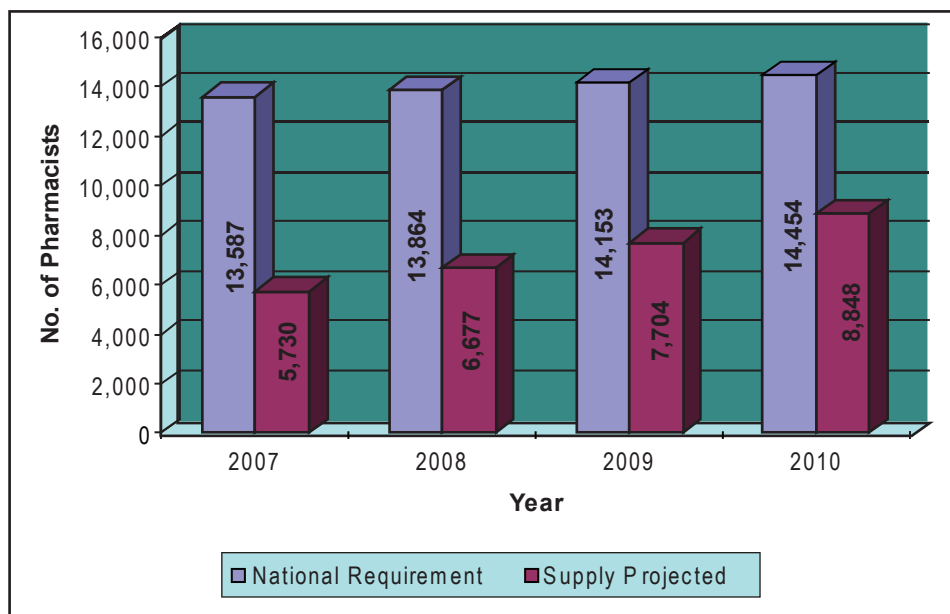
Source : Training Management Division, MoH

**FIGURE 2**  
**Current and Projected Requirement and Supply of Dentists to Population on the Ratio of 1:4,000**



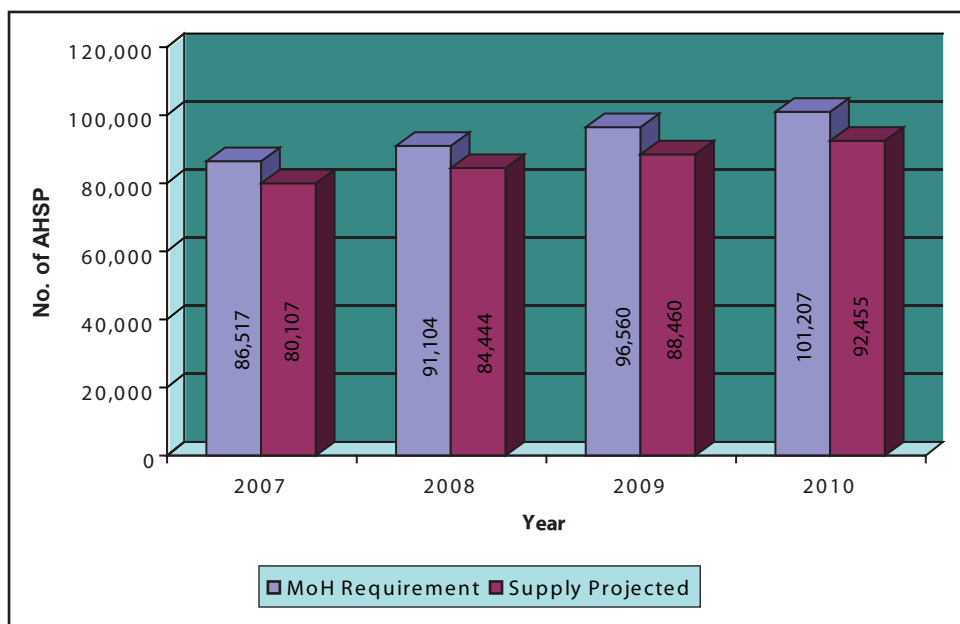
Source : Training Management Division, MoH

**FIGURE 3**  
**Current and Projected Requirement and Supply of Pharmacists to Population on the Ratio of 1:2,000**



Source : Training Management Division, MoH

**FIGURE 4**  
**Current and Projected Requirement and Supply of AHSP for MoH**



Source : Training Management Division, MoH

### Training Programmes

In the year 2007, there was an increase in the intake of trainees for various categories of training as compared to the year 2006, with the exception of Post Basic training, Specialist training and the Sub-Speciality training (Medical Officers), as shown in Table 1.

**TABLE 1**  
**Intake of Trainees by Type of Training, 2006 - 2007**

No.	Types of Training	2006	2007
1.	Basic Training in MoH training colleges (Basic Training through outsourcing program)	5,588 (879)	5,921 (953)
2.	Post Basic Training	2,459	2,267
3.	Specialist Training (Medical Officers)	451	441
4.	Sub-Speciality Training (Medical Officers)	87	80
5.	Masters/ Doctoral courses	53	104
6.	Short Term In-service courses (Overseas)	200	387
7.	In-Service Conversion courses	201	210
8.	Induction courses	9,632	10,977

Source : Training Management Division, MoH

## Basic Training (AHSP)

In 2007, the intake of trainees for the Basic courses in the training colleges of MoH was 5,921 of which 953 were trainees from the outsourcing program. Table 2 shows the intake of trainees for the Basic training courses in the training colleges of MoH according to disciplines for 2006 and 2007.

**TABLE 2**  
**Intake of Trainees for Basic Training by Category of AHSP, 2006 - 2007**

No.	Discipline	2006	2007
1	Nurse	2,199	2,481
2	Community Nurse	1,323	1,322
3	Medical Assistant	613	664
4	Pharmacy Assistant	101	112
5	Assistant Environmental Health Officer	237	224
6	Medical Laboratory Technologist	274	273
7	Radio grapher	82	121
8	Dental Nurse	130	118
9	Dental Technician	40	46
10	Physiotherapist	59	77
11	Occupational Therapist	60	78
12	Dental Surgery Assistant	267	141
13	Public Health Assistant	203	264
	<b>Total</b>	<b>5,588</b>	<b>5,921</b>

Source : Training Management Division, MoH

## Post Basic Training

A total of 2,267 AHSP attended Post Basic training courses in 30 different disciplines in the training colleges of MoH. Table 3 shows the number of AHSP who have attended Post Basic training courses according to disciplines for the year 2006 and 2007.

**TABLE 3**  
**Intake of Trainees for Post Basic Training, 2006 - 2007**

No.	Discipline	2006	2007
1	Midwifery	776	864
2	Emergency Care	120	134
3	Public Health Nursing	116	111
4	Environmental Health	6	18
5	Laboratory Management	-	33
6	Health Personnel Management	141	85
7	Primary Healthcare	52	42
8	Transfusion Medicine	-	-
9	Gerontology	26	14
10	Coronary Care	97	59
11	Neonatal Nursing	78	54
12	Ophthalmic Nursing	39	33
13	Oncology Nursing	42	19
14	Orthopaedic Nursing	83	78
15	Paediatric Care	98	59
16	Perioperative Care	149	122
17	Psychiatric Nursing	70	56
18	Intensive Care	153	117
19	Renal Nursing	115	104

20	Legal and Prosecution	15	18
21	Cytology	-	-
22	Computerize Tomography	20	19
23	Anaesthesiology	16	5
24	Diabetic Management	53	65
25	Sports Medicine	41	27
26	Hemostasis	-	11
27	Occupational Health and Safety	-	-
28	Paediatric Dental Care	18	-
29	Forensic	43	22
30	Otorinolaringology Treatment	21	12
31	Microbiology	-	-
32	Food Safety and Cleanliness	5	-
33	Orthodontic Treatment	-	-
34	Infection Control	-	20
35	Perianesthesia care	24	38
36	Periodontic Care	21	-
37	Oral Surgery	-	16
38	Neuroscience care	21	12
	<b>Total</b>	<b>2,459</b>	<b>2,267</b>

Source : Training Management Division, MoH

### Specialist and Sub-speciality Training

A total of 441 Medical Officers were offered for the Master in Medicine Programme in various fields of specialization under the Federal Training Scholarship for the year 2007, while 80 Medical Specialists were offered to undergo sub-speciality training. Table 4 and 5 showed the intake of Medical Officers and Medical Specialists for specialist and sub-speciality training for 2006 and 2007 respectively.

**TABLE 4**  
**Intake of Medical Officers for Specialist Programmes, 2006 - 2007**

No.	Discipline	2006	2007
1	Obstetric & Gynaecology	28	25
2	Anesthesiology	54	49
3	Paediatric	23	25
4	Internal Medicine	46	38
5	Psychiatry	22	20
6	Radiology	30	30
7	General Surgery	35	42
8	Ophthalmology	22	24
9	Orthopaedic	36	30
10	Otorhinolaryngolog	21	21
11	Pathology	22	31
12	Family Medicine	31	32
13	Public Health	35	24
14	Sports Medicine	3	3
15	Rehabilitation Medicine	6	5
16	Emergency Medicine	21	23
17	Neurosurgery	4	5
18	Plastic Surgery	3	2
19	Clinical Oncology	4	4
20	Pediatric Surgery	3	3
21	Tranfusion Medicine	2	5
	<b>Total</b>	<b>451</b>	<b>441</b>

Source : Training Management Division, MoH

**TABLE 5**  
**Intake of Medical Specialists for Sub-Specialty Training, 2006 - 2007**

No.	Discipline	2006	2007
1	Medicine	22	19
2	Surgery	12	11
3	Paediatric	7	10
4	Obstetric & Gynaecology	5	4
5	Anesthesiology	6	8
6	Orthopedic	6	5
7	Otorhinolaryngology	6	4
8	Ophthalmology	4	6
9	Psychiatry	4	5
10	Pathology	8	4
11	Radiology	3	2
12	Family Medicine	3	2
13	Radiotherapy	-	-
14	Forensic Medicine	-	-
15	Palliative Medicine	1	-
16	Health Management	0	-
	<b>Total</b>	<b>87</b>	<b>80</b>

Source : Training Management Division, MoH

### **Masters and Doctorate Courses**

A total of 104 officers from different health service schemes were offered the Federal Training Scholarship to undertake Masters (94 officers) and Doctorate courses (10 officers) in different disciplines relating to health in the year 2007.

## **Short Term In-Service Courses**

Every MoH personnel have the opportunity to attend short-term in service courses financed from the Development Budget of 9th Malaysia Plan (9MP). In 2007, there were 131,473 and 387 MoH personnel attended short-term in-service courses locally and short courses overseas respectively.

## **Conversion Courses (In-Service)**

In 2007, TD conducted the in-service conversion courses for the career advancement of Community Nurses to Nurses for 210 Community Nurses as compared to 201 in 2006.

## **Management of Examinations**

In the management of examination for the year 2007, the TD had worked to strengthen various aspects in the management of all Basic and Post Basic courses examinations conducted in the training colleges and also the examination of departmental panel subjects.

The examination questions were reviewed and more were developed to enlarge the pool of questions in the examination questions bank for Basic and Post Basic courses in 2007. Courses on the measurement and evaluation techniques for the tutors in order to update their knowledge and skills in the management of examinations were also conducted.

All the examinations scheduled for the year 2007 were successfully implemented. Almost all the courses of the different disciplines achieved a passing rate of more than 85%. However, there were several issues in the administration of the examination that need to be overcome to further improve the students' achievement in the examinations and the overall quality of the graduates.

## **Development of Curriculum**

In 2007, TD had revised and improved on the Guidelines for the Evaluation of the Credit System and also drafted the Guidelines for Co-curriculum Activities following the decision to make co-curriculum compulsory in Basic courses.

The training curriculum for the following Basic programmes were further enhanced:

- Diploma in Medical Assistant
- Certificate in Dental Technology
- Diploma in Radiography and Radiotherapy

Training curriculum for Post Basic programmes that had been enhanced were:

- Neonate care
- Renal care
- Paediatric
- Orthopaedic care

TD had also developed the curriculum of a new specialise course, namely, Rehabilitative Care.

### **Management of the Training Colleges**

In 2007, TD had taken further effort to strengthen the management of the training colleges following the decision to centralise the administration of the colleges under TD to ensure the colleges are managed and monitored systematically.

As an initiative to streamline the organisation of convocations for the training colleges, TD had drafted the Guidelines for the Organisation of Convocation to assist the colleges in organising the occasion more effectively and also to ensure certain degree of uniformity in their implementation.

TD had also intensified its quality improvement initiatives for its training activities. A national convention for QCC was organized whereby the QCC teams competed among themselves.

Two (2) Quality Assurance Performance (QAP) reports on the Basic Training Programme of MoH training colleges were prepared, each for the period of January-June 2007 and July – December 2007 respectively. The overall level of compliance of MoH training colleges to the quality assurance indicators set was commendable.

The outsourced training programme in several private training institutions were being monitored from time to time. TD had carried out evaluation on new private training institutions that had applied to participate in the outsourcing program. The teaching and training activities of MoH training colleges were also monitored to ensure that they meet the needs and standards set.

### **INFORMATION AND COMMUNICATION TECHNOLOGY**

The Ministry of Health Malaysia (MoH) always enhances its service delivery system by using the information and communication technology. The program to strengthen, enhance and expand MoH ICT infrastructure throughout the country which was stated as the main focus in 2007 was implemented as scheduled.

The data communication network infrastructure connects application system to all of the MoH's offices nationwide and was implemented as planned. The Information and Communication Technology (BTMK) Division had successfully delivered computer facilities to the headquarters according to the ratio stated in the ICT Strategic Plan (ISP).

## **Strengthening the MoH ICT Network Infrastructure**

The MoH network systems (MOH\*Net) which has been enhanced from the COINS Frame Relay technology to IPVPN Multi Protocol Label Switching (MPLS) and implemented at 26 locations in year 2006 has been extended to 315 locations by December 2007.

In the same year, the Ministry procured 654 personal computer (PC) for officers in Supporting Group 1 and above in the Head Quarters (HQ) for office automation. The Ministry also purchased an additional of 311 PCs for the use of new recruitment of staffs both inside and outside the HQ. Procurement of PC for officers outside HQ's will continue until 2010.

## **Enhancing the Service Delivery System to MoH Staff**

The Technical Support and Helpdesk Unit which was established in 2006, has been modernized by using centralized helpdesk software and application. With the applications, every complaint was successfully handled in less than two hours. As a result, users can easily used Helpdesk as a channel for them to lodge their problems regarding ICT. About 7,093 complaints were recorded in 2007, increased by 53% as compared to 4,635 received in 2006. This shows that the application system that was developed by Information Technology and Communication Division (BTMK) is efficient and easy to use.

## **Closing the Gap (Digital Divide) of ICT Knowledge Among MoH Staff**

The mechanism used by MoH to close the digital gap of ICT knowledge among MoH staff is by implementing a level of assessment methodology. In order to achieve this purpose, Skill Assessment and Certification (ISAC) which was established by *Institut Tadbiran Awam Negara* (INTAN) were widely used in the public sector. In 2007, MoH organized 15 test sessions nationwide with the participation of 3,275 staff. Out of these, 2,203 staffs passed the test in 2007 as compared to 600 in 2006. This statistics showed that ICT knowledge among MoH staffs increased from time to time.

MoH also organized office automation and technical training in order to create opportunities for staffs to develop their skills using ICT software properly. In 2007, MoH organized six (6) training sessions intensively on office automation involving 145 staffs.

## **Monitoring, Coordinating And Providing Technical Advise Services For Future, Current And Implemented ICT Projects**

ICT Project in MoH can be divided into 4 phases; Planning, Development, Implementation, and Maintenance. In 2007, the ongoing projects coordinated by the BTMK were:

### **i. Planning Phase**

There are two categories of projects in this phase i.e. new project and upgrading project. The new projects approved by MoH ICT Steering Committee (JPICT) were Laboratory Information System (LIS), *Sistem Pengurusan Penguatkuasaan Farmasi (SPPF)*, *Sistem Klinikal Maklumat Kesihatan Pergigian (SKMKP)*, Hospital Information System (HIS) in hospitals (Ipoh, Pulau Pinang, Klang, Kuantan, Temerloh, Kluang, Bintulu, Jempol, Jasin, Kuala Terengganu, Cameron Highland, Queen Elizabeth and Likas), new application to make use of ICT infrastructure in Klang Valley (eKL) and Vekpro System. The upgrading projects were QUEST3 System and Food Safety Information System of Malaysia (FoSIM).

### **ii. Development Phase**

In 2007, there were 13 systems in development phase which included *Sistem Pengurusan Pesakit (SPP)*, Hospital Information System (HIS) in hospitals (Ampang, Sungai Buloh, Alor Star, Keningau, Sungai Petani and Pekan), Geographical Information System (GIS), *Sistem Informasi Program Pap Smears (SIPPS)*, Sistem MyTB, Medical Practice Control System (MedPCs), Integrated Campus Management System (ICMS), Training Management System (TMS), Library Management System (LMS), E-Reporting System, *Sistem Maklumat Pengamal Perubatan (SMPP)*, *Sistem Pengurusan Pengambilan Atas Talian (SPPAT)* and *Sistem Pengurusan Kompetensi (SPK)*.

### **iii. Implementation Phase**

The Ministry is also coordinating the systems in implementation phase which include Office Automation in some hospitals (Setiu, Pitas, Kuala Penyu and Kunak), *Sistem Pemantauan Projek II (SPP-II)*, HRMIS, e-SPKB and e-Perolehan.

#### iv. Maintenance Phase

The systems under maintenance include Hospital Information System (HIS) in hospitals (Serdang, Lahad Datu, Kepala Batas and Pandan), Communicable Disease Control Information System (CDCIS), *Sistem Penyiasatan Measles*, *Sistem Informasi Makmal Kesihatan Awam* (SIMKA), Tele Primary Care (TPC) System, Blood Bank Information System (BBIS), Malaysian National Health Account System (MNHA), Asset and Inventory Management System (AIMS), *Sistem Maklum Balas Jemaah Menteri & Parlimen* (SJMP), Annual Practising Certificate System (APCs), *Sistem Pemantauan Surat Rasmi* (SPSR), *Sistem Diari Projek* (SDP), *Sistem Tabung Bantuan Perubatan* (STBP), *Sistem Pemantauan Perjalanan Ke Luar Negara* (SPPKN), *Sistem Maklumat Pengurusan Personel* (SMPP) and MoH Portal.

#### Monitoring and Coordinating the Policy and Development of MoH ICT

The committee which was responsible for monitoring and coordinating the policy and development of MoH ICT (JPICT) has successfully organized three series of meeting in 2007. A total of 27 proposal papers and two reports were presented in the meeting. BTMK as a secretariat of JPICT has also processed the ICT procurement application valued below RM200,000 and has approved 37 ICT procurement in 2007.

In order to ensure the implementation of ICT projects follows the rules and procedures, the Ministry has conducted ICT projects inspections throughout the country. Throughout 2007, the Division has inspected ten (10) MoH ICT projects such as QUEST2, SIMKA, BBIS PDN, LIS Seremban, GIS Negeri Sembilan, LIS Perlis, TPC Perlis, MedPCs, BAKAS in HQ and KMAM in HQ. The purpose of this activity was to help the respective system owners to improve their projects by giving them appropriate remarks and suggestions after the inspections.

#### Upgrading Quality Management System (SPK)

The BTMK Division is always upgrading the quality management system to increase the job quality from time to time. On 25 June 2007, the Division was awarded with the ISO 9001:2000 certifications. The Division has also applied the Six Sigma methodology to improvise the service quality to customer.

#### MANAGEMENT SERVICES

Management Services is to ensure that all activities within the Ministry of Health (MoH) Headquarters (HQ) are carried out professionally and to enhance the health services delivery system. It is the role of Management Services Division (MSD) to provide efficient and effective support and advisory services. The MSD is also responsible to ensure that the required services and facilities is provided to enable each Division within the HQ to excel in their functions.

## Personnel Management

The MSD is responsible in managing all service related matters for 3,518 employees in the MoH Headquarters (Table 6). The core activities include the preparation and record of change reports, processing of appointment date confirmation, certification for confirmation of service and confirmation of service. The performance of each activities is shown in Table 7.

**TABLE 6**  
**Number of Employees in MoH Headquarters by Category, 2007**

Category	No. of Employees
Administration	4
Highest Management	35
Professional & Management	850
Support	1,408
Part-time	392
Training Pool	745
Temporary Addition	79
Pool	5
<b>Total</b>	<b>3,518</b>

Source: Management Services Division, MoH

**TABLE 7**  
**Performances Based On Activities In Personnel Management, 2007**

No.	Activity	Performance
i.	To prepare and record change reports	8,090 reports
ii.	To record servicerealted matters	8,132 records
iii.	To process the following: i. Appointment Date Confirmation ii. Certification for Confirmation of service and Confirmation of service iii. Conferment into pension status	554
iv.	To process compulsory / optional / derivative retirement	Compulsory (50), Optional (10), derivative (2)
v.	To process and certify loan applications for computer, housing and vehicle.	91 – Computer 100 – housing 16 – vehicle
vi.	To process and certify applications for winter clothes / ceremonial attire allowance.	85 – winter clothes 94 – ceremonial attire
vii.	To process promotion and 'acting' related matters	325 applications
viii.	Letter to certify and confirm entitlement to medical benefits	457 letters
ix.	Covering Allowance Certification	256 applications
x.	Disciplinary Issues	9 cases
xi.	Conducting Service related courses	3 courses

Source : Management Services Division, MoH

Within the scope of personnel management, the MSD has been appointed as the secretariat for various main committees which are related to employees' service matters. Amongst them were the Human Resource Development Panel, which convenes periodically to discuss various issues such as the annual salary review and movement, selection of the Excellent Service Awards recipients and to award diagonal salary progress for deserving employees. The activities of the said panel for the year 2007 are summarized in Table 8.

**TABLE 8**  
**Summary Of Activities of the Human Resources Development, 2007**

No	Activity	Performance
i.	Convened once to discuss and certify the normal salary movement for employees who have submitted their Annual Performance Appraisal Forms.	2,745 employees
ii.	Convened once to select recipients of the Excellent Service Awards.	218 selected from a pool of 2,745
iii.	Convened three times to consider and award the diagonal progress in salary.	116 employees

Source : Management Services Division, MoH

The MSD was also the Secretariat for *Majlis Bersama Jabatan* (MBJ), which was set up to enable members to discuss and resolve issues related to work systems, administrative matters and employees' welfare. In 2007, the MBJ convened 4 times, thus fulfilling the stipulated minimum number of meetings.

In line with the Government's Vision to modernize its' administrative machinery and to create a paperless work-environment, the Public Services Department introduced the Human Resource Management Information Systems (HRMIS). The MoH was selected as one of the pioneer agencies to launch the system. The MSD was made responsible to ensure that the HRMIS was launched and effectively used in the Ministry's HQ. The HRMIS involves numerous human resource related processes such as employee personal data entry, post creation, leave application and uploading service related information (Table 9).

**TABLE 9**  
**HRMIS Profile Updating Status In MoH HQ as of 31 December 2007**

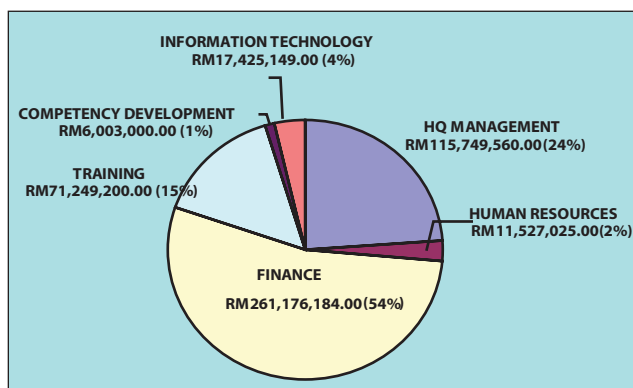
Type Of Data / Status(%)			
Personal	%	Family	%
1,777	88.2	1,363	67.7

Source: Management Services Division, MoH

## Finance Management

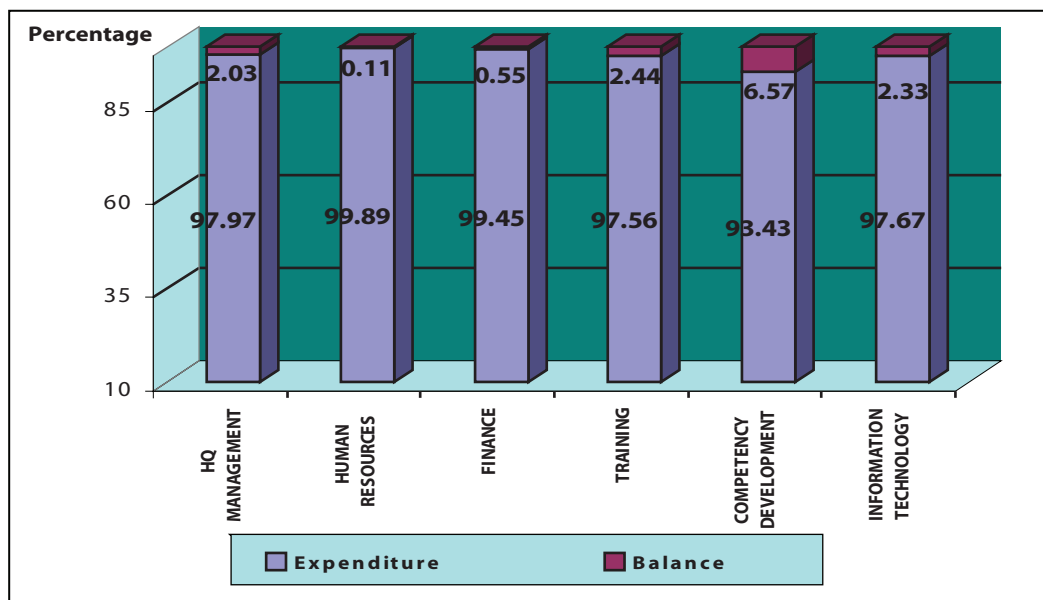
The MSD manages all finance-related matters for employees in the HQ. This includes payment of salary, allowances, reward and bonuses. The MSD is also in charge of the HQs' Management Programme whereby a total of RM407.776 million was allocated for its' operations. The performance based on expenditure until January 2008 (Accounts Payable) was 97.31% (Figure 5 and 6).

**FIGURE 5**  
**Total Allocation by Activity till Januari 2007**



Source: Management Services Division, MoH

**FIGURE 6**  
**Allocation Achievement (%) Based On Total Expenditure By Activity, 2007**



Source: Management Services Division, MoH

As the 'Responsibility Centre', better known as PTJ 1, the MSD also has a role in receiving and distributing the allocation warrant to all the other PTJs' under it. In 2007, a total of 348 warrants had been received and 437 sub-warrants had been distributed. The MSD is also the secretariat to the PTJ1 Accounts and Finance Management Committee Meeting. The committee had convened four times as scheduled to monitor the accounts and financial practices of 12 PTJ 2 and 3 PTJ 3 under its' jurisdiction.

The other responsibilities of this Division includes accounting and revenue collection for the HQ. A total of RM4.097 million has been collected in 2007. The MSD also conducts periodical courses for finance staff to equip them with the necessary skills that would enable them to carry out their tasks more efficiently. In 2007, one course was conducted.

### **General Administration and Quality Management**

The MSD is in charge of the quality and general administration matters in the HQ. This includes department vehicles management, office premises and the usage of the ministry's assembly hall. The Library also comes under this Division where its scope includes planning and development of reading collections, its system and services as well as providing access for two databases i.e. the NSTP E-Media and Lawnet. The activities and performance pertaining to this Division for 2007 is exhibited in Table 10.

### **Protocol and Events Management**

This Division manages all activities related to protocol, event management, applications seeking approvals for foreign bound trips/courses (of duration less than 14 days) and selection of medical representatives for the Hajj season. In 2007, eight main functions have been managed by this Division. Amongst them were The KL-OIC Health Ministerial Conference 2007, Excellent Services Awards Function, Quality Day, Tilawah Al-Quran Function at Ministry level, Independence Month Celebrations and the Appreciation Dinners for senior/high-ranking officers.

The Division also coordinates Naming/Official Opening ceremonies of Hospitals, events organized by other Divisions and formal visits by external parties to the Ministry. In 2007, the Division coordinated eleven (11) events organized by other Divisions, 2 visits to the Ministry including the officers from Hospital Science University Malaysia and members from PERKIM (Rengit Branch, Batu Pahat). A total of 1,064 applications from the Ministry employees for official foreign bound trips had been received and processed while the applications for personal trips amounted to 1,730. This Division is also in charge of coordinating the launching of *Islam Hadari* where a five-year strategic plan has been drafted for this purpose.

**TABLE 10**  
**Summary of Quality and General Administrative Activities, 2007**

No	Activities	Achievements
i.	Parliament (Both House of Representatives and The Senate)	<ul style="list-style-type: none"> <li>- Compiled the questions for both houses. 248 verbal questions for all three seating of House of Representatives and The Senate and 42 non-verbal questions all three seating of House of Representatives and The Senate.</li> <li>- Circulated the notification for 4 Bills.</li> <li>- Coordinated the Policy Speech preparation for the Minister of Health in presenting the policy and to debate on the motion of thanks to H.R.H. The Yang DiPertuan Agong</li> <li>- Coordinated answers for impromptu motions.</li> </ul>
ii.	Quality & Productivity Committee Meeting	- Convened four times
iii.	Compiling Time Card Reports	- 12 Reports compiled
iv.	SPANCO car rentals	<ul style="list-style-type: none"> <li>- 79 official cars for JUSA/Special Grade</li> <li>- 19 official department vehicles</li> <li>- 22 official vehicles replacement</li> <li>- 23 replacements of leased official vehicles, lease expired.</li> </ul>
v.	Security ■ Security Company Appointment ■ Security Tags/Pass Issuance.	<ul style="list-style-type: none"> <li>- Appointment has been done and the said company is being monitored.</li> <li>- 860 passes have been issued</li> </ul>
vi.	Building Maintenance ■ Putrajaya Office Complex. ■ Cenderasari Office Building o Cleaning Services o Security Services o Renovation	<ul style="list-style-type: none"> <li>- 10 maintenance meetings have been held</li> <li>- Maintenance Company appointed</li> <li>- Maintenance Company appointed</li> <li>- Renovation works at 30% completion, done by RWD appointed Contractor</li> </ul>
vii.	Premises and Space rental	<ul style="list-style-type: none"> <li>- 97 office space rental applications</li> <li>- 26 residential rentals</li> <li>- 18 premises rentals</li> </ul>
viii.	Monthly Assembly	- 11 times
ix.	Library Management	<ul style="list-style-type: none"> <li>- Purchase of 800 books, 37 journal and 2 databases</li> <li>- Customer services provided includes: <ul style="list-style-type: none"> <li>- References and referrers-1000 people</li> <li>- Borrowers – 500 people</li> </ul> </li> </ul>
x.	Filing Management	<ul style="list-style-type: none"> <li>- File Registration:</li> <li>- Personal: 10,172</li> <li>- Open: 360</li> <li>- Classified: 493</li> <li>- Application for expired File termination= 274</li> </ul>

Source: The Management Services Division, MoH

## **Counselling Services**

This Division plans and develops policies and coordinates counselling activities for the Ministry of Health. It assists in managing cases along with the Personal Services Branch and also the Disciplinary Unit from the Human Resources Division. This Division also provides counselling services to all employees and as of 2007, 63 cases had been managed while 141 individual and group counselling sessions were held.

## **COMPETENCY DEVELOPMENT**

The main function of the Competency Development Division (CDD) is to be responsible for the management and implementation of the Competency Level Assessments (CLA) for the non-sharing services schemes in the Ministry of Health (MoH). Among others, it has to prepare the examination syllabus, the courses' and PTK-CPD's curriculum, formulating the examination questions, and carrying out the examinations, courses and PTK-CPD methods, and take actions pertaining to issues related to CLA.

This Division also carry out evaluations and improvements on the CLA, and made evaluations and suggestions on the status of courses and the eligibilities of its staff for the purpose of full or part exemptions from the CLA. The CDD also works together with the Human Resource Division, MoH, in matters relating to promotions by giving inputs such as the CLA results and holding special CLAs for those groups of its employees that need them for the purpose of promotions, and to support efforts towards the competency-based development of the human resources in the MoH.

## **WAY FORWARD**

### **Health Manpower**

Various initiatives have been established to further improve the quality of service delivery system in HRD. The initiatives were:

- To establish 'value added' innovation in order to expand the creation of bulk posts from 3 posts in Estimated Operational Budget ( ABM ) 2007 to 21 type of posts in ABM 2008 and to prepare a list of additional posts that will be created through ABM 2008 which can be uploaded from internet and to introduce new application format for uniformity.
- To continuously review and improve the scheme and allowances in order to ensure MoH employees enjoy an effective benefit and competitive and attractive allowance and the appropriate services scheme.
- To update the Roll Out System in HRMIS application which include Roll Out Submodule usage of leave and declaration of property at the State Health Department and institution.

- To implement more acting activities in 2008. Besides that, 2 courses related to promotion and acting will also be held.
- Conducting 2 workshops on Disciplinary Action Management 3 times per year and *Bengkel Persidangan Pengerusi Lembaga Tatatertib* which will be expected to accomplish in middle of 2008.

## **Training Management**

The human resources development of MoH through training is crucial in supporting the development and expansion of an efficient, effective and reliable health service delivery system which can respond to the dynamic changes in health care needs and demands. The following are the strategies of TD to achieve its human resources development initiatives:

- Ensure continuous improvement in the planning and development of MoH training programmes;
- Develop appropriate health manpower training plans to equip all levels and categories of personnel to the required level of competencies;
- Expedite the development or improvement of the training colleges of MoH to ensure their teaching and learning quality meet national needs and aspirations; and
- Collaborate closely with relevant government agencies and the private sector to ensure the requirement for health human resources are met adequately.

## **Information And Communication Technology**

For the year 2008, BTMK will focus in four main subjects:

### **i. ICT Soft Infrastructure**

Regarding this matter, BTMK will implement mid-term review for Ninth Malaysian Plan for ICT project, mid-term review for MoH ICT Strategic Plan (ISP) together with execution of training plan and human development of BTMK staff.

### **ii. ICT Product (Project)**

To produce quality products of ICT, BTMK will develop and implement the Enterprise Architecture, create and implement the change management program and create ICT projects showcase.

### **iii. ICT Hard Infrastructure**

To improve the infrastructure, BTMK will widen the ICT network, implement the network technology assessment as well as implement the inspection and assessment of ICT security system.

### **iv. ICT Services to Customer**

To upgrade the service to customer, BTMK will implement Customer Relationship Management (CRM), monitor and assess the customer feedback and also strengthen the ICT technical support service and laboratory.

## **Management Services**

As a Division that provides support services, it is the Division's aspiration to shorten and simplify all work processes and to deliver excellent services for all the various Divisions within the MoH's HQ. The MSD strives to carry out its responsibilities and tasks effectively and efficiently so that maximum customer satisfaction is achieved and all the other Divisions can carry out their respective policies and responsibilities efficiently for the realisation of the Ministry's objectives.

## **Competency Development**

For 2008, the Competency Development Division (CDD) is planning the implementation of the PTK-CPD method in the MoH. The implementation of this method involves three categories initially, namely the Medical Officers, Dentists and Pharmacists. The implementation of the PTK-CPD method is a continuous effort to improve MoH work force for the future. Apart from that, the quality aspect is being given special emphasis which involves the improvement and training of syllabus/examination question designers and evaluators, improvement on the quality of examination questions/course assignments and the grading of answer scripts so as to meet the required standards, getting ISO certification for the CDD, and undertaking impact studies of the CLA on the members of the MoH.

## **CONCLUSION**

In line with MoH's goal in 9th Malaysia Plan to strengthen healthcare services, continuous efforts and proactive measures will be under taken to enhance human resource development, optimise resource utilisation, strengthen financial management, and enhancement of excellent ICT infrastructures and facilities.

Human Resource Division (HRD) will constantly implement improvisations to ensure the human resource management in MoH are efficient and effective to achieve the vision, mission and objectives of HRD.

The management of curriculum and examination of Basic and Post Basic training programmes will continue to be enhanced to achieve its targets. Every effort will be made to ensure that the training provided continue to be relevant.

MoH will ensure that the development of its physical projects that were approved under the Ninth Malaysia Plan will progress and complete as scheduled.

It is projected that the supply of medical and health manpower, especially Medical Doctors, Dentists, Pharmacists, Medical Specialists, and the AHSP for several years to come will still be inadequate to meet the needs of the nation. However, the increase in intake of students in the medical and health fields by local Institutions of Higher Learning (public and private) and also the increase in the intake of AHSP trainees by MoH training colleges will help to reduce the deficit in the demand and supply of those categories of manpower.

In meeting the growing needs for trained personnel consequence to the expansion of health care services and the development in health care technologies, the Training Management Division (TD) will continue its effort in developing flexible training action plans that are adaptable to changes.

The Ministry is always enhancing the ability and facilities of ICT to support the effectiveness of the service delivery systems. Information and Communication Technology Division (BTMK) will ensure in the year 2008 onwards the development and enhancement of excellent ICT infrastructures and facilities to the whole Ministry are implement.

The Management Service Division (MSD) intends to seek continuous improvement to enhance its services and to ensure that all the relevant services and requirements are sufficiently provided to every employee within the MoH's HQ so that they may perform their tasks and responsibilities in a conducive and productive environment. All MSD employees are committed towards providing excellent and high quality services. The MSD is currently striving towards obtaining the MS:ISO 9001:2000 certification for nine core activities, as further proof of its commitment towards providing excellent services.

## **FINANCE SECTION**

Finance Section is headed by the Deputy Secretary General (Finance) and comprises of 3 Divisions namely Finance Division, Accounts Division and Procurement and Privatisation Division. This Program is responsible for managing all matters related to finance such as budget and expenditure, accounts management, payments, procurement of assets and privatisation in the Ministry of Health (MoH).

The two main functions of the Finance Division are to formulate financial policies and budget management for the Ministry. The main activities of this Division are to ensure disbursement of allocation, monitoring of expenditure, general finance, revenue management, distribution of financial aid and expenditure system studies.

The role of the Accounts Division is to provide an efficient and quality accounting service in processing, checking and approving payments including emolument for all Responsibility Centers (RC) within Klang Valley. It is also responsible for processing revenue collection. In addition to preparing the financial and management report, it also inspects the electronic payment system (e-SPKB) and cash auditing at all RC. Accounts Division was restructured on 1st October 2006 and was divided into two branches namely Management and Operation. With the restructuring, Accounts Division extends its role in advisory and as financial solution information provider for managerial decision support besides carrying out routine processing of financial transactions.

All procurement is managed effectively by the Procurement and Privatisation Division. This Division is the main agency for procurement, privatisation, asset and store management for the Ministry. It ensures that MoH's procurement is the best, effective, transparent, fair and most cost-effective. It also ensures all privatization programs are implemented in line with the national privatisation policy and monitored effectively so as to improve the standard, efficiency and quality of services provided to the public. It also ensures that the stores, inventories and assets of MoH are managed effectively, transparently, efficient and with integrity.

## **ACTIVITIES AND ACHIEVEMENTS**

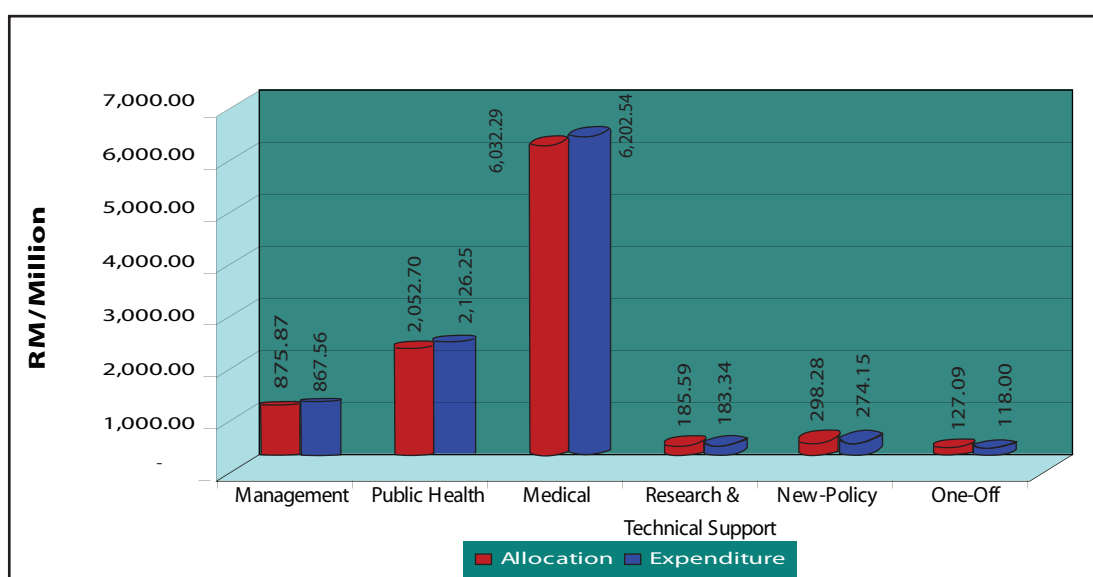
### **BUDGET MANAGEMENT**

In 2007, a total of RM11.2 billion was allocated to MoH which consists of RM9.57 billion for the Operational Budget and RM1.63 billion for the Development Budget. It is the third largest budget allocation as compared to other Ministries. The Operational Budget allocation is distributed to Programs i.e. Management, Public Health, Medical Treatment and Research & Technical Support Services, while the Development Budget is spent on projects such as hospitals, training centres, health clinics, rural clinics and the procurement of equipments. MoH is also responsible for distributing financial aid to Non-Governmental Organizations and to needy patients.

## Performance of Operating Expenditure

The Operating Budget allocation for 2007 was RM9,571.8 million which represents an increase of RM1,365.9 million or 16.6% as compared to RM8,205.9 million allocated for 2006. However, the total expenditure for the year 2007 was RM9,771.8 million, which acceded 2.09% from the sum allocated. The over expenditure was due to payment of emolument such as salary increment for civil servants effective from 1 July 2007, increment of Cost of Living Allowance (COLA), adjustment of salary and allowance due to promotion as well as filling up of vacant posts. Figure 7 shows the allocation and expenditure of the Operating Budget in 2007 according to Programme.

**FIGURE 7**  
**Allocation and Operational Budget by Programme, 2007**

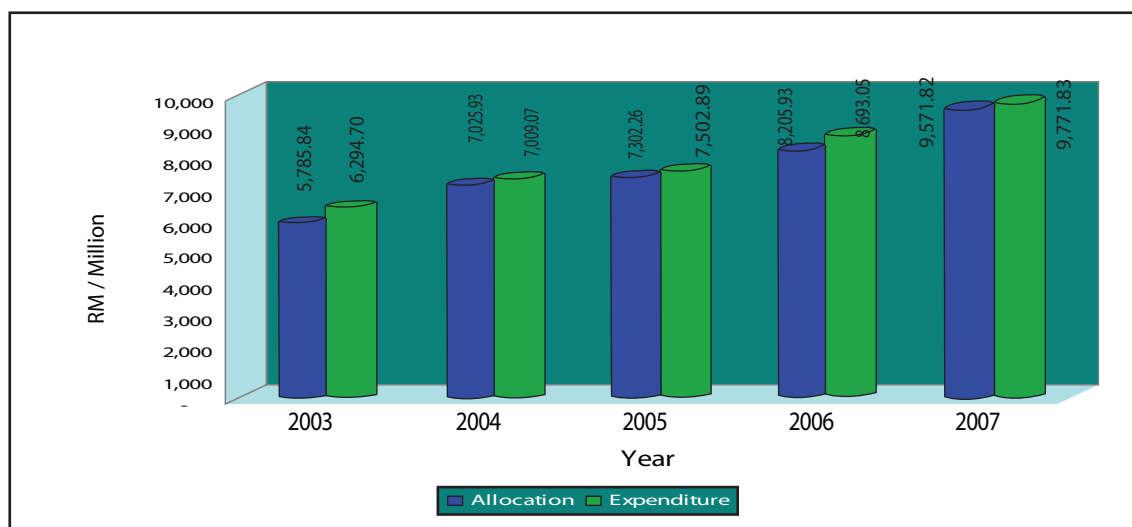


Source : Finance Division, MoH

## Overall Performance of Operating Budget

For the past five years (2003 - 2007), the Operating Budget allocation for MoH has increased by 66% from RM5,785.8 million in 2003 to RM9,571.8 million in 2007. This constituted an average increase of 13% per year. Meanwhile, the expenditure for operating budget recorded an increase of 55.2% from RM6,294.7 million in 2003 to RM9,771.8 million in 2007 in tandem with the sum allocated, with an average increase of 11% per year. For the past five years, MoH recorded an expenditure in excess of allocation of operating budget between 2% to 8% except in 2004, where the expenditure was 0.24% less than the budget allocated. Overall, the major factor for over-expenditure was due to the payment of emolument which was not allocated sufficiently in the budget. Figure 8 shows the overall performance of Operating Budget from 2003-2007.

**FIGURE 8**  
**Overall Performance of Operating Budget, 2003 - 2007**



Source : Finance Division, MoH

### Performance of Development Expenditure For 2007

The total expenditure of Development Budget was RM1,471.0 million or 90.32% of the total budget allocation of RM1,628.7 million. The percentage of expenditure in 2007 was slightly lower as compared to 2006 which recorded a performance of 93.24%. Table 11 shows the development expenditure according to the project details.

The highest percentage of expenditure was recorded by project detail of facilities for staff with 99.86% and was followed by project on Information and Technology with 97.21%. Overall, the total expenditure for all development projects was more than 90% except for projects under Research & Development (89.45%), Public Health (87.33%), and Hospital Facilities (68.99%). The year 2007 was the second year of implementation of the Ninth Malaysia Plan, hence a substantial number of projects are still at the planning stage. However, it is anticipated that the development expenditure for 2008 and beyond will be increased as these projects will be at an advanced stage of implementation.

**TABLE 11**  
**Development Allocation and Expenditure by Project Details, 2007**

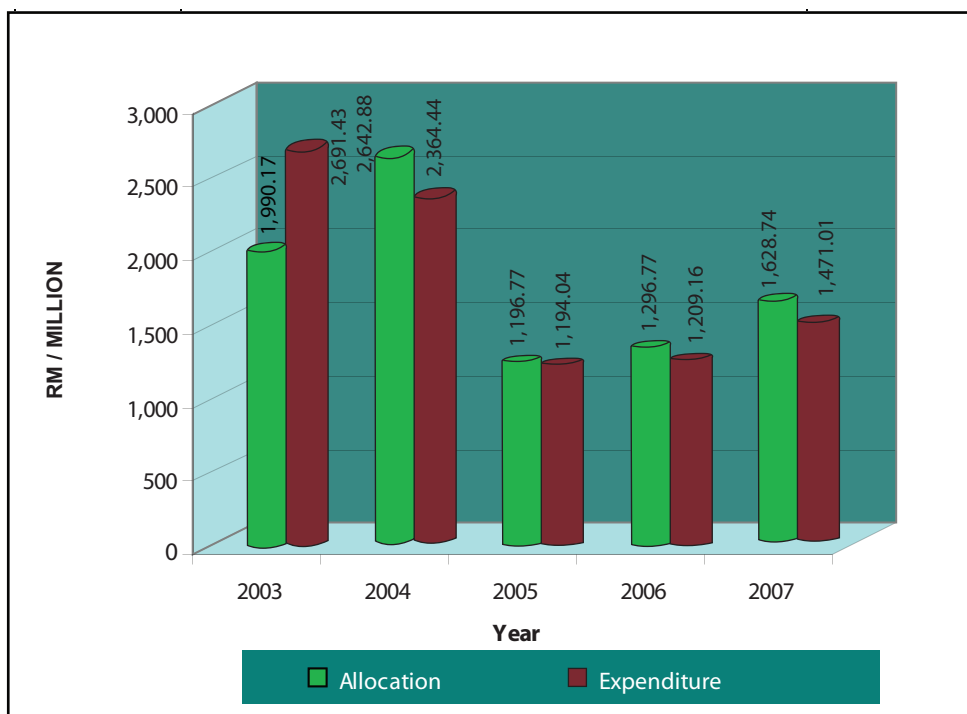
Project Detail	Title	Allocation (RM)	Expenditure (RM)	Percentage
<b>00100</b>	<b>Training</b>	<b>213,265,000</b>	<b>198,401,509</b>	<b>93.03</b>
00101	Construction of New Colleges	129,450,000	127,902,000	98.80
00102	Upgrading of Training Projects	11,505,000	9,248,774	80.39
00103	Hostels for Prev Service Trainees	610,000	56,961	9.34
00104	Outsourcing	17,200,000	17,189,120	99.94
00105	In-Service Training	54,500,000	44,003,941	80.74
<b>00200</b>	<b>Public Health</b>	<b>108,142,500</b>	<b>94,440,015</b>	<b>87.33</b>
00201	Rural Health Services	45,850,500	35,667,363	77.79
00202	BAKAS	11,189,500	11,007,331	98.37
00203	Urban Health Services	50,930,000	47,765,320	93.79
00204	Mobile Clinics	172,500	0	0
00300	Hospital Facilities	198,410,000	136,876,911	68.99
00400	New Hospitals	172,032,600	157,686,430	91.66
00500	Research and Development	43,750,000	39,135,094	89.45
00600	Restructure, Upgrade and Repair	153,000,000	146,672,976	95.86
00700	Land Procurement and Maintenance	178,100,000	165,838,764	93.12
00800	ICT Facilities	221,536,400	215,356,479	97.21
00900	Staff Facilities	42,087,300	42,027,701	99.86
01000	Health Promotion	9,900,300	9,444,162	95.40
01100	Equipment and Vehicles	288,514,000	265,134,821	91.90
<b>Total</b>		<b>1,628,737,800</b>	<b>1,471,014,862</b>	<b>90.32</b>

Source : Finance Division, MoH

### Overall Performance of Development Budget and Allocation

Figure 9 shows the overall performance of the development budget allocation and expenditure from 2003-2007 which covers the second phase of the Eighth Malaysia Plan (2001-2005) and the first phase of Ninth Malaysia Plan (2006-2010). Generally, the development expenditure for MoH for the past five years has been less than the allocation provided. The only exception was in 2003 where MoH managed to spend 35% in excess of the sum allocated. This expenditure trend is commonly observed during the implementation of the Five Year Development Plans whereby expenditure will have a slow start at the beginning stage and gradually increase towards the end of the Plan.

**FIGURE 9**  
**Overall Performance of Development Budget, 2003 - 2007**



Source : Finance Division, MoH

## Revenue Management

The total revenue collection for MoH in 2007 was RM272,850,061.36, of which RM187,072,608.63 was collected from the charges of health services in hospital and clinics while RM85,777,452.73 or 31.43% was collected from other revenues such as fines, rentals, sales, etc. The breakdown of the revenue classification are shown in Table 12.

**TABLE 12**  
**Total Revenue Collection of MoH, 2007**

Code	Revenue Classification	Amount (RM)
60000	Tax Revenue	10,377.24
71000	Licenses, Registration Fees and Permits	10,248,279.77
72000	Services and Services of Goods	201,071,025.00
73000	Receipts from Sales of Goods	2,348,077.58
74000	Rentals	12,137,943.92
75000	Interest and Returns on Investment	503,177.35
76000	Fines and Penalties	6,869,460.12
80000	Non-Revenue Receipts	38,711,179.88
90000	Revenues from Federal Territory	950,540.50
<b>Total</b>		<b>272,850,061.36</b>

Source : Finance Division, MoH

### **Outstanding Revenue**

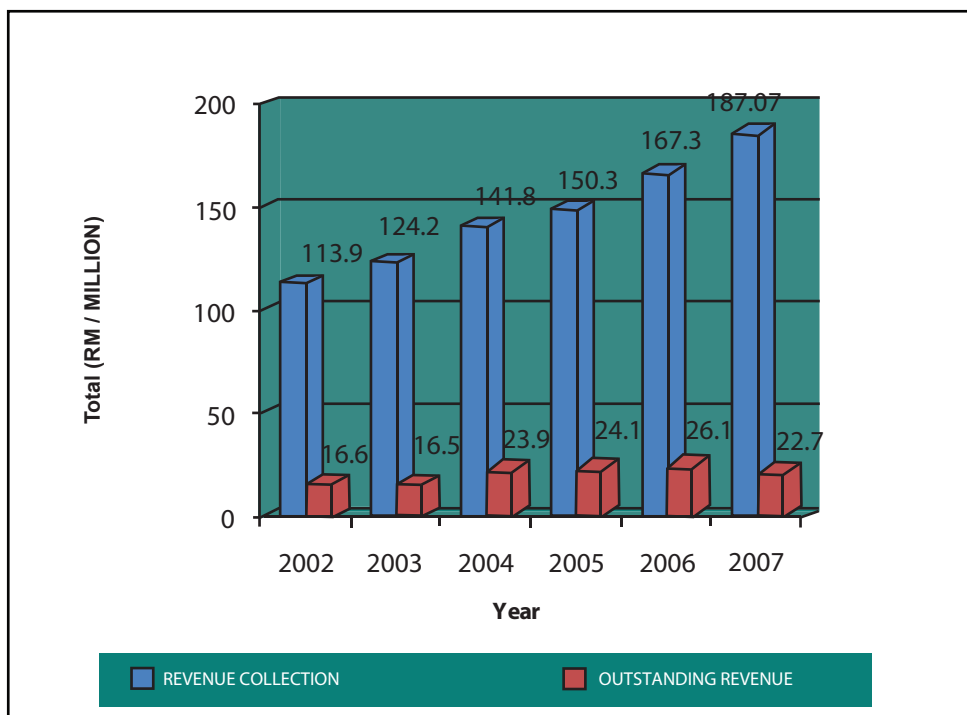
Total outstanding revenue in 2007 increased by 16.78% to RM25.54 million from RM21.87 million in 2006. Out of these, a total of RM22.7 million of the outstanding revenue was contributed by charges of health services under the Fees (Medical) Order 1982, while RM2.84 million was from other revenues such as fines, rentals, sales, etc.

### **Collection and Outstanding Revenue For Health Services Under The Fees (Medical) Order 1982**

The total revenue collection for health services under the Fees (Medical) Order 1982 for the year 2007 was RM187,072,608.63, of which RM138,352,745.10 was contributed by Malaysian's as in-patient, out-patient and Full Paying Patients for services provided by clinics/hospitals, while RM48,719,863.53 was contributed by non-Malaysian patients.

In 2007, a total of RM 22.7 million of the outstanding revenue was contributed by charges of health services under the Fees (Medical) Order 1982. A total of RM11.26 million and RM11.44 million of the outstanding revenue was contributed by Malaysian and non-Malaysian patients respectively.

**FIGURE 10**  
**Collection and Outstanding Revenue Under The Fees (Medical) Order 1982,**  
**2002 - 2007**



Source : Finance Division, MoH

The total revenue collected under the Fees (Medical) Order 1982 from 2002 to 2007 showed an average increment of RM73.17 million or 64.2%. The revenue collected in 2007 increased by 11.81% to RM187.07 million as compared to RM167.3 million collected in 2006 (Figure 10). Meanwhile, outstanding revenue for health services under the Fees (Medical) Order 1982 for the year 2007 decreased by 13.03% or RM3.4 million as compared to RM26.1 million in 2006.

## Financial Aid to Non-Governmental Organization (NGO)

There are 3 types of financial assistance offered by the Ministry of Health, Malaysia (MoH) to the Non- Governmental Organizations (NGO) such as:

- **Health Related Programmes Fund**

In 2007, a sum of RM3,568,620 was allocated by MoH to NGOs in the form of financial aid to support health related programmes and activities such as counseling sessions, awareness campaigns, treatment and other related activities to the patients. This allocation was given to organisations such as *Majlis Hospis Malaysia*, *Yayasan Jantung Malaysia*, *Institut Diabetes Negara* (NADI), *Persatuan Bagi Mencegah Penyakit Tiba Malaysia* (MAPTB) and others. The total allocation in 2007 increased by 66.8% as compared to RM2,142,800 allocated in 2006. The Ministry of Health had also provided funds amounting to RM4.0 million to the Malaysian AIDS Council (MAC) in 2007 to carry out AIDS education and awareness activities.

- **Capital Grant Fund**

This grant was given to new dialysis centres which has a maximum of 10 dialysis machine. In 2007, a sum of RM1,776,208 was allocated to NGOs in the form of capital grant. This amount decreased by 41.9% as compared to RM3,056,229 allocated in 2006.

- **Hemodialysis Subsidy Fund**

This fund was created in order to help poor people who are undergoing dialysis due to chronic kidney failure in NGO hemodialysis centers with a subsidy of RM50.00 for each treatment. In 2007, MoH had allocated a sum of RM18,704,200 to NGOs as subsidy payment for hemodialysis treatment. This amount increased by 10.1% as compared to RM16,984,500 allocated in 2006.

## **ACCOUNTS MANAGEMENT**

### **Processing of Payment**

In 2007, Accounts Division processed a total of 109,388 payment vouchers valued at RM2,070,577,396 for 35 Responsibility Centres (RC) as compared to 110,385 vouchers (RM2,154,078,429) for 33 RCs in 2006. Since 2003, all RCs in Klang Valley have implemented e-SPKB, which helps to expedite payment processes and provides greater control over allocation and expenditure, whereby the Vote Book is maintained electronically. Payment is processed using Accountant General's Government Financial and Management Accounting System or GFMAS. A new mode of payment through Electronic Fund Transfer (EFT) was introduced to ensure efficiency, security and instant clearing. In 2007, 79% of payments were made by EFT as compared to 72% in 2006.

### **Processing of Payroll**

A system known as Human Resource Payroll (HRPay) Module of GFMAS is used in processing payrolls of personnel in agencies under the MoH in Klang Valley. In 2007, total payrolls processed were 19,091, increased by 12.6% as against 16,959 processed in 2006. Employees under this payroll system received their salaries timely according to the dates determined by the Accountant General's (AG) Office.

### **Collections**

The number of collector statements processed in 2007 was 9,505 amounting to RM88,074,396.98 as compared to 7,615 (RM70,764,265.28) in 2006. As end of 2007, all 15 collection offices located in Klang Valley had implemented eSPKB in their collector statement preparation. Treasury receipts were issued to the collection offices to acknowledge that collections have been accounted for. A revenue report will be distributed to all collection offices in the first week of the following month for reconciliation purpose.

### **Periodic Financial Reporting**

A report on development and operating expenditure, revenue and trust accounts (including deposit and subsidiary) is submitted to the management and AG's office on a monthly basis. The report provides information on expenditure, revenue, trust, trial balance, voted allocation, petty cash, specific imprest fund, cash in transit, payment and journal vouchers as well as emoluments and deductions. Accounts Division is responsible in preparing supporting documents for the interim and final public accounts. Supporting documents for public accounts for reference year 2006 were submitted to AG's office on 26 February 2007.

The Accounts Division prepares Yearly Financial Statement which reports on development expenditure by projects under the 9th Malaysia Plan (9MP), operating expenditure by programme/activities, revenue classified into tax/non-tax revenue/non-revenue, receivable/Federal Territory revenue and trust account classified by government trust funds/public trust funds/general deposit accounts/other deposit accounts and account payable. In 2007, the Financial Statement for 2006 was submitted to the Auditor General Office on 16 March 2007.

## **eSPKB Inspectorate Team**

The inspection program was set up in all accounting offices in compliance with the requirement by the AG of Malaysia under Treasury Instruction 138 and AG's Circular No. 2/2003 on proper monitoring to prevent losses due to fraud and negligence in the RC. An inspectorate team was set up to ensure that all payments comply with the eSPKB user manual and financial procedures. A total of 35 RCs were inspected in 2007 as against 32 RCs in 2006. Corrective measures were taken based on reports from the team to overcome the various weaknesses.

## **Improve Monitoring and Compliance Of Financial Procedures**

Cash and revenue audits were carried out on selected collection offices to ensure the compliance of procedures of revenue collection to avoid malpractices and irregularities. In addition, the inspectorate team also provides advise on the revenue collection system so as to ensure that the financial documents are managed and kept accordingly. The audit's observations on any irregularities will be reported to the collection offices and to the Ministry. A total of 61 audit inspections were conducted on collection offices under the Ministry in 2007 as compared to 71 audits in 2006.

## **Government Financial and Management Accounting System (GFMAS)**

GFMAS was first implemented on 1st September 2006 to replace the old legacy accounting system which comprises of Branch Accounting System and the Payroll System. GFMAS is an integrated system for both internal and external systems and is able to provide accurate and consistent financial information for the purpose of financial planning, budget control and accounting and streamlines work processes to achieve a standard financial process for all Federal Government agencies. This will enhance financial transparency and accountability.

## **eBantuan**

The eBantuan system was developed in 2005 and was fully implemented in 2006. This system allows RC to log online reports of any technical or application problems regarding eSPKB, as well as problems related to accounts. The system will be able to check and verify the problem and periodically update solution status. It also enables the helpdesk to take immediate action on the problems reported. eBantuan also provides information on server and eSPKB network status and provides document download facility at all times.

## **Training and Courses Information System**

This system is a web based intranet database system developed by Accounts Division implemented in December 2007. The system helps to maintain records of trainings and courses conducted and produces reports for management. It can be accessed by the Training and Administration Unit of the Accounts Division.

## Training Programmes

A Training Unit in the Accounts Division was established in 2007. This unit provides training for accounting staff of the Division and Ministry. In 2007, the Unit organized 12 training programmes. Among topics covered in the programmes were government accounting system, vote book maintenance, accounting for trust, revenue, payment and emolument, eSPKB modules, billing report, office automation system and closing of accounts.

## Contract Requisition Information System For MoH Responsibility Centers In Klang Valley

This is a database system that assists Checking and Payment Unit of the Accounts Division to vouch progress of payment under contract electronically. The idea for this system was introduced in 2007 and was scheduled for implementation in 2008.

## Advisory Role

The Accounts Division is involved in providing accounting and financial advise and assisting in the implementation and development of collection and management accounting system that are being developed by other Divisions and agencies under the MoH. Among the systems and procedures involved were e-Payment, online e-Payment, National Health Financing Mechanism, Patient Management System and Malaysia National Health Account.

## PROCUREMENT MANAGEMENT

### Pre-Procurement

In 2007, Procurement and Privatisation Division received a total of 220 specifications for tendering. There were 324 procurements including medical instruments, ICT, drug & non-drug products and other services worth RM1,642,764,453.32 were approved (Table 13).

**TABLE 13**  
**Number of Approved Procurement By Category, 2007**

Category	Number Offered	Value (RM)
Instrument	65	124,426,082.58
Drugs	158	746,963,858.43
Non-Drugs	19	136,143,692.51
Work	10	384,016,914.25
Development (9 MP)	6	92,178,860.99
ICT	15	50,294,501.81
Food	21	36,627,844.71
Security	15	16,399,986.98
Central Contract	6	34,672,754.87
Others (Media)	9	21,039,956.19
<b>Total</b>	<b>324</b>	<b>1,642,764,453.32</b>

Source : Procurement and Privatisation Division, MoH

## **Implementation of e-Procurement (eP) in Ministry of Health**

A total of 129 additional/new Responsibility Centres (RC) implemented the eP-enabled in 2007. These RC had undergone Mandatory Handholding with cooperation from Commerce Dot Com Sdn. Bhd. and Ministry of Finance. A total of 63,739 Local Order (LO) worth RM511,896,483.34 were generated in 2007 through the implementation of eP system. The total LO generated in 2007 increased by 81.27% as compared to 35,161 in 2006, while the value increased by 54.21% as against RM331,931,454.10 recorded in 2006.

## **Store Inspection**

The number of stores inspected in 2007 increased by 37.8% to 153 (in 77 RC) as compared to 111 stores (in 52 RC) inspected in 2006.

## **Stock Verification**

For the first half of 2007, a total of 745 Verification Stock Certificates were received from 838 stores in MoH, while the second half of 2007 recorded 861 Verification Stock Certificates from 937 stores.

## **Asset Disposal Management**

In 2007, Government Asset worth RM41,413,000 were disposed. Most of these assets were vehicles and medical equipments.

## **“Naziran” Report and Store and Asset Inspection**

Store and asset inspection on 77 RC was carried out to ensure that regulations and guidelines under Treasury Circular Letter No. 5/2007 (*Surat Pekeliling Perbendaharaan Bil. 5/2007*) were followed accordingly.

## **Reports on MoH's Lost of Asset**

A total of 177 cases reported in 2007, with only 99 cases resolved.

## **Seminars**

There were 5 series of workshop on Procurement Management, Asset and Store organised according to zone (North, South, East and Sabah/Sarawak) involving 315 personnel from Management and Professional Group and Supporting Group.

## Policy Management and Privatisation Planning

Several consulting firms were appointed to carry out research in MoH. Among the researches conducted in 2007 were:

- i. Efficiency and Effectiveness of Cost for the Privatization of Hospital Support Services conducted by Usains Holding Sdn. Bhd. (90% completed);
- ii. Evaluation of Privatising Pharmaceutical Supplied by Pharmaniaga Logistics Sdn. Bhd. also conducted by Usains Holding Sdn. Bhd. ( 90% completed);
- iii. Proposal on privatizing, building and upgrading of medical lab / pathology lab for MoH (completed);
- iv. Proposal on privatizing and upgrading health clinics in rural area (completed);
- v. Privatization *Projects of Institut Kebangsaan Produk-produk Asli, Vaksin dan Biologikal* (IKPAVB) (completed);
- vi. Research on Due Diligence On The Capability And Effectiveness Of The Ministry of Health And Institut Jantung Negara Sdn. Bhd. In Managing Regional Cardiac Centres (terminated upon consultant's request);
- vii. Proposal on designing, implementing, training, commissioning and handling over medical equipment program in Malaysia (completed);
- viii. Research on The Authentication Of Pharmaceuticals and Health Care Products in Malaysia (completed); and
- ix. Proposal on "*Perakuan Semakan Harga APPL Bagi Tempoh 2007-2009*" (completed).

## Monitoring And Evaluation Of Privatisation

For pharmaceutical products, monitoring and observation activities were carried out through managing, conducting and handling complaints from the hospitals. A total of 27 visits were conducted to observe the service of Hospital Support Service by Faber Medi-Serve Sdn. Bhd., Radicare (M) Sdn. Bhd., Pantai Medivest Sdn. Bhd., pharmaceutical product supplied by Pharmaniaga Logistics Sdn. Bhd. and SIHAT Sdn. Bhd.

## **WAY FORWARD**

The main objective of the Management Programme is to enable the achievement of MoH's vision and mission by giving support services such as human resource development, general administration, financial management, information system management, and ICT infrastructure development. In the future, continuous improvement and innovations will be implemented in order to enhance the effectiveness and efficiency of the service delivery system in MoH.

## **CONCLUSION**

In the 9th Malaysia Plan, MoH's goal is to strengthen healthcare services by carrying out continuous efforts and proactive measures to enhance human resource development, optimise resource utilisation, strengthen financial management and enhancement of excellent ICT infrastructures and facilities.



# PUBLIC HEALTH PROGRAMME



## **PUBLIC HEALTH PROGRAMME**

### **INTRODUCTION**

Public Health Programme is headed by the Deputy Director General of Health (Public Health), who is directly responsible towards the Director General of Health. The Deputy Director General of Health (Public Health) is assisted by four Divisional Directors and one Sectional Senior Principal Assistant Director namely Director of Disease Control Division, Director of Family Health Development Division, Director of Food Safety and Quality Division, Director of Health Education Division and Senior Principal Assistant Director of Public Health Development Section.

Public Health goes beyond medical care and recognizes the social aspects of health problems and lifestyles. Public Health recognizes non health factors that contribute to improvement in health status of individuals, communities and the whole nation. Obviously, Public Health had embraced virtually all aspects of social and economic policies, stressing on preventive measures against diseases, both on the part of the society, family and individual.

Public Health Programme and activities has made significant contributions in upgrading the status of health in Malaysia. Programmes and activities are inclusive of various strategies planned, implemented, monitored and evaluated by the various Divisions in Public Health Programme. Every Division has their own objectives and activities.

The main objective of Disease Control Division is to reduce the occurrence of diseases and death due to communicable and non-communicable diseases as well as environment-related diseases so that they will no longer poses a threat to public health. Other objectives were:

- a. To encourage a healthy life style, a healthy, safe and hygienic work environment and workplace, suitable preventive measures, immediate detection and treatment, continuous monitoring and suitable rehabilitation services.
- b. To encourage the participation of members of public and cooperation among agencies / sector so as to build a healthy and caring society.

Specific programmes are carried out by six (6) disease control sub-activities namely, the Communicable Disease Section, the Disease Surveillance Section, the Vector Borne Disease Section, the AIDS/STI Section, the National Public Health Laboratory, the Non-Communicable Disease Section incorporating the Occupational and Environmental Health Section. The activities are implemented at all levels i.e Ministry, State and District.

Family Health Development (FHD) Division is responsible to ensure provision of comprehensive and quality services to community from womb to tomb. The objective is to promote, maintain and improve the health status of individuals, families and communities through efficient, effective, affordable, accessible, integrated and technologically appropriate family health care services. This is achieved through continuous and effective planning, implementation, monitoring and evaluation by three sections in the FHD Division namely Family Health Section, Primary Healthcare Section and Nutrition Section.

The main objective of Food Safety and Quality (FSQ) programme is to protect the public against health hazard and fraud in the preparation, sale and use of food. The FSQ Division (FSQD) has been implementing an active food safety activities which include routine monitoring of compliance sampling, food premises inspection, food import inspection activity and licensing of several items and activities. It also conducts a food monitoring activity on specific food contaminants and additives. As a preventive approach, the Division has been implementing food handler training programme, vetting of food labels, giving advice to the industry and consumers, and food safety certification scheme such as Health Certificate, HACCP certification and Free Sale Certificate.

The main objective of Health Education Division is to manage health education and promotion programme as well as to do training and behavioral research. The health education and promotions activities include healthy life style campaign, health promotion in public health such as prevention of communicable and non-communicable diseases, health promotion media campaign, production of IEC material and behavioural research. Health promotion activities were carried out by all health personnel at all levels to specific target groups. Health promotion will be given greater emphasis to empower the community in improving their health.

Public Health Development Section was previously known as Quality and Standards Unit. Initially, the function of the unit was to monitor quality of health care services in Public Health Programme. With the extended scope, the functions were further enhanced to include Public Health policy and legislation, Public Health Quality Improvement Programme, Public Health Professional Development and Public Health Laws and Enforcement.

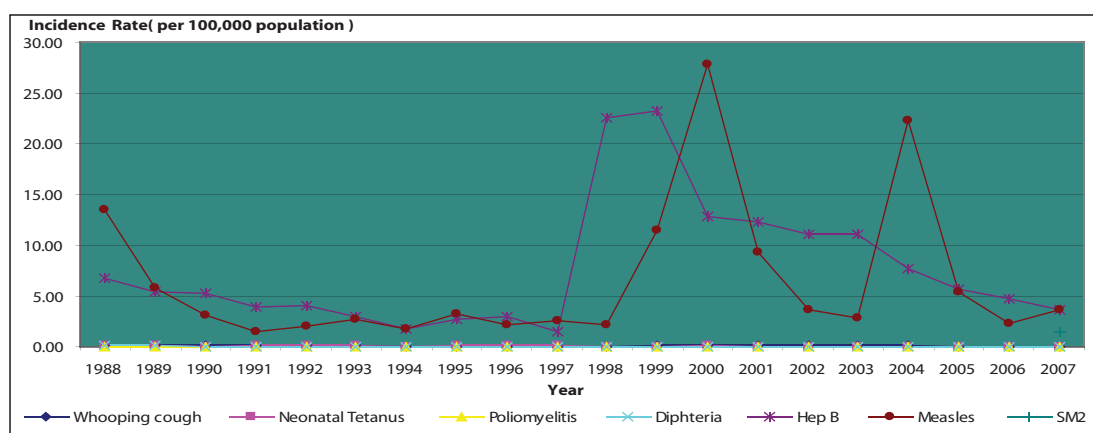
## ACTIVITIES AND ACHIEVEMENTS

### COMMUNICABLE DISEASE

#### Vaccine-Preventable Disease Control and Prevention Programme

In 2007, the incidence rate of clinically diagnosed measles increased from 2.27 per 100,000 population in 2006 to 4.4 per 100,000 population. This was a result of measures taken to enhance surveillance in the national effort towards achieving measles elimination status. Nevertheless, the incidence rate of the disease based on positive laboratory results was 1.5 per 100,000 population, the remainder being accounted for by either being positive for rubella or negative for both measles and rubella. There were no reported measles outbreak in 2007. Incidence rate of Hepatitis B decreased from 4.68 per 100,000 population in 2006 to 3.97 in 2007. Malaysia is planning to achieve declaration in Hepatitis B control in line with WHO target for the Region. Figure 1 displays the vaccine-preventable disease trends from 1988 till 2007.

**FIGURE 1**  
**Incidence Rate Of Vaccine-Preventable Diseases Under The Expanded Programme for Immunisation (EPI), per 100,000 Population, Malaysia, 1988 – 2007.**

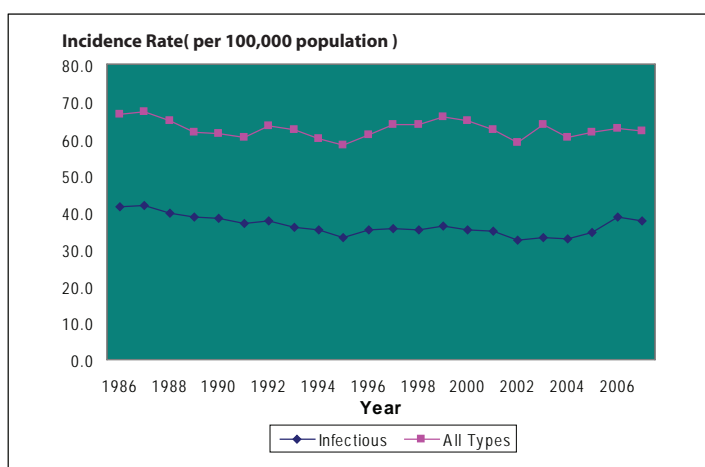


Source: Disease Control Division, MoH

#### National TB Control Programme

Malaysia has been classified by the World Health Organisation (WHO) as a country with an Intermediate TB load. Since the last 20 years, the national incidence rate appear to have plateaued, with a mild increase in 1999. In 2007, a total of 16,918 new TB cases were registered in the country, of which 10,264 cases were deemed infectious. The TB incidence rate (all types) in 2007 was 62.3 per 100,000 population, whereas the incidence rate for infectious TB was 37.8 per 100,000 population.

**FIGURE 2**  
**Incidence Rate of TB (All Types and Infectious) in Malaysia, 1986-2007**



Source: Disease Control Division, MoH

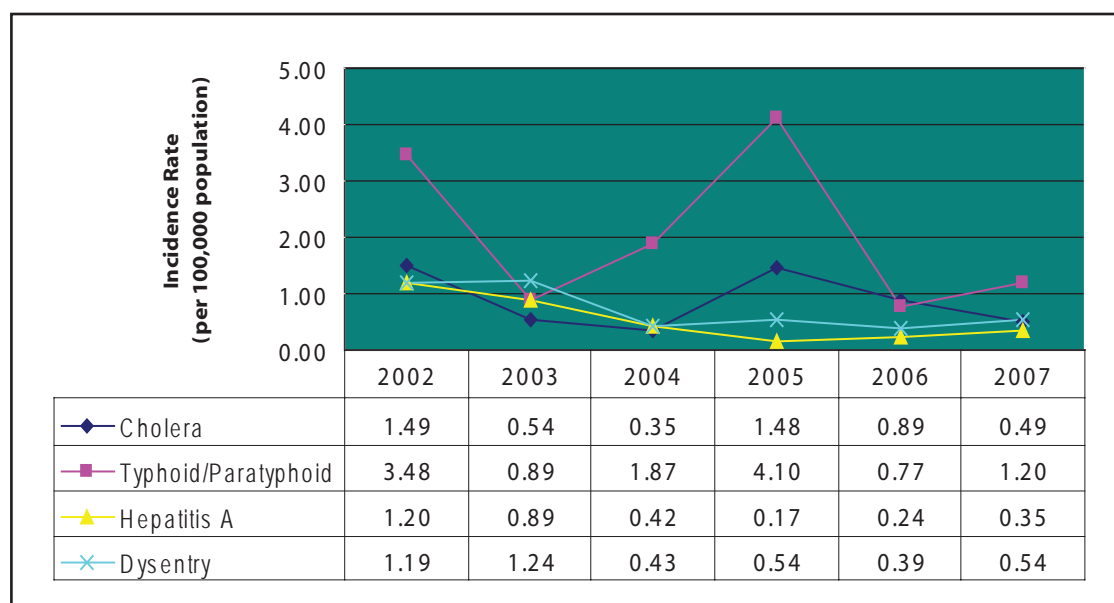
### National Leprosy Control Programme

Since the inception of the National Leprosy Control Programme 30 years ago, Malaysia has succeeded in reducing the burden of the disease. In the early 1990s, the World Health Organisation (WHO) established a target of eliminating leprosy as a public health problem by the year 2000. Elimination of Leprosy has been defined by WHO, as prevalence of the disease (at one point in time) at 1 case per 10,000 population. Malaysia has achieved the Leprosy elimination status since 1994, which is 6 years ahead of the WHO target.

### Prevention and Control of Food and Waterborne Diseases Programme

There are five food and waterborne disease in the list of communicable diseases which are required to be notified under the Prevention and Control of Infectious Diseases Act 1988 (Act 342) and these are cholera, typhoid, food poisoning, hepatitis A and dysentery. Monitoring is done electronically using the Communicable Diseases Control Information System (CDCIS). During the five year period from 2003 to 2007, the incidence rate for cholera, typhoid/paratyphoid, hepatitis A and dysentery has been less than 5 per 100,000 population. Incidence rate for these diseases are shown in Figure 3.

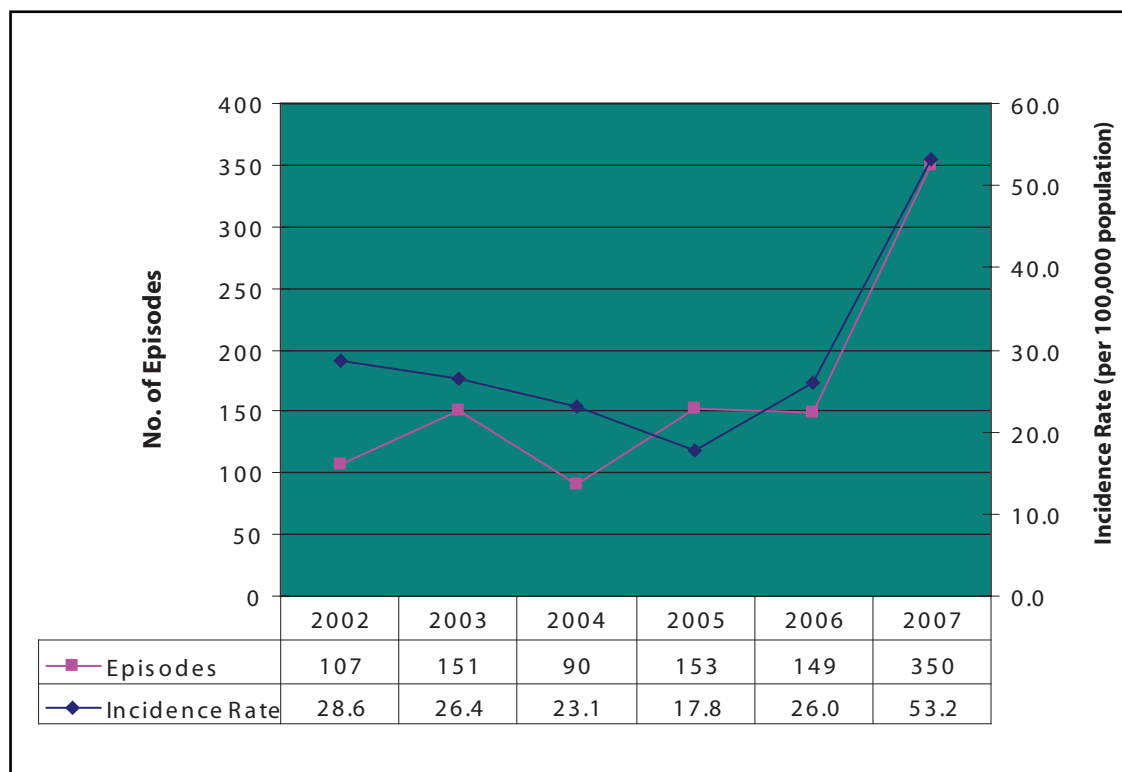
**FIGURE 3**  
**Incidence Rate of Cholera, Typhoid/Paratyphoid, Hepatitis A and Dysentery**  
**in Malaysia, 1997-2007**



Source: Disease Control Division, MoH

As compared to the year 2006, the incidence rate for these diseases had increased, except for cholera (from 0.89 to 0.49 per 100,000 population). Nevertheless, the incidence of all these food and waterborne diseases in the country remain low. The food poisoning episodes reported throughout the country in 2007 has recorded more than 100% rise as compared to that in 2006, while the incidence rate increased by 97% (Figure 4). Sixty-two percent (62%) of the episodes occurred in a school setting, followed by other academic institutions (17%) and community gathering accounted for 8%. The main contributing factor were insanitary food handling procedures which accounted for more than 50% of these episodes. In view of this, a Ministry of Health and Ministry of Education Joint Committee was formed to specifically address and manage the issue of food poisoning in schools. Among the activities conducted were media campaigns, food contractor seminars at schools nationwide and road tours in selected schools.

**FIGURE 4**  
**Number of Episodes and Incidence Rate of Food Poisoning in Malaysia, 2002 - 2007**



Source: Disease Control Division, MoH

### Zoonotic Control Programme

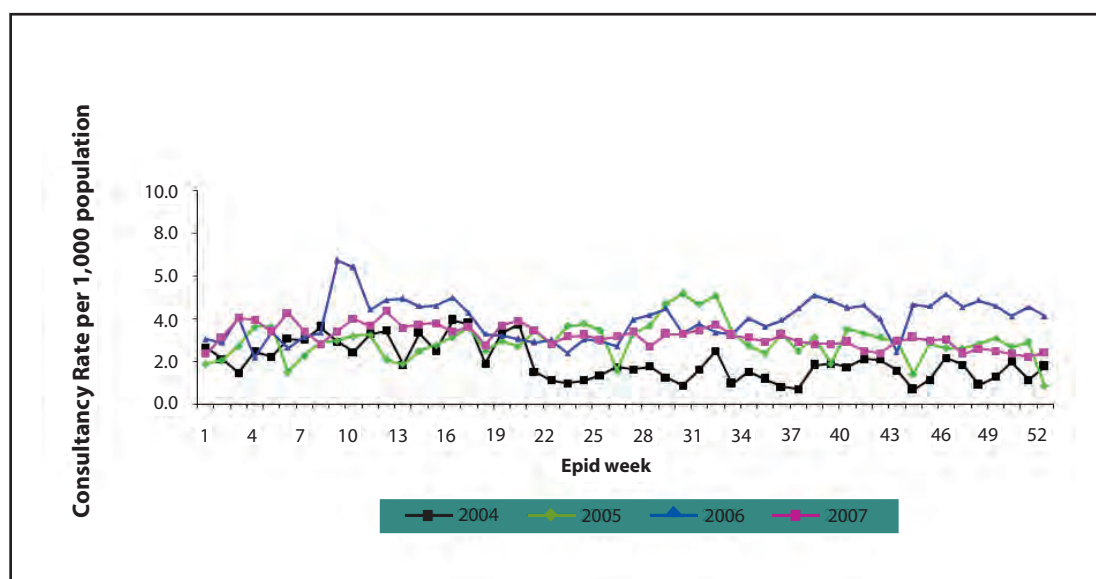
Plague, rabies and yellow fever are the three listed zoonotic diseases required to be notified under the Prevention and Control of Infectious Diseases Act 1988 (Act 342). In 2007, there was no incidence of such cases reported. The data for the other zoonotic diseases can be obtained from the Health Information Management System (HIMS) for hospital admissions. In June 2007, a single episode of avian influenza in poultry was reported in Selangor. Prevention and control measures to avert transmission to humans was taken during that outbreak which occurred amongst the poultry. No human infection cases was reported.

## Sentinel Influenza-like Illness (ILI) Surveillance

This surveillance was initiated with the intention of providing those involved in the health services and to the community with information on influenza and the transmission of the influenza virus strains both during the epidemic and pandemic situation in Malaysia. It is also to detect and to identify circulation of new virus strains in the country from time to time. It also enhances the level of surveillance in the event of the detection of a pandemic strain, both in and out of the country.

The Influenza-Like Illness (ILI) sentinel surveillance is utilised as a proxy in the detection of influenza infection. This programme commenced in 2003 with the initiative of providing a daily record of consultations for defined ILI cases from both selected Ministry of Health clinics and private clinics. This is in addition to those obtained from the districts and this information is then relayed to the State Health Departments and then to the National level. The pattern of ILI consultations per 1,000 population appears as a plateau for the past 4 years (Figure 5).

**FIGURE 5**  
**Weekly ILI Consultancy Rate (per 1,000 Population) in Malaysia, 2004 – 2007**



Source: Disease Control Division, MoH

## Sentinel Influenza Virus Surveillance

This sentinel surveillance is conducted with the objective of an early warning mechanism in order to elicit rapid response in confronting the influenza virus spread. In addition, it provides virus isolation information to the WHO Influenza Reference Laboratory for the purpose of antigenic analysis and vaccine formulation. Samples gathered from selected sentinel clinics are analysed in laboratories nationwide, like the Institute for Medical Research (IMR); the National Public Health Laboratory (NPHL), Sungai Buloh; the Medical Microbiology Department; University Malaya Medical Centre (UMMC); the Microbiology Laboratory, National University of Malaysia (UKM) and the Microbiology Laboratory, University of Science Malaysia (USM). In 2007, 2,951 samples were analysed. Of the 179 (6.1%) samples found positive, influenza virus A was isolated from 111 samples while the other 68 samples yielded influenza virus B.

## Syndromic Surveillance

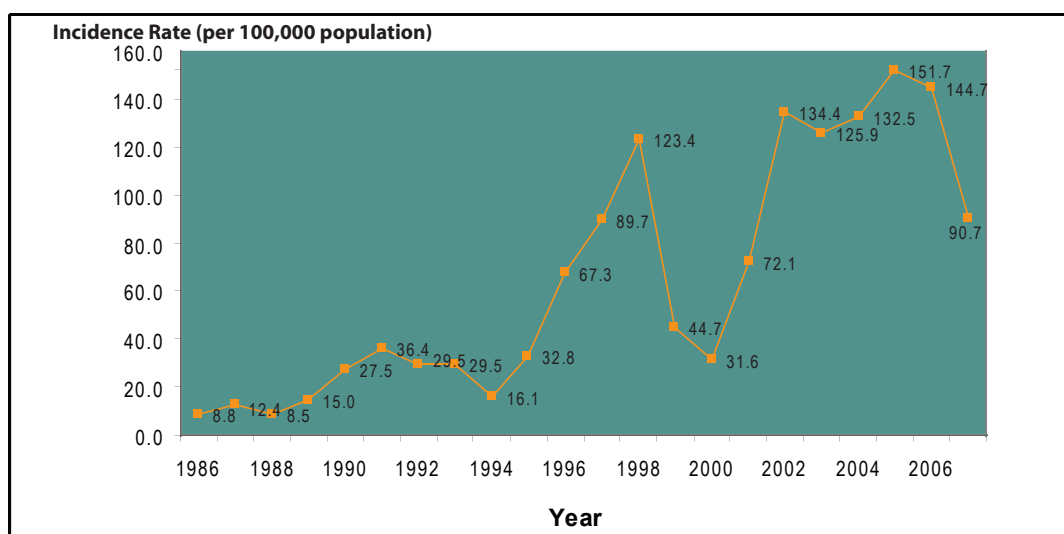
The syndromic approach represents notification based on the certain disease symptoms and signs and does not focus on specific diseases as such, and consists of Acute Neurological Syndrome, Acute Respiratory Syndrome, Acute Dermatological Syndrome, Acute Haemorrhagic Fever Syndrome, Acute Jaundice Syndrome and Acute Diarrhoeal Syndrome. In 2007, a total of 43 notifications were received. Out of these, 36 (83.7%) notifications were of acute respiratory syndromes, 5 (11.6%) were of acute neurological syndromes and only single notification each of an acute neurological and an acute dermatological syndrome.

## Dengue Control Programme

Dengue still poses a serious public health problem in Malaysia. Dengue Fever (DF) was first reported in the country in 1902. However, Dengue Haemorrhagic Fever (DHF) was identified in 1962 when an outbreak occurred in Pulau Pinang with 41 cases and 5 deaths reported. Since then, dengue cases in Malaysia have shown an increasing trend. For the year 2007, 24,634 cases were reported, of which 23,310 cases (94.6%) were dengue fever (DF) and 1,324 cases (5.4%) were dengue haemorrhagic fever (DHF). In the same year, 82 dengue deaths were reported with an increase of 15 deaths as compared to that reported in 2006. Nevertheless, the case fatality rate has declined from 0.24% to 0.20%. The States which reported high mortality due to dengue were Selangor (26 deaths) and Federal Territory of Kuala Lumpur (23 deaths).

The dengue incidence rate (IR) in 2007 had decreased to 90.7 per 100,000 population as compared to 144.7 per 100,000 population in 2006 (Figure 6). States reporting high incidence rates (per 100,000 population) was Selangor (155.4), followed by Federal Territory Kuala Lumpur (135.8), Kelantan (114.9) and Pulau Pinang (100.6).

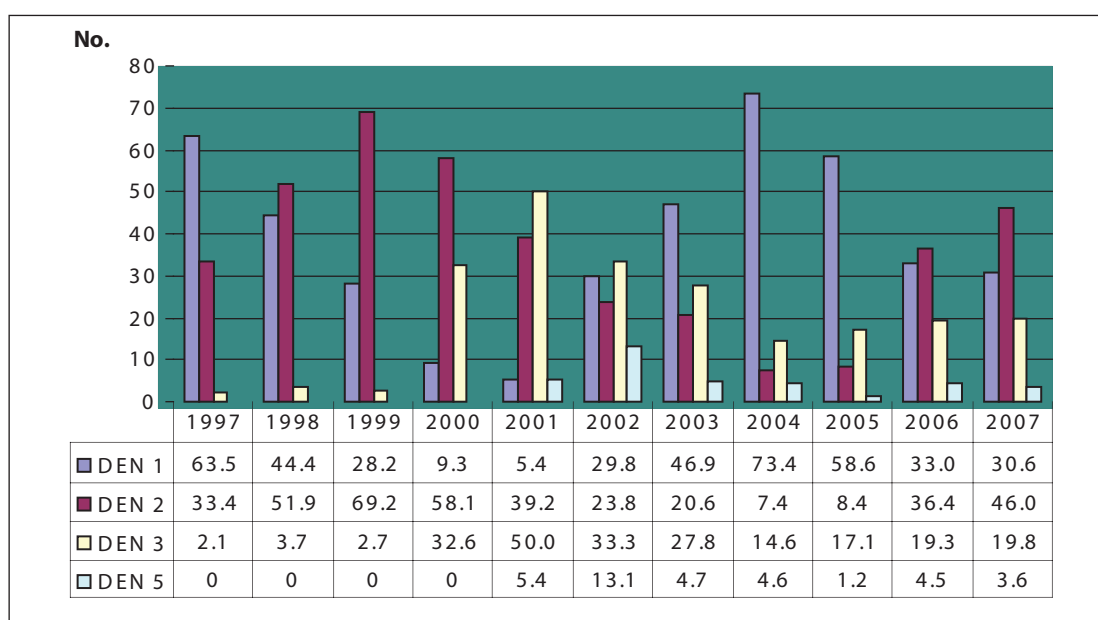
**FIGURE 6**  
**Incidence Rate of Dengue in Malaysia, 1986 - 2007**



Source: Disease Control Division, MoH

In 2007, majority of the DF/DHF cases (74.2%) occurred in urban areas. All four serotypes (DEN1, DEN2, DEN3 and DEN4) are present in the country. From 1992 to 1995, DEN3 was the predominant circulating virus. The scenario has changed in the recent years, with DEN1 and DEN2 alternating as the predominant serotype (Figure 7).

**FIGURE 7**  
**Dengue Virus Serotypes in Malaysia, 1997-2007**



Source: Disease Control Division, MoH

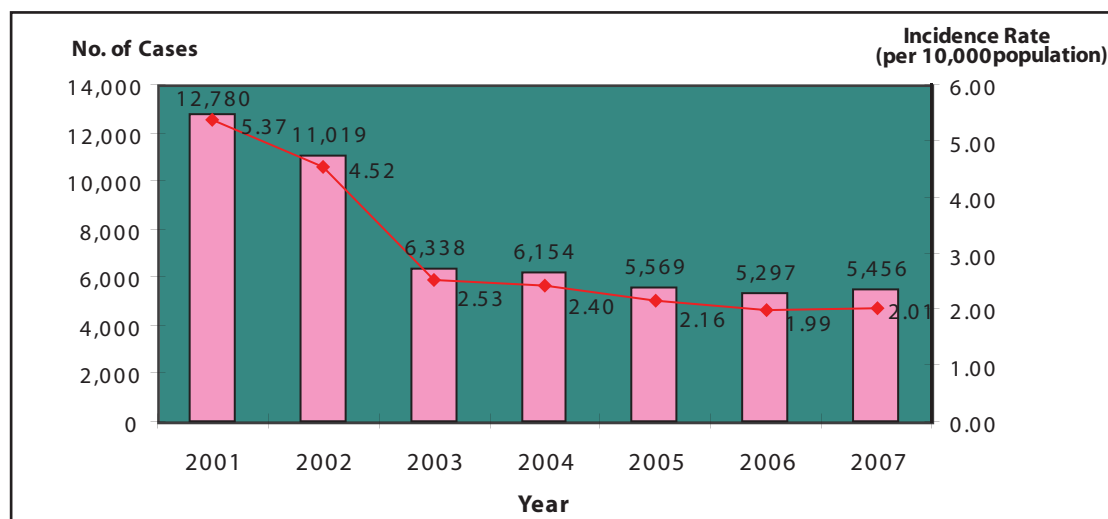
A total of 3,071,467 premises were inspected for aedes breeding in 2007 with 67,462 premises positive for aedes breeding as compared to 3,008,712 premises inspected in 2006 with 65,128 were found positive for breeding. The number of premises inspected and found with aedes breeding has increased to 2.1% and 3.6% respectively in 2007 as compared to 2006. In 2007, a total of 14,753,596 houses were fogged as compared to 14,420,297 houses in 2006. There was an increase in fogging activity (333,299 or 2.3%) in 2007 as compared to 2006.

From the premises inspection activity done in the year 2007, aedes index was found highest in construction sites (13.50%), followed by road dividers (11.45%), land/vacant lot (9.27%), factory (7.05%) and abandoned housing projects (3.52%).

### Malaria Control Programme

Malaria remains a public health problem in Malaysia, especially in Sabah, Sarawak and in the interior central region of Peninsular Malaysia where Perak, Pahang and Kelantan share their borders.

**FIGURE 8**  
**Number of Cases And Incidence Rate for Malaria in Malaysia, 2001 – 2007**



Source: Disease Control Division, MoH

In 2007, the incidence rate of malaria in Malaysia was 2.01 per 10,000 population as compared to 1.99 in 2006 (Figure 8). Sabah had the highest incidence rate of 10.4 per 10,000 population and followed by Sarawak with 4.82 per 10,000 population. Other states recorded incidence rates below 1 per 10,000 population. The highest number of cases was also contributed by Sabah with 3,191 cases (58.49%), followed by Sarawak 1,159 cases (21.24%) and other states in Peninsular Malaysia accounted for 1,106 cases (20.27%). The increase in the number of malaria cases in the three states was due to a larger number of foreign citizens being infected with malaria. For the year 2007, all the 5 malaria cases in Perlis occurred among the foreign citizens compared to only one affected in 2006. Eighteen (18) deaths attributed to malaria were reported in 2007 as compared to 21 deaths in 2006, a decrease of 3 deaths (14.3%). The total deaths in 2007 were contributed from Sabah (9), Sarawak (3), Selangor (3), Kedah (1), Perak (1) and Johor (1).

### **The National Strategic Plan (NSP) on HIV/AIDS 2006-2010**

A successful response to HIV/AIDS requires strong political commitment and leadership at the highest level. It is therefore critical that HIV/AIDS is address as a development, not just a health issue but also integral to national planning. Six priority areas that have been identified to address issues on HIV/AIDS in this country were :

- i. Strengthening leadership and advocacy;
- ii. Training and capacity enhancement;
- iii. Reducing HIV vulnerability among injecting drugs users and their partners;
- iv. Reducing HIV vulnerability among women, young people and children;
- v. Reducing HIV vulnerability among marginalised and vulnerable population; and
- vi. Improving access to diagnostics, treatment and care.

In adopting the NSP, the government of Malaysia has shown a strong commitment to address this epidemic as a national agenda and to drive an expanded, multi-sectoral with well resourced funds and responses. The Ministry of Health has allocated RM500 million for the years 2006-2010 to expedite the Millennium Development Goals (MDG) targets of halting and reversing the spread of HIV/AIDS by year 2015 in this country.

### **Harm Reduction Programme**

In the efforts to prevent the spread of HIV infection among injecting drug addicts, who constitute the main source of HIV spread in the country, the Ministry of Health has embarked on a Harm Reduction Programme which incorporates the Methadone Maintenance Therapy (MMT), Needle Syringe Exchange Programme (NSEP), and Condom usage.

## **Methadone Maintenance Therapy (MMT)**

This programme commenced in October 2005 aims at preventing the spread of HIV through the practice of injecting drugs. This programme was targeted to achieve 25,000 Opiate dependent IDUs by the end of 2010. Till December 2007, the MMT programme was successfully implemented in 25 Government hospitals, 34 health clinics, 10 private clinics, and 3 AADK Service Centres in Peninsular Malaysia. Of the 4,223 participants in this programme, 75.1% are still maintained on MMT. This rate of involvement is much higher than the standard 60% retention rate as recommended by WHO. Urine examination also showed the drop in opiate content from 45% to 10% after a 12 month participation in the MMT programme.

## **Needle Syringe Exchange Programme (NSEP)**

The Needle Syringe Exchange Programme (NSEP) started in February 2006 with the involvement of the AIDS Council of Malaysia as the programme implementor at the community level. This programme is aimed at preventing the spread of HIV through needle syringe sharing while injecting drugs and targeting 15,000 injecting drug addicts by 2010. Until December 2007, a total of 6,658 injecting drug addicts had participated in the NSEP programme through the 5 Drop-In-Centres (DICs) and 70 outreach points in 5 States (Federal Territory of Kuala Lumpur, Johor Bahru, Pulau Pinang, Kuantan and Kota Bharu). Forty percent (40%) or 2,605 of the total programme participants were regular clients who exchange needles and syringes more than twice a month.

## **Condom Usage**

The usage of condoms was implemented to arrest the spread of HIV through sexual relationship which had increased from 5.3% in 1990 to 27.4% in 2006. In the context of Harm Reduction, distribution of condoms was carried out to prevent HIV infection among injecting drug addicts and their sex partners. Till the end of 2007, a total of 50,000 condoms had been distributed to the NSEP participants through the peer education activity.

## **PUBLIC HEALTH LABORATORY SERVICES**

In 2007, the National Public Health Laboratory, Ministry of Health Malaysia, received 46,363 clinical and non-clinical sample which consisted of 39,905 (86.0%) clinical samples and 6,458 (14.0%) food and environmental samples. There were 23,381 (50.4%) samples for diagnostic/special projects or survey, 12,102 (26.1%) samples from surveillance activities and 5,449 (11.8%) from outbreaks (Table 1).

**TABLE 1**  
**Number of Samples Received in National Public Health Laboratory by Sample Categories, Ministry of Health Malaysia, 2007**

Sample Category	Diagnostic / Monitoring	Surveillance	Outbreak	Others	Total
<b>Laboratories in Disease Section</b>					
Bacteriology		268	2,926		<b>3,194</b>
Biochemistry		3,399			<b>3,399</b>
Leprosy		50		1,052	<b>1,102</b>
Mycobacterium (T) B	3,265	7,376			<b>10,641</b>
Molecular	185		29		<b>214</b>
Serology	2,092				<b>2,092</b>
Cytology	11,303				<b>11,303</b>
Virology	3,606		813	3,541	<b>7,960</b>
<b>Sub-Total</b>	<b>20,451</b>	<b>11,093</b>	<b>3,768</b>	<b>4,593</b>	<b>39,905</b>
<b>Laboratories in Food Section</b>					
Additives	85	285	3	42	<b>415</b>
Biotechnology	59	9		4	<b>72</b>
Mycotoxin	223	15	2	39	<b>279</b>
Microbiology	851	51	1,673	7	<b>2,582</b>
Nutrients	165	23		4	<b>192</b>
Heavy Metal and Environmental Pollution	115	71	1	437	<b>624</b>
Natural Contaminant	223				<b>223</b>
Veterinary Drug Residue	947	357		251	<b>1,555</b>
Pesticide Residue	213	191	2	54	<b>460</b>
Tar and Nicotine	49	7			<b>56</b>
<b>Sub-Total</b>	<b>2,930</b>	<b>1,009</b>	<b>1,681</b>	<b>838</b>	<b>6,458</b>
<b>Total</b>	<b>23,381</b>	<b>12,102</b>	<b>5,449</b>	<b>5,431</b>	<b>46,363</b>

Note:

Diagnostic / Monitoring: samples for diagnostic purposes (case-based) or from special project or survey.

Surveillance: samples for surveillance or on-going scheduled (including Ops Ramadhan) activity.

Outbreak: samples from outbreaks investigations and control or complaints.

Others: samples from other than the above reasons (eg. Proficiency Testing, cross-checking etc).

Source : National Public Health Laboratory, MoH

Under accreditation from SAMM ISO/IEC 17025 on analysis for microbiology and chemicals in food (No SAMM 267), the National Public Health Laboratory had expanded the scope of analysis in 2007.

Four issues of '*Buletin Survelan Makmal*' which provides laboratory based surveillance information were also published and distributed.

The National Public Health Laboratory had taken the role of Quality Control for Slit Skin Smear slides from Peninsular Malaysia from the Research Unit, National Leprosy Control Centre, Sungai Buloh since 2007.

The National Public Health Laboratory has been given the task of continuing the National Laboratory Based Surveillance which monitors 4 pathogens namely, *Vibrio cholera*, *Salmonella* spp, *Neisseria meningitidis* and *Haemophilus influenzae* since October 2007. The National Laboratory Based Surveillance also monitor *Vibrio cholerae* and *Salmonella* spp isolated from food.

The National Public Health Laboratory has started a Weekly Laboratory Surveillance Meeting where all laboratory results are reviewed and discussed as part of early detection of an impending outbreak.

In 2007, as part of surveillance, the National Public Health Laboratory has started compiling and monitoring daily outbreak clinical laboratory samples received.

### Disease Control Laboratory

Laboratory Testing for this Section is carried out by the National TB Reference Laboratory, the Leprosy Reference Laboratory, Virus Isolation, Biochemistry, Serology, Bacteriology and Molecular. The number of specimens received by each laboratory in 2007 is shown in Table 2.

**TABLE 2**  
**Number of Specimens Received In 2007**

Unit	Specimens Received
National TB Reference Laboratory	12,297
Cytology Laboratory	11,303
Virus Isolation Laboratory	10,083
Biochemical Laboratory	9,585
Serology Laboratory	3,773
Bacteriology Laboratory	3,345
Molecular Laboratory	833
Leprosy Reference Laboratory	653
<b>Total</b>	<b>51,872</b>

Source: National Public Health Laboratory, Sg Buloh, MoH

## Food Laboratory

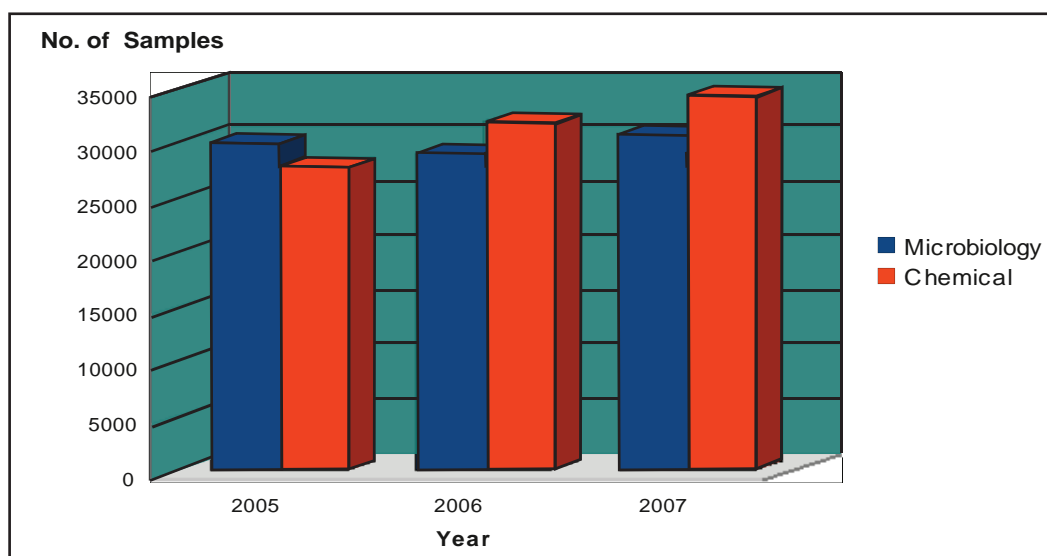
The Food Section provides laboratory testing for food, water and environmental analysis for the purpose of outbreak investigation, surveillance and enforcement of the Food Act 1983. These tests were done to support programmes under the Disease Control Division and the Food Safety and Security Division to reduce the exposure of the community to unsafe food. The Food Section also provides training, development of protocols and quality system harmonisation for all food laboratories under the Ministry of Health.

Monthly reports from 14 Food Laboratories were monitored to evaluate the achievements and performances of laboratory services. In 2007, a total of 65,478 food samples were analysed, which increased by 7.59% as compared to 60,861 samples in 2006. From the amount, 30,992 (47.3%) samples were for microbiological analysis and 34,392 (52.5%) samples for chemical analysis (Figure 9).

Laboratories participated in national and international proficiency test to evaluate the competency of technical staff in conducting food analysis. In 2007, laboratories participated in Food Microbiology Proficiency Test, FAPAS Programme and FODAS (Jabatan Kimia Proficiency Testing Scheme).

Audits were conducted on each laboratory to ensure smooth implementation of quality system and to evaluate laboratories' preparedness to undergo compliance audit to obtain accreditation by the Department of Standard Malaysia. In 2007, all food laboratories under MoH have successfully obtained accreditation for ISO/IEC 17025:2005 from the Department of Standard Malaysia.

**FIGURE 9**  
**Samples Analyzed by Categories, 2005-2007**



Source: Food Safety and Quality Division, MoH

## **Laboratory Surveillance**

The surveillance compiles and analyses laboratory data from the Public Health Laboratory. The information is reported and transmitted to all public health physicians through the Laboratory Surveillance Reports which is issued bimonthly.

The National Laboratory Surveillance Programme conducted epidemiological type monitoring on the isolates of *Salmonella typhi*, other *Salmonella*, *Vibrio cholerae*, *Haemophilus influenzae* and *Neisseria meningitidis* from all laboratories in the country. On completion of the computerisation project (currently ongoing in collaboration with the Asia Development Bank), the National Laboratory Surveillance Programme will enable on-line registration and notification directly by the involved laboratories.

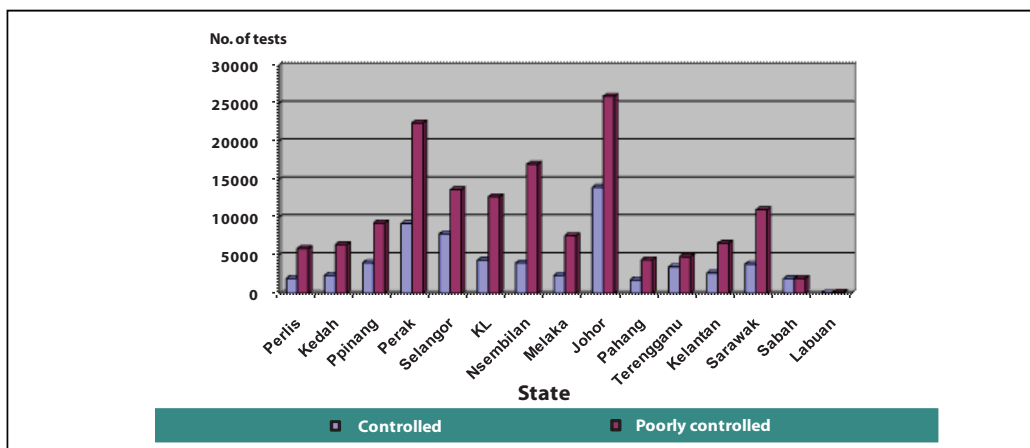
## **NON COMMUNICABLE DISEASES**

### **Diabetes and Cardiovascular Prevention and Control Programme**

The prevention and control of cardiovascular diseases and diabetes covers all three categories of the population; for the apparently well, the prevention of diseases and maintenance of health; for the population at risk, early detection of NCD risk factors followed by intervention; and for those with diseases, appropriate management and prevention of complications to maintain a high quality of life. Throughout 2007, several activities have been successfully carried out continuously in health clinics and hospitals, which includes diabetes screening, increasing the provision and coverage of HbA1c testing, and the establishment of more Diabetes Resource Centres.

Diabetes screening is conducted either opportunistically, specifically in the clinic setting (Wellness services or health checkups) or in the community (health camps). In 2007, a total of 679,233 individuals underwent screening throughout the country; the results showed that approximately 72% had normal results, 10% abnormal and 18% with borderline results. A total of 214,145 HbA1c tests were conducted in 2007 in health clinics; where 29.9% (64,032 tests) showed good control (HbA1c <6.5%) and 70.1% (150,113 tests) showed poor control (Figure 10).

**FIGURE 10**  
**Results of HbA1c Tests By State, 2007**



Source: Disease Control Division, MoH.

In addition, monitoring and surveillance of diabetes are conducted through the diabetes registry (mostly in manual form), the diabetes services annual returns (revised in 2007), the new Diabetes NIA Indicator "Quality of Diabetes Care at MoH Health Care Facilities" (planned for nationwide implementation in 2009) to replace the existing NIA Indicator "Appropriate Management of Diabetes", and the implementation of the Diabetes Clinical Audit.

### **Mental Health Programme**

Mental Health Life Skills Module was developed to provide life skills to target groups i.e children, adolescents, working adults, parents and elderly. In October 2007, a Seminar on "Mental Health in a Changing World: The Impact of Culture and Diversity" was conducted for 200 health personnels, paramedics, teachers, school counsellors, and counsellors from the Welfare Department in conjunction with the World Mental Health Day 2007. The objective of the seminar was to provide knowledge and skills to the participants on issues related to culture and mental health.

### **Suicide Prevention**

National Plan of Action on Suicide Prevention was developed and presented at Public Health Exco Meeting in July 2007. This plan outlines the strategies in the implementation of suicide prevention activities with the objective to reduce suicide rate among the population.

### **Healthy Mind Services**

Guidelines and Standard Operating Procedure was formulated in March 2007 to help implement pilot projects in 9 health clinics. These clinics provide screening services on stress, anxiety and depression and provide life skills intervention as well as relaxation techniques.

## Treatment and Psychosocial Rehabilitation of Mental Patients at Health Clinics

A total of 671 (82.9%) health clinics have implemented mental health care services. Until December 2007, a total of 1,937 patients were detected with mental illness increased by 53% as compared to that of the year 2006. A total of 371 mentally ill patients received psychosocial rehabilitation services at 26 health clinics throughout the country.

## ENVIRONMENTAL HEALTH SERVICES

### National Service Training Programme (PLKN)

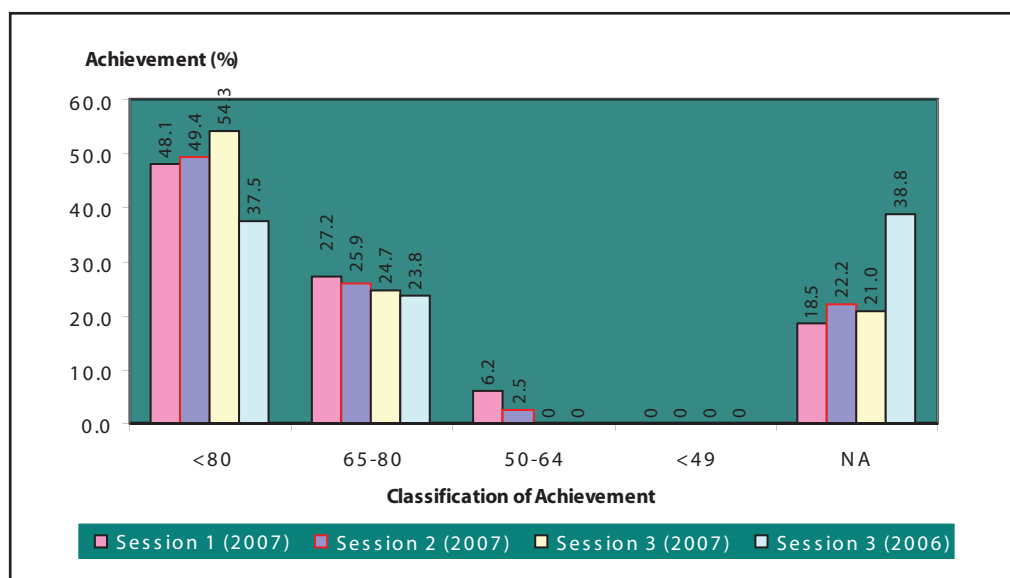
The involvement of the Ministry of Health with PLKN was the result of the post cabinet meeting directive on 23 May 2007. The objectives of the MoH's involvement are to ensure a healthy and safe environment at the training sites, to prevent and control the incidence of diseases amongst the PLKN trainees and to increase the awareness and knowledge of the PLKN trainees about HIV/AIDS.

The role of MoH in PLKN covers three major aspects:

#### i. Sanitary and Health Monitoring at National Service Training Centres (PLKN)

The MoH had initiated sanitary and health monitoring activities at the PLKN training sites since the third session in 2006. Generally, nearly 50% of PLKN camps achieved excellent scores, while only a small minority requires further attention (with scores less than 49%) whereby these camps were closed temporarily pending corrective measures (Figure 11).

**FIGURE 11**  
**Environmental Health Assessment Achievement at National Service Training Centres (PLKN), 2007 - 2008**



Source: Disease Control Division, MoH

## ii. Emergency and Curative Services

The MoH also provided assistance to the Department of National Service Training (JLKN) with regards to medical services at the training camps. The health-related activities includes screening of selected PLKN trainees prior to joining the programme, curative and emergency services at the PLKN camps (MoH personnel are stationed temporarily at the camp clinics, with visiting medical officers), and continuous diseases surveillance among the PLKN trainees.

## iii. Health Education Related To HIV/AIDS

Throughout each training session, the MoH allocated two full days to conduct educational programmes on HIV/AIDS and its prevention for the PLKN trainees. These training sessions were conducted by officers from the MoH simultaneously in all PLKN training camps nationwide.

## MATERNAL AND PERINATAL HEALTH CARE SERVICES

### Antenatal Care

The antenatal coverage in Malaysia for the year 2007 decreased to 91.9% as compared to 97.2% recorded in 2006 (Table 3).

**TABLE 3**  
**Antenatal Service Coverage in Malaysia, 1990, 2000, 2006 and 2007**

Region	Estimated No. of Pregnant Mothers				Antenatal Service Coverage (Number and percentage)			
	1990	2000	2006	2007	1990	2000	2006	2007
<b>Pen. Malaysia</b>	527,095	543,199	411,092	415,089	412,363 78.2%	398,773 73.4%	406,519 98.9%	382,531 92.2%
<b>Sabah</b>	81,571	86,333	59,529	59,379	69,291 84.9%	64,073 74.2%	53,935 90.6%	54,028 91.0%
<b>Sarawak</b>	67,716	62,132	47,549	46,680	46,375 68.5%	54,292 87.4%	43,123 90.7%	42,211 90.4%
<b>Malaysia</b>	<b>676,382</b>	<b>691,664</b>	<b>518,170</b>	<b>522,933</b>	<b>528,029 78.1%</b>	<b>517,138 74.8%</b>	<b>503,577 97.2%</b>	<b>480,562 91.9%</b>

Source: Health Informatics Centre, MoH.

### Deliveries and Postnatal Care

The total number of registered births in Malaysia was 437,519 in 2007 (Table 4). Postnatal coverage increased from 79.3% in 2006 to 86.7% in 2007. Deliveries conducted by trained health care providers increased from 98.3% in 2006 to 98.6% in 2007. The role of traditional birth attendants has been rapidly decreasing over the years (Figure 12). In 2007, 83.4% of the pregnant mothers completed the tetanus toxoid immunization (Table 5).

**TABLE 4**  
**Deliveries and Postnatal Coverage in Malaysia, 1990,2000,2006 and 2007**

Region	Total Delivery				Postnatal Coverage			
	1990	2000	2006	2007	1990	2000	2006	2007
<b>Pen. Malaysia</b>	371,519	400,69	360,535	339,973	241,284 64.9%	312,467 77.9%	276,871 77.1%	302,376 77.1%
<b>Sabah</b>	59,927	61,722	50,667	50,325	39,507 65.9%	55,641 90.1%	48,723 93.4%	43,504 86.4%
<b>Sarawak</b>	44,750	45,488	47,541	45,718	38,162 85.3%	49,124 107.9%	38,194 80.3%	36,412 76.6%
<b>Malaysia</b>	<b>476,196</b>	<b>507,90</b>	<b>458,743</b>	<b>437,519</b>	<b>318,953 67.0%</b>	<b>417,232 82.1%</b>	<b>363,788 79.3%</b>	<b>383,682 86.7%</b>

Source: Health Informatics Centre, MoH.

**FIGURE 12**  
**Percentage of Safe Deliveries in Malaysia, 1990-2007**



Source: Health Informatics Centre, MoH.

**TABLE 5**  
**Average Antenatal Visits Per Mother and Tetanus Toxoid Immunisation Coverage, 1990 ,2000 ,2006 and 2007**

Region	Average Antenatal Visits per Mother				Tetanus Toxoid Immunisation Coverage			
					Completed Immunisation (2 <sup>nd</sup> & Booster Dose)			
	1990	2000	2006	2007	1990	2000	2006	2007
<b>Pen. Malaysia</b>	6.7	8.7	10.0	9.2	316,3758 80.0%	337,043 82.9%	302,388 84.6%	302,149 83.6%
<b>Sabah</b>	5.2	7.3	8.5	8.1	54,205 88.6%	59,887 97.5%	50,487 97.5%	40,007 77.5%
<b>Sarawak</b>	7.3	8.3	8.4	8.5	43,865 86.4%	52,678 113.0%	38,561 93.3%	35,998 88.7%
<b>Malaysia</b>	<b>6.6</b>	<b>8.5</b>	<b>9.6</b>	<b>9.0</b>	<b>414,445 81.7%</b>	<b>449,608 86.8%</b>	<b>391,436 86.9%</b>	<b>379,626 83.4%</b>

Note : Estimated Livebirth used as Denominator for Tetanus Toxoid Coverage

Source: Health Informatics Centre, MoH.

## **Neonatal Jaundice and G6PD Deficiency**

In 2007, a total of 328,029 newborns were screened for G6PD of which 1.9% were found to have G6PD. A total of 54% of the babies had neonatal jaundice as compared to 46.6% in 2006. There were 4 cases of kernicterus in 2007 resulting in three deaths.

## **Thalassaemia**

The four components for this programme include comprehensive treatment, screening for Thalassaemia, health education, and establishing the Thalassaemia registry. Health clinics and district hospitals were equipped with haematology analysers. High Performance Liquid Chromatography (HPLC) and Gel electrophoresis were distributed to 8 hospitals for second level screening. The DNA analysis was conducted at Institute of Medical Research (IMR) and Kuala Lumpur Hospital. Since 2006, 150 health personnel have been trained as thalassaemia counsellors. Budget was allocated to establish the thalassaemia registry. Health educational activities were carried out to increase public awareness on thalassaemia.

## **Maternal Mortality**

Maternal mortality ratio (MMR) was 30 per 100,000 livebirths in 2007. The leading causes of maternal mortality were obstetric embolism, postpartum haemorrhage, hypertensive disorders in pregnancy, and associated medical conditions. A national conference on Maternal Mortality was held from 30 -31 October 2007 in Pulau Pinang with the objective to increase awareness on the main causes of maternal deaths in Malaysia and to further strengthen the commitment of health care providers in reducing maternal morbidity and mortality. Reduction in maternal mortality remains a priority in Malaysia as it is one of the Millennium Development Goals – MDG 5 which requires maternal mortality to be reduced by three quarters by the year 2015.

## Perinatal mortality

Data collected via the Perinatal & Neonatal rapid reporting format showed that the leading cause of perinatal deaths was 'normally formed macerated stillbirths' followed by 'asphyxial conditions' and 'lethal congenital malformations'. 'Immaturity', 'Lethal congenital malformations' and 'asphyxial conditions' were the main causes of neonatal deaths. Strengthening pre-pregnancy and antenatal care is essential to reduce perinatal deaths.

## CHILD HEALTH SERVICES

### Attendances of Infant, Toddlers and Pre-School Children in Health Facilities

Coverage of attendance to the health clinics in 2007 was 83.3% for infants, 43.6% for toddlers and 24.2% for pre-school children. The average clinic visits made per infant, toddler and pre-school children was 5.3, 3.9 and 2.2 respectively. The coverage of children and average visit for each group has improved as compared to 2006, except for the coverage of infant, which showed a slight reduction from 85.9 (2006) to 83.3 (2007). Breakdown of coverage of clinic visits made per children is shown in Table 6.

**TABLE 6**  
**Coverage of New/First Clinic Attendance's of Children and Average Visits to Government Health Facilities per Children, Malaysia, 2007**

Coverage of Children (%)			Average Visits per Child		
Infant	Toddler	Pre-school Children	Infant	Toddler	Pre-school
83.3	43.6	24.2	5.3	3.9	2.2

Source: Health Informatics Centre, MoH.

## Immunisation

Immunisation is one of the core activities provided by the Family Health and Development Division. The immunisation coverage for school children in 2007 is shown in Table 7. In general, the coverage for all immunisation has achieved the Universal Child Immunisation (UCI) targets of 90% except for MMR (Mumps, Measles and Rubella). Effort is being made to further increase the coverage for MMR which include defaulter tracing and health promotion.

**TABLE 7**  
**Immunisation Coverage in Malaysia, 2007**

BCG	Hepatitis B (3 <sup>rd</sup> Dose)	Polio (3 <sup>rd</sup> Dose)	DPT (3 <sup>rd</sup> Dose)	MMR	Hib (3 <sup>rd</sup> Dose)
98.6%	96.2%	98.5%	96.2%	87.5%	93.2%

Source: Health Informatics Centre, MoH

Table 8 shows the immunisation coverage for school children in Malaysia. Overall, the immunisation coverage for school children remain above 90%.

**TABLE 8**  
**Immunisation Coverage Among the School Children in Malaysia, 2005-2007**

Standard 1							Form 3		
Polio, Booster Dose (%)			Double Antigen, Booster (%)			Measles, Mumps Rubella (%)	Tetanus Toxoid (%)		
2005	2006	2007	2005	2006	2007	2007	2005	2006	2007
93.3	102.4	93.2	93.7	102.6	93.1	92.3	96.0	94.2	99.8

Source: Health Informatics Centre, MoH

The replacement of the whole-cell pertussis with Acellular pertussis and Inactivated Polio vaccine has been discussed in the National Technical Immunisation Committee. This vaccine will then be incorporated into the National Immunisation schedule for Children.

### National Congenital Hypothyroidism Screening

The main objective of this programme is for early detection and management of Congenital Hypothyroidism so as to prevent mental disability. As of 2007, about 101 hospitals conducted this screening programme and about 347 cases of Congenital Hypothyroidism were detected. All cases are on follow up by pediatricians in the respective hospitals. Health education material, pamphlets, posters and flip-chart will be developed to further promote the screening programme among the public and also health workers.

## Integrated Management of Childhood Illness (IMCI)

In 2007, training on Follow up for IMCI for Supervisor was carried out in Pahang and was organized by Pahang State Health Office and this training was facilitated by WHO consultant. Sabah, Sarawak and Pahang have conducted one training session each.

## SCHOOL HEALTH SERVICES

### School Health Coverage and Morbidities Among School Children.

The coverage of School Health Services in 2007 by the nurses in both primary and secondary schools remains above 95% while the coverage by doctors in 2007 was still low (less than 40%). This was due to critical shortage of doctors in the School Health Team.

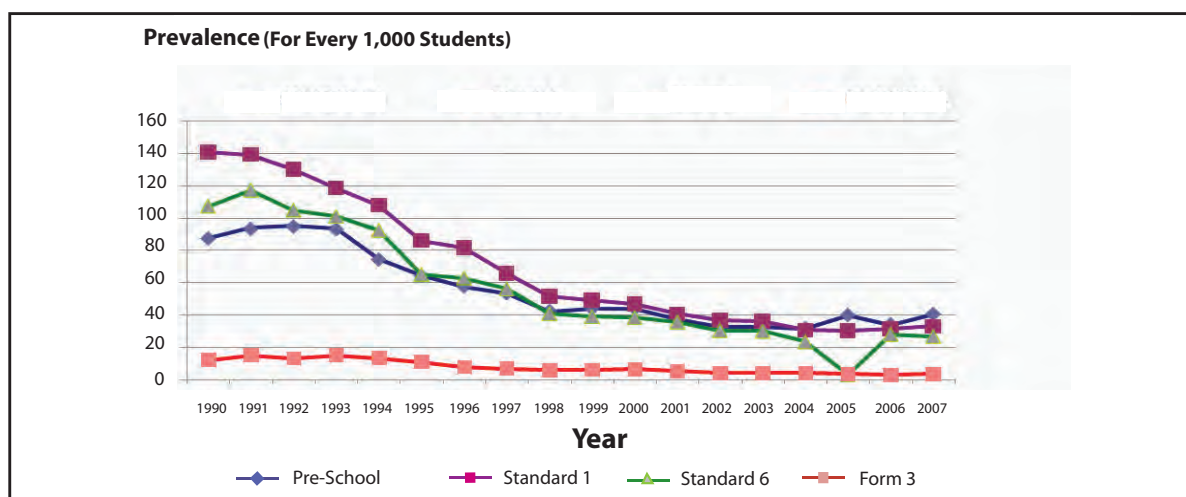
**TABLE 9**  
**Coverage of School Health Services, Malaysia, 2007**

Coverage by Health Nurse (%)			Coverage by Medical Officer (%)		
Standard 1	Standard 6	Form 3	Standard 1	Standard 6	Form 3
97.2	96.4	94.0	26.2	21.0	13.6

Source: Health Informatics Centre, MoH

Since 1990, it has been observed that the prevalence of head lice, worm infestation and scabies have reduced among all age groups. However, the prevalence of visual defect and malnutrition have increased steadily since 1990.

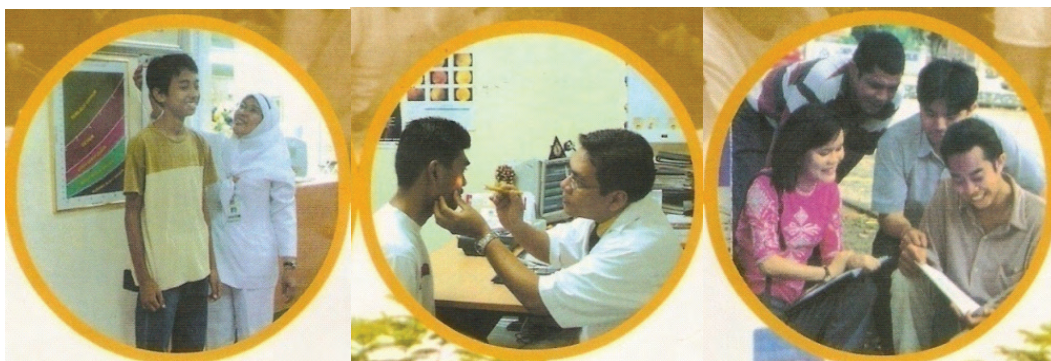
**FIGURE 13**  
**Prevalence of Head Lice Detection Among Malaysian School Children, 1990 to 2007**



Source: Health Informatics Centre, MoH

## ADOLESCENT HEALTH PROGRAMME

In 2007, a total of 2,948,669 new attendants among adolescent 10-19 years received treatment at the health centers nationwide. Among those, 160,771 (5.5%) were screened, 33,888 (1.1%) adolescents were given counseling and 1,395 (0.05%) were referred to hospitals or other agencies for further management. The morbidities seen were related to nutritional health, physical health, mental health, sexual and reproductive health as well as risk behaviours.



In 2007, a total of 38 trainings on adolescent health care and counseling were conducted at national, state and district level. A total of 809 healthcare providers from various categories (doctors and paramedics) were trained to increase their knowledge, skills and quality of care in dealing with adolescents at the primary health care level. Several meetings and workshops were also conducted at the national level to review and finalise the "National Adolescent Health Plan of Action 2006-2020", "Module Engaging Adolescent Using HEADSS Framework" and e-HIMS guidelines and retens for Adolescent Health Services.

Ministry of Health also collaborated in smart partnership with other agencies to organize several Adolescent Health related activities such as the 1st Adolescent Health Learning Market and the 5th National Adolescent Health Symposium on 23-25 March 2007 which was launched by the Director General of Health, Malaysia. Several representatives from Ministry of Health including the Adolescent Health Unit also attended, co-chaired as well as presented papers in the Workshop on Accelerating Action For Improving The Sexual and Reproductive of Young People which was jointly organized by WHO, UNICEF and UNFPA in Manila Philippines on the 6-8 March 2008.

## WOMEN'S HEALTH PROGRAMME

The main activities include Cervical Cancer Screening Programme, Family Planning Programme, Breast Cancer Prevention Programme and activities related to reproductive health and gender. Cervical Cancer Screening Programme through pap smear screening and family planning programme is available in almost all health clinics in Malaysia. The number of pap smear slides taken in 2007 was 385,090 which was slightly lower as compared to the previous year's performance. However, the percentage of unsatisfactory slides has reduced significantly from 3.7% in 2006 to 1.5% in 2007. The positive smear rate which includes LGSIL, HGSIL, ASCUS, HPV and cancer increased from 0.93% in 2006 to 1.04% in 2007.

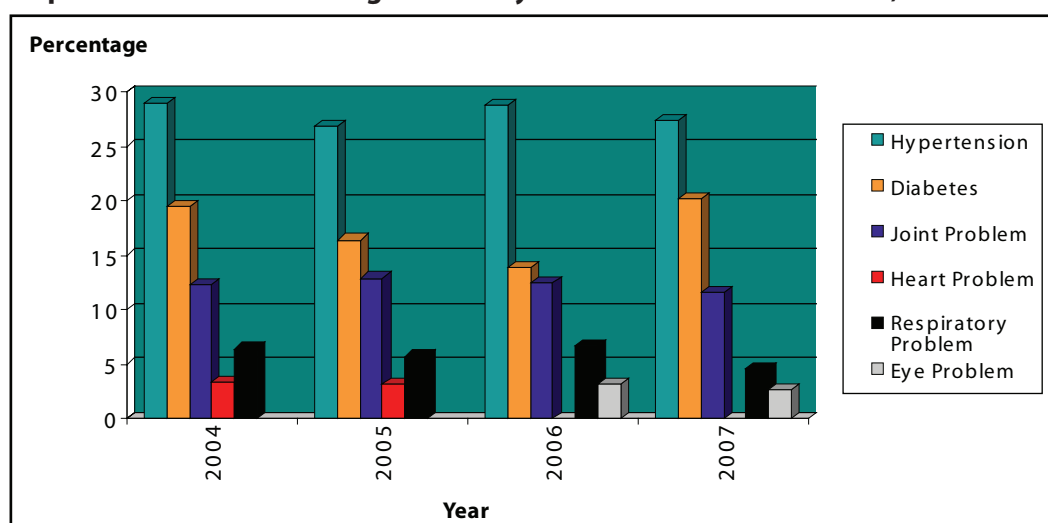
In the effort to strengthen the population-based pap smear programme, an application which is known as SIPPS (Sistem Informasi Program Pap Smear) was developed in 2007 and the pap smear request and report form was reviewed according to Bethesda Classification 2001.

In 2007, there was a significant increase in family planning new acceptors by 14.7% as compared to the previous year. A total of 10,000 units of Malay version of the WHO Medical Eligibility Criteria and Selected Recommended Practise for Contraceptive Use was printed and distributed to all health clinics and hospitals in Malaysia to improve and update the knowledge of healthcare givers in prescribing family planning methods.

## HEALTH CARE SERVICES FOR THE ELDERLY

Until December 2007, a total of 542 (67%) health clinics, all over the country have implemented the health care services for the elderly. Almost 19,000 health personnel at primary care level had undergone training for health care of the elderly. To strengthen care for the elderly, effort has been focused on dementia problem among the elderly whereby dementia screening has been conducted in certain health clinics. About 16,000 personnel have been trained for care for the elderly (care givers). These included health personnel, elderly care givers, non-governmental organisations, voluntary bodies and other agencies. For the same period, a total of 16 health education materials had been produced. Five most common morbidities among the elderly (according to the highest number of repeated visits) were hypertension, osteoarthritis, diabetes mellitus, asthma/COAD and vision problem i.e. almost the same as previous year (Figure 14). For the coming years, formation of multidisciplinary team at the health clinics level had been included in the Elderly Healthcare Plan of Action to enable the delivery of a comprehensive healthcare services for the elderly and their carers.

**FIGURE 14**  
**Top Five Morbidities Among the Elderly Attended the Health Clinics, 2004-2007.**



Source: Family Health Development Division, MoH.



*Home Care Nursing Session*

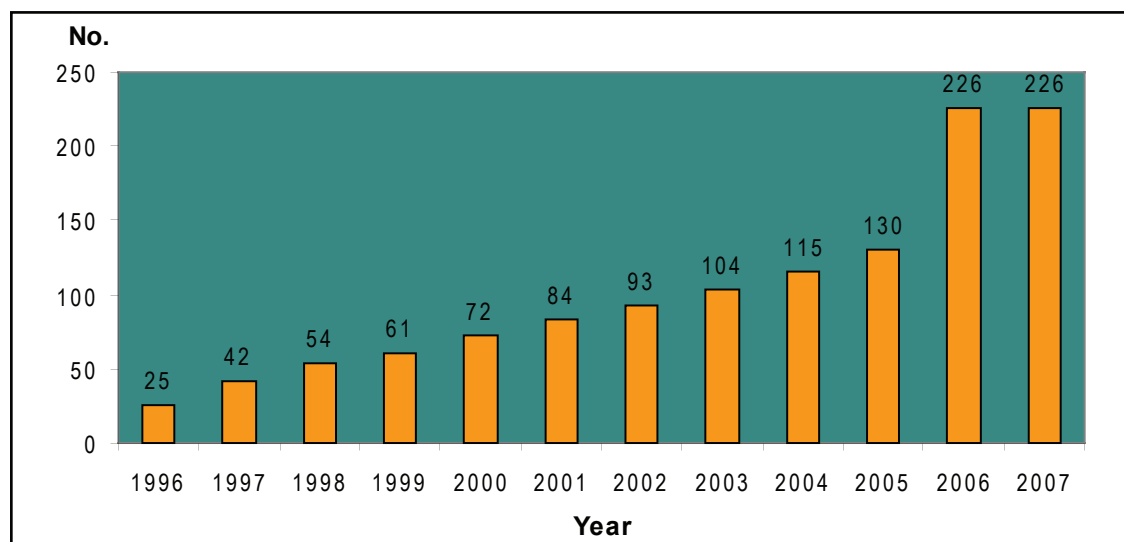
## **HEALTH CARE FOR PERSONS WITH DISABILITIES**

Health care programmes for Persons with Disabilities (PWD) include care of Children with Special Needs (CWSN) as well as prevention and control of blindness and deafness. From 1996 to 2005, the activities focused on CWSN. However, beginning 2006 till 2016, the activities focused mainly on the strengthening of the rehabilitation services for adults with disabilities. Focus for the year 2007 was quality improvement on the management of PWD. From 7 - 9 February 2007, a workshop was conducted to introduce the International Classification of Functioning, Disability and Health (ICF) to policy makers and health care providers. A decision was made not to implement ICF as yet as it is still under research. However following the workshop, health care professionals from MoH and universities have joined the WHO multicenter research on ICF.

Training of health staff was conducted in five (5) regions using the six (6) manuals on the management of CWSN. The training focused on multidisciplinary team management. Three training sessions on Neurodevelopment and Sensory Integration for children with Cerebral Palsy was conducted by an Occupational Therapist from Penang Spastic Center. A training manual on issues of sexual health for children and adolescent with disabilities is being finalised following feedback from a trial training conducted involving health, welfare and education personnel.

In 2007, a total of 1,384 new cases were detected among children of 0-12 years. The number of clinics providing rehabilitation has increased from 25 in 1996 to 226 in 2006 (Figure 15). There was no increase in the number of facilities in 2007. There were 32,590 attendances for rehabilitation at health clinic in 2007 and 11,379 encounters at community based rehabilitation centers operated by Department of Social Welfare.

**FIGURE 15**  
**Number of Health Clinics Providing Rehabilitation Services for Children**  
**with Special Needs, 1996 - 2007**



Source: Family Health Development Division, MoH

## PRIMARY HEALTHCARE ACTIVITIES

### Integrated Approach in Health Delivery Services in Health Clinic (Reviewed Approach)

To facilitate the implementation of policy on integrated services in health clinics, several documents were developed in 2007 to be used by staff and client. An integrated screening tool which focus on person health needs by age groups were developed i.e for adolescent, adult men & women and elderly. A detailed manual as a guide to users on how to fill up the screening forms was established and an integrated tally sheet was introduced to facilitate daily and monthly data collection. Discussion by program heads was held to work out the population targets and coverage. A training program and road show plan for 2008 were drawn to disseminate integrated concept and facilitate implementation in phases.

### Medical Examination for Government Servant Age 40 Years and Above

The health clinics had received several requests for routine medical examination for various purposes. A workshop was conducted to identify critical areas and type of examination which will focus more and address the interest of employees and employers by vetting through various forms and made recommendation for improvement. Members included representatives from Public Service Department, Ministry of Education, Ministry of Higher Learning, Universities, National Sport Council, National Service Department, Road & Transport Department, Police Department and other uniformed personnel such as JPA, SMART team and fire squad. A clear guideline on policy, general procedure including laboratory tests and several forms were developed and circulated for comments.

## Health Clinic Advisory Panels

A total of 653 (79.3%) health clinics had appointed Advisory Panel for Health Clinics which comprised of 9,697 members. The Biennial 4th Health Clinic Advisory Panels National Convention was held on 9-12 July 2007 in Terengganu. The theme was “*Memahat Sejarah Membina Kecemerlangan*” and was officiated by The Honourable Deputy Health Minister. About 500 participants attended the event which marked the launching of “The 3rd manual for health clinic advisory panels use on chronic diseases: Diabetes, Hypertension, Stroke and Arthritis” which emphasized on risk factors and healthy life styles practices. The state representatives were also participating in oral and poster presentations.

The groups have moved forward in looking into impact indicators for advisory panel health clinic activities. Spearheaded by the National Technical Committee for Health Clinic Advisory Panels with input from program heads, a preliminary workshop was held to establish four impact indicators for their activities. The four areas (and its indicators) were food poisoning, chronic disease management , healthy life style and stress management.

## Pre Hospital Emergency Care and Ambulance Services

Primary emergency care services at primary care level have been improved and upgraded to ensure early treatment and appropriate referral could be effectively provided to the clients. Some of the major activities that were carried out include:

Review and update the operational policy document of ambulance and emergency services at health clinics to ensure standardized and uniformity in the implementation of activities related to emergency and ambulance services.

Provision of additional allocation amounting to RM1.5 million for upgrading of treatment room, RM1.36 million for health clinics operation and RM50 million for procurement of medical equipments and non-drugs items to the states to improve the service delivery to the clients.

Review and update the specification of ambulance and emergency medical equipments. The specification would be used for future procurement of ambulance and emergency medical equipments for the Ministry of Health.

Conduct four regional pre-hospital emergency care training courses for assistant medical officer and two training courses for community nurse. A total of 234 staffs were successfully trained.

Provide technical support in implementing National Call Center network. There were 237 health clinics linked to 26 main hospital- based emergency call centers in 2007.

**TABLE 10**  
**Ambulance Status in Health Clinics, 2007**

No.	State	Good Condition	Damaged	B.E.R Process	B.E.R	Condemn	Total
1	Perlis	12	0	0	0	0	12
2	Kedah	52	0	4	0	1	57
3	P.Pinang	23	0	0	1	0	24
4	Perak	54	15	4	2	0	75
5	Selangor	52	0	0	0	10	62
6	N.Sembilan	29	17	2	0	3	51
7	Melaka	14	0	0	1	3	18
8	Johor	61	4	8	5	10	88
9	Pahang	58	6	7	1	0	72
10	Terengganu	19	14	7	3	8	51
11	Kelantan	44	13	8	9	3	77
12	Sabah	55	3	6	4	3	71
13	Sarawak	89	25	9	1	2	126
14	F.T. KL & Putrajaya	10	0	0	0	0	10
15	F.T. Labuan	3	0	0	0	0	3
	<b>Total</b>	<b>575</b>	<b>97</b>	<b>55</b>	<b>27</b>	<b>43</b>	<b>797</b>

Source: Family Health Development Division, MoH.

### Pharmacy Services

The number of prescriptions and items dispensed in 2007 were 25,507,072 and 63,591,916 respectively, increased by 13.6% and 13.1% as compared to 2006. The average number of items per-prescription was 3.10, similar to the previous year. The total expenditure for drug and non-drug items in 2007 was RM260,844,451, i.e. an increase of 26.1% as compared to 2006. Out of the total expenditure, 92.0% was spent on purchasing of drugs. The average cost of drugs per prescription was RM11.82, mainly due to revision of drug price and purchasing of pre-packed drugs. The number of patients involved in drug counseling in 2007 increased by 263% to 31,455 as compared to 2006. The number of prescriptions screened in 2007 was 142,750. Implementation of the Clinic Procurement System had been expanded nationwide, with 598 (85.7%) of health clinics actively use the system.

### Pathology Services

The number of tests done in medical laboratories in the health clinics has increased by 52.5% (31,407,210) in 2007 as compared to 2006. There were 629 or 70.3% health clinics and mother and child health (MCH) clinics had medical laboratory unit within their facilities. As end of 2007, the number of hematology, chemistry and HbA1c analyzers in the health clinics were 519,207 and 201 respectively.

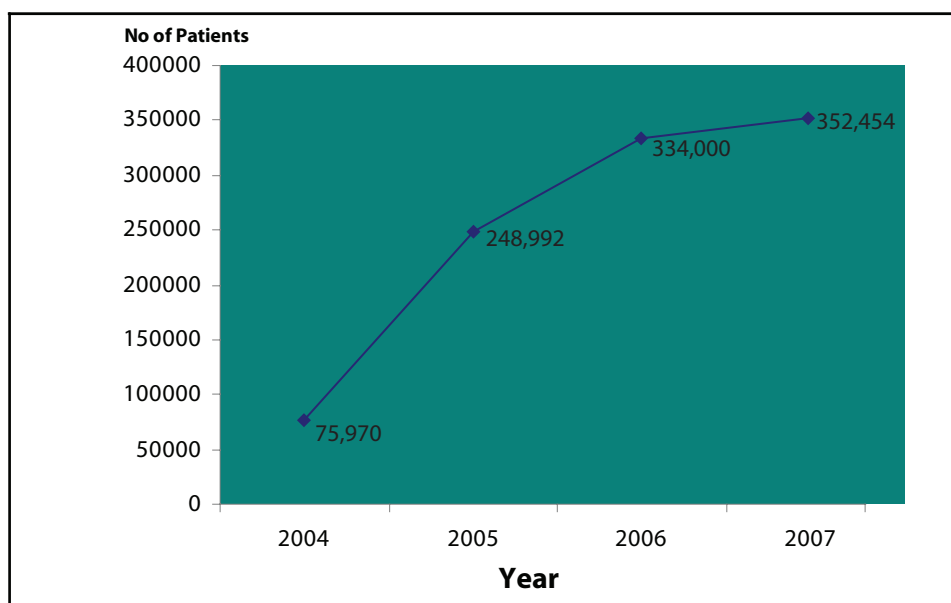
## Radiology Services

Total health clinics with x-ray unit in 2007 was maintained at 157, while clinics with ultra sound scanners increased to 390 (6.7%) as compared to 2006. As number of x-ray examination increasing, the median examination rate among new out-patient attendances was 3.35% in 2007.

## Teleprimary Care (TPC)

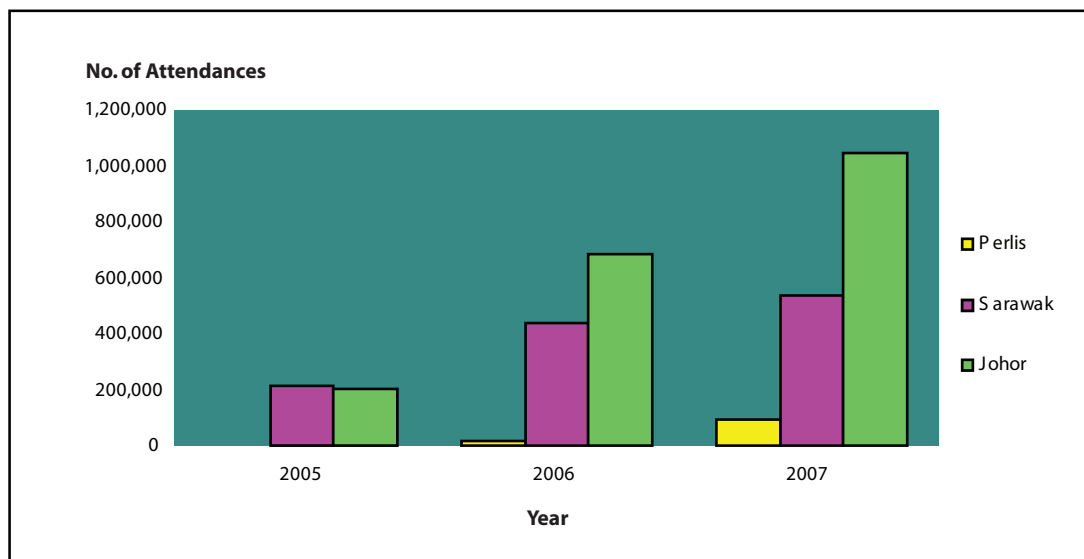
Teleprimary Care is Malaysia's first home-grown enterprise-wide electronic clinic management & clinical information system that links primary and secondary care. It was launched in 2005 and is currently implemented in Johor, Sarawak and Perlis in a total of 56 health clinics, 4 hospitals and 10 health districts. As of 31 December 2007, a total of 1,011,411 patients have been registered into the system, comprising of 53% males and 47% females with ethnic breakdown of 38% Malays, 15% Chinese, 6% Indians and 17% Bumiputra Sabah and Sarawak. Majority of the patients were 20-29 years (51%), and followed by 0-19 years (37%). Visit records showed that 70% came for curative care while 24% obtained wellness services (Figure 16).

**FIGURE 16**  
**Number of Patients Registered into TPC System, 2004-2007**



Source: Family Health Development Division, MoH

**FIGURE 17**  
**Number of Attendances Recorded into TPC System, 2005-2007**



Source: Family Health Development Division, MoH

TPC user was trained based on the modules that they use in their daily activities. Currently, 3,000 users have been trained. A Users Conference was conducted from 24-27 July 2007 and it was attended by 200 participants consisting of users and other stakeholders of TPC. Upgrading of TPC activities included conversion of VSAT to IPVPN lines to 18 Health clinics. TPC CIS was also enhanced to make it more user friendly. Interface with MyKad for registration was successfully done. Several laboratories within TPC facilities were interfaced with the Laboratory Information System i.e. at Sultanah Aminah and Sibu hospitals, and Lanang and Kangar health clinics.

Information kiosks were piloted in 8 of the TPC health clinics namely Johor (3), Sarawak (4) and Perlis (1). In 2007, selected clinics developed the content for these kiosks which consist of clinic operational information and all these kiosk will be installed with an off line version of MyHealth Portal.

In July 2007, Ministry of Health's ICT Steering Committee concurred on extending TPC to another 13 sites, i.e. 9 in Sarawak and 4 in Perlis to achieve the Key Performance Indicator for Ministry of Health. The Ministry was also involved in the eKL project whereby the population living within the Klang Valley will have access to an e-appointment system. The Ministry decided that for the 18 health clinics chosen in Selangor and Federal Territory of Kuala Lumpur the back-end application to be TPC. Installation of TPC will start in 2008. The use of Manual Lifetime Health Record (LHR) was implemented in 7 health clinics in Pahang.

## NUTRITION ACTIVITIES

Nutrition activities were grouped into four major areas, namely, planning and development, surveillance, rehabilitation and promotion. All activities were carried out in line with those of other health services, both at the national level as well as at health facilities in the states. Inter-agency cooperation and integration of nutrition activities into other programmes has contributed to the strengthening of these activities.

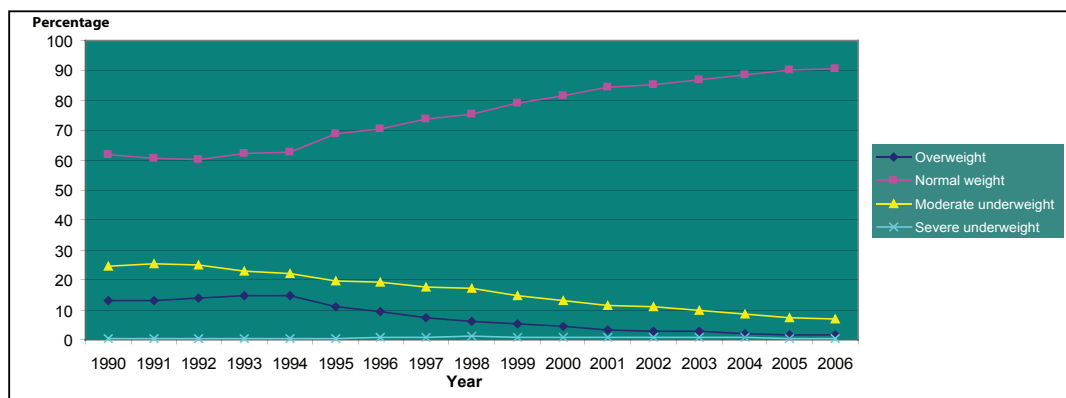
### Nutrition Planning and Development

In 2007, advocacy of the National Plan of Action for Nutrition Malaysia (2006-2015) was carried out at the national level and in a few states, namely Negeri Sembilan, Pahang, Pulau Pinang and at the Social Welfare Department. Advocacy will be targeted at other ministries and institutions of higher learning in 2008. The Technical Working Groups on the National Plan of Action for Nutrition of Malaysia had implemented various activities throughout 2007. The Malaysian Dietary Guidelines which was published in 1999 was revised and is expected to be published by the end of 2008. The Balanced Diet and Healthy Lifestyle Module Course was conducted at both national and state levels. In 2008, this activity will be carried out at agencies under the Department of Community Development (KEMAS) and the Association of Registered Child Care Providers Malaysia. A seminar-cum-workshop on the Malaysian Adult Nutrition Survey, 2003 was also held. Besides that, a survey to assess nutrition knowledge, attitudes and practices was carried out. A database containing all the information pertaining to nutrition-related research since 1985 will be developed in 2008. The Technical Working Group on Nutrition Promotion was formed in an effort to reinforce nutrition promotion activities and to forge a network of collaboration with other agencies.

### Nutrition Surveillance

There was an improvement in the nutritional status of children below five years, with the percentage of children with normal body weight increasing to 90.7% as compared with 90.3% in 2006. The percentage of overweight and moderately under weight children had decreased, while the percentage of children with severe malnutrition remained below 1% (Figure 18).

**FIGURE 18**  
**Nutritional Status of Children Below Five Years, Malaysia, 1990-2006**



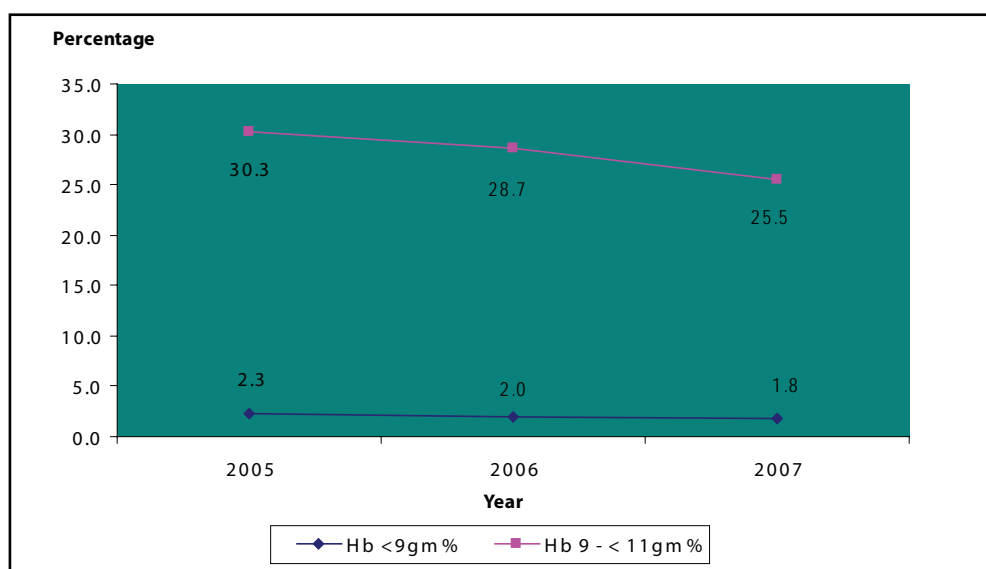
Source : Health Informatics Centre, MoH.

## Nutrition Rehabilitation

Nutrition rehabilitation was implemented through various strategies and interventions tailored to the specific target groups. The Food Basket programme along with educational activities were carried out to support rehabilitation of malnourished children. Until December 2006, a total of 8,623 children had received the Food Basket under the Nutrition Rehabilitation Programme for Malnourished Children. Out of the total number of recipients, 55.3% had been rehabilitated successfully.

In an effort to eradicate iron deficiency anaemia among pregnant mothers, haematinics and full cream milk supplements were provided. Nutrition and health education activities were also carried out amongst them. In 2007, the percentage of pregnant mothers with anaemia (Hb level < 11 gm%) was 27.4%. Moderate anaemia (Hb level 9 - < 11 gm %) had dropped to 25% ( Figure 19) as compared to the previous year, while mothers with haemoglobin level of less than 9 gm % was 1.8 % ( 3,866 individuals).

**FIGURE 19**  
**Percentage of Pregnant Mothers ( 36 months gestation) Attending**  
**Government Health Clinics by Haemoglobin Level, 2005-2007**



Source : Health Informatics Centre, MoH.

Universal salt iodisation, which was gazetted as a law in Sabah beginning on the 1st June 2000 up to 2007, has been proven as an effective measure to help increase urinary iodine to the optimal level ( 100-199 µg/litre). Nevertheless, iodine deficiency still persists in Sarawak, Perak, Terengganu, Kedah and Pahang. Therefore, the National Survey on Iodine Deficiency Disorders 2008 was approved as a measure to assess the iodine status of the Malaysian population in 2008. The survey will also aid in the implementation of the Universal Iodised Salt intervention programme.

The proposal paper for the gazettelement of the whole of Sarawak as an endemic area under Subsection 285(3) Food Act 1983 and the Food Regulations 1985 (Amended Version 2006) was approved by the Honourable Minister of Health and is expected to take effect in 2009. Distribution of iodised salt to pregnant mothers and malnourished children in endemic areas will be continued with a total of 507,474.5 kilogrammes of iodised salt distributed to 42,158 recipients in 2007.

Individualised Nutrition Counseling at health clinics has been initiated to address the nutrition-related health needs of the population such as obesity, diabetes, hypertension and hyperlipidemia. Nutrition counseling is provided by trained nutritionists. As end of 2007, a total of 162 health clinics had participated in this programme, by utilising the services of nutritionists from the District Health Department.

### **Nutrition Promotion**

Various activities were planned and implemented in effort to change the eating habits and dietary patterns of the population for a better quality of life. Healthy nutrition starts with breastfeeding during infancy. Breastfeeding promotion activities were carried out at various levels with the collaboration and support of other agencies. Until December 2007, 116 out of a total of 127 government hospitals, 2 hospitals under the Ministry of Education and 6 private hospitals were accredited as Baby- Friendly Hospital. The Code of Ethics for Infant Formula Products was another strategy utilised to assist in the protection, promotion and support of breastfeeding practices. A total of 123 informational materials on infant formula products submitted by infant formula marketing companies were vetted. Out of these, 88 materials (72%) were issued approval codes. Apart from that, 158 cases of probable violation against the Code were recorded. Companies found to violate the Code were given penalties ranging from warnings and suspension of vetting of all informational materials for one year, in line with provisions under the Code.

The Guidelines for the Feeding of Infants and Young Children (0-3 years) encompassing nine feeding principles have been drafted and will be published in 2008. The aim of developing these guidelines is to promote optimal feeding of infants and young children. Healthy eating activities in schools have also received emphasis, with the development of the Healthy School Canteen Project. This project, which is targeted to the canteen operators, students, teachers and parents will be implemented in 2008. Twelve schools from four states will be participating in this pilot project. The questionnaire for the Knowledge, attitude and Practice survey has been developed. Besides that, a four-week rotationary healthy menu for all residential schools and participants of the National Service Training programme has also been prepared.

A total of 14 Nutrition Information Centres and 47 Healthy Community Kitchens were set up until 2007 at the national and state levels, as a centre of reference for the public to gain access to nutrition information. Various activities had also been lined up and carried out at these centres for the benefit of the community.

Health and nutrition promotion activities were widened with the smart partnership networking involving both government and non-government agencies in an effort to enhance the knowledge and awareness of the community on the importance of a healthy, safe and quality diets. The Healthy Cafeteria Project Model which provides 56 healthy recipes and a computerised menu selection service was introduced.

In addition, the Healthy Eating through Healthy Shopping project which involved the participation of a few renowned hypermarkets has been planned for implementation in the states of Negeri Sembilan, Johor and Selangor in 2008. Training of food handlers and canteen operators in the National Service Training programme as well as in schools was carried out with the aim of enhancing their knowledge and skills on healthy eating and the preparation of healthy meals.

In line with the implementation of various promotional activities, educational materials and nutrition guides were also produced in 2007. These included a poster on breastfeeding, a booklet on Healthy Eating, guide books on healthy menus in school canteens, healthy canteens, preparation and serving of healthy meals and a leaflet on nutrition for older adults.

## **FOOD SAFETY AND QUALITY ACTIVITIES**

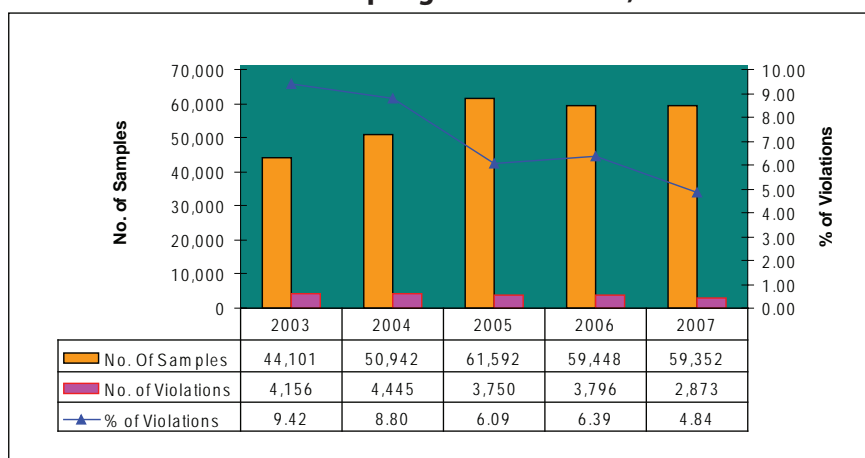
### **DOMESTIC ENFORCEMENT ACTIVITY**

#### **Food Sampling**

Sampling was carried out to ensure food prepared and sold in Malaysia are safe and comply with the provisions in the Food Act 1983 and Food Regulations 1985. The sampling target for the year 2007 was 48,000 which was based on the norm established in the National Work Plan (NWP) of 2 samples per 1,000 population fixed by the Food Safety and Quality Division, Ministry of Health, Malaysia. The parameters of analysis of these samples were divided into microbiology (40%), Chemical (55%) and Physical (5%).

A total of 59,352 food samples were taken for analysis in 2007, out of which 2,873 (4.48%) contravened the Food Act 1983 and Food Regulations 1985 (Figure 20). The number of offenders fined were 733 cases with total fines collected amounting to RM827,681.00. There was no case of imprisonment for the offenders, 78 cases were acquitted not amounting to discharge and 21 cases were discharged and acquitted.

**FIGURE 20**  
**Number of Food Sampling and Violations, 2003 – 2007**

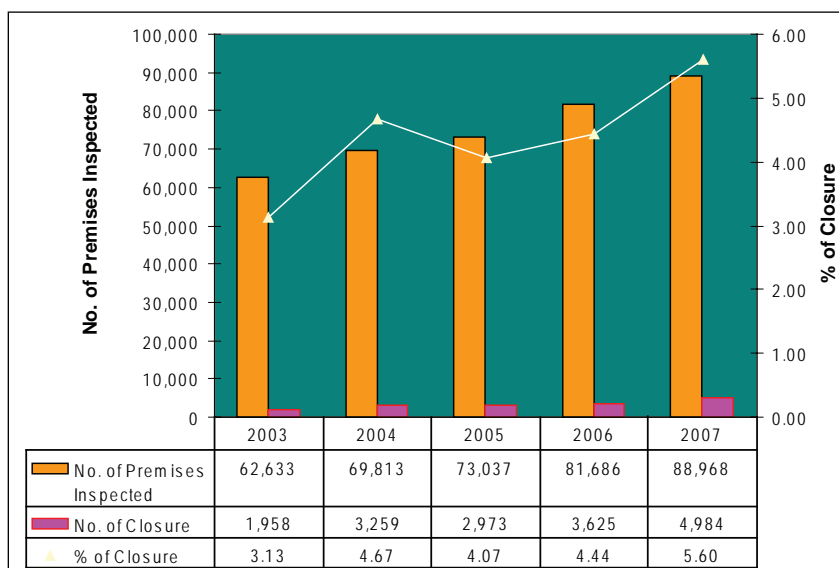


Source: Food Safety and Quality Division, MoH

### Inspection and Closure of Food Premises

The inspection of premises is a routine activity to ensure the sanitation and hygiene of premises and to ensure food safety. In 2007, a total of 88,968 premises were inspected and 4,984 unsanitary premises were closed under provisions provided in Section 11 of the Food Act 1983 (Figure 21).

**FIGURE 21**  
**Food Premises Inspection and Closure, 2003 – 2007**



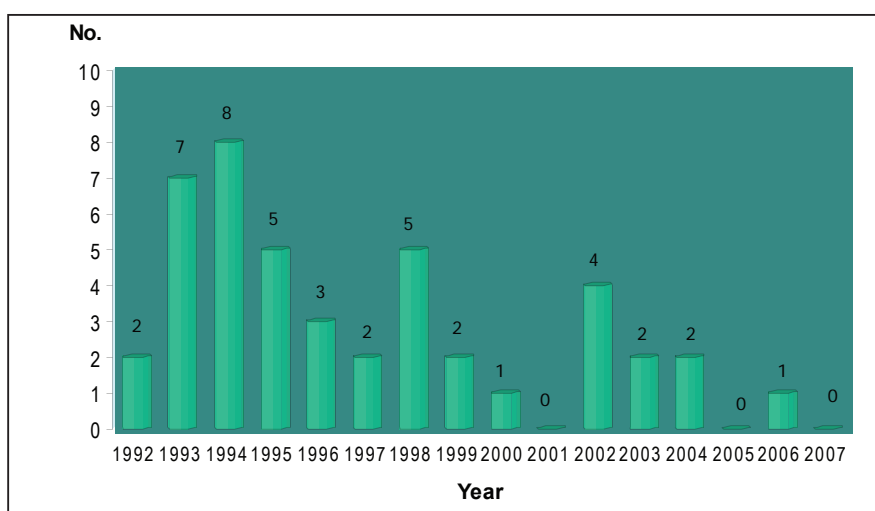
Source: Food Safety and Quality Division, MoH

## Licensing

### Natural Mineral Water

The production and importation of natural mineral water in this country is licensed under Regulation 360A of the Food Regulations 1985. From the time this Regulations is enforced until December 2007, 44 sources of natural mineral water is being licensed with a collection of RM264,000.00. From the 38 sources of natural mineral water licensed in 2007 (Figure 22 and Table 11), 29 were from local sources and 9 were from foreign sources.

**FIGURE 22**  
**Number of Licenses Issued to Sources of Natural Mineral Water, 1992 - 2007**



Source: Food Safety and Quality Division, MoH

**TABLE 11**  
**Total Licenses of Natural Mineral Water Issued, 2007.**

State	Natural Mineral Water		Total	Total Collection (RM)
	Local	Imported		
Total	29	9	38	228,000.00

Source: Food Safety and Quality Division, MoH

### Packaged Drinking Water

Regulation 360B, Food Regulations 1985 was gazetted in the year 2000 whereby the sources of packaged drinking water need to be licensed. Since 2007, a total of 173 sources of packaged drinking water were approved (Table 12). However, there were only 149 licenses still active.

**TABLE 12**  
**Number of Licenses Approved, 2001-2007**

Year	2001	2002	2003	2004	2005	2006	2007	Total
Total	8	33	43	26	19	33	11	173

Source: Food Safety and Quality Division, MoH

## Operations Carried Out

In 2007, a few operations were carried out as shown in Table 13.

**TABLE 13**  
**Operations Carried Out in 2007**

No.	Operations
1.	Colour Operation (Tea with Colour)
2.	Rhodamine B Operation (Paste)
3.	Chinese New Year Operation/Ops Gou (Beta-agonist in pork, nuts and nuts product - aflatoxin, mandarin oranges - pesticides and kuaci - cyclamate dan sulphur dioxide)
4.	Benzene in Soft Drink Operation
5.	Boric Acid in Pasta Operation
6.	Formaldehyde in Pasta (Koay Teow)
7.	Propionic Acid in Bread and Biscuit Operation
8.	Ramadhan Operation
9.	Hijrah Operation (Hari Raya Qurban)
10.	Tongkat Ali Operation
11.	Beta-agonist in pork dan pig feed operation

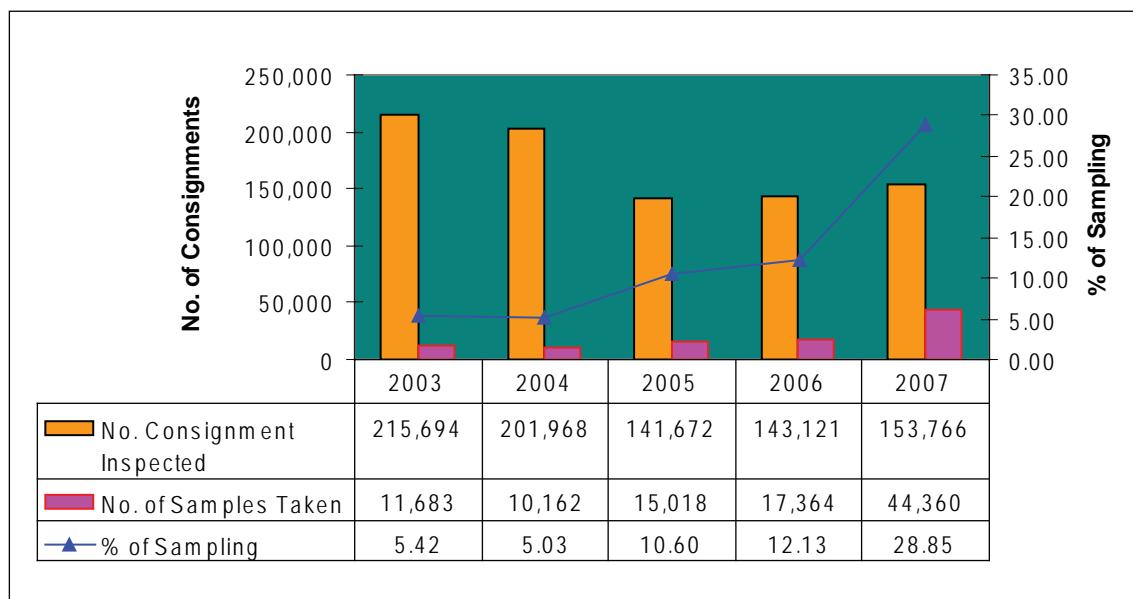
Source: Food Safety and Quality Division, MoH

## IMPORT ENFORCEMENT ACTIVITIES

The enforcement activities included the establishment of National Monitoring Programme of National Imported Food Product such as Groundnut Kernels for Aflatoxin Contamination (January – December 2007), Shrimp for Drug Residue Contamination (January – December 2007), Peanut Butter for Aflatoxin Contamination (July – December 2007), Cheese for *Listeria spp* Contamination (June – December 2007), Pistachio for Aflatoxin Contamination (June 2007– July 2008) and redrafting and reviewing of the proposed Food Import Regulation. The other activities were establishment of guidelines for criteria for action level for the parameter inorganic arsenic in fish and fish product, consultation and reviews on existing policy on Bovine Spongiform Encephalopathy (BSE), development of FoSIM Domestic that plan to be operated in the last quarter of 2007 and development of Food Emergency and Preparedness Plan that plan to be operated in last quarter of 2007.

In 2007, a total of 153,766 consignments were inspected and 44,360 samples (28.84%) were taken for analysis (Figure 23). From the total samples taken for analysis, 765 samples (1.72%) contravened the Food Act 1983 and its Regulations 1985. All of the activities were guided by the FoSIM.

**FIGURE 23**  
**Inspection Of Food Import Consignment and Sampling, 2003-2007**



Source: Food Safety and Quality Division, MoH

## INDUSTRY ACTIVITIES

### Exportation

Since 1996, the European Union had appointed the Ministry of Health (MoH) as the competent authority to ensure food safety through HACCP certification scheme in order to obtain registration approval such as European Union (EU) Registration Number when exporting fish and fish based products to the EU. There were 70 companies registered with the EU through Food Safety and Quality Division (FSQD). Furthermore, as a CA, report on the monitoring program for drug residues in fish and fish-based products was prepared annually as it is one of the requirement by the EU.

### Export Control

Food export is an activity that contributes significantly to the economy and increases our revenue. It is therefore imperative to ensure continuous, uninterrupted export and maintain the image of the country through good relationships with importing countries and the production of food that is safe and of high quality. Due to the expansion of the export of food products in Malaysia, export control is one of the main activities under this department.

Under export control, the section provides guidance and advice on aspects of safety and hygiene to relevant agencies and industries; develop, monitor and evaluate issues or problems that occur during export of food products, with the cooperation of the state health officers and other agencies. The section maintains good cooperation and bilateral or unilateral relationships through discussions, provide information and assist during inspection visits carried out by CA of importing countries.

Based on the inspection done by Food and Veterinary Office (FVO) in European Commission's Health and Consumer Protection Directorate General from 1-11 March 2005, a few comments and ameliorate recommendation had been given. The FSQD took the initiative to seek assistance under Asia Trust Fund (ATF) to carry out a project entitled "Upgrading The Capability of The Competent Authorities and Fish Facilities in Malaysia of Meeting EU Fishery Requirements". The objective of the project is to improve the understanding of all relevant agencies on the 'EU requirements for fish and fish product export to EU'. This project will be carried out in phases over a one year duration and will be conducted by international consultants from International Trade Centre (ITC).

### Export Certificate

Corresponding with the rapid expansion of the food industries in Malaysia, there is a tremendous increase in the food export activities in order to fulfill the varied requirements of the importing countries. To fulfill these requirements, this section issues various certificates for export purposes namely Health Certificate, Free Sales Certificate, Non Genetically Modified Food ( Non Starlink Corn), HACCP certificate and also other certificates as required by the importing countries. The increase in the number of certificates issued as shown in Table 14 showed the rapid expansion of the export trade.

**TABLE 14**  
**Number of Export Certificate Issued by Type, 2002-2007**

Type of Certificate	Year						Total
	2002	2003	2004	2005	2006	2007	
Health Certificate	7,525	12,255	14,938	16,907	17,805	19,409	<b>88,839</b>
Free Sale Certificate	252	481	1,326	1,078	1,261	1,539	<b>5,937</b>
Non-Genetically Modified Certificate (non starlink Corn)	21	33	142	50	64	56	<b>366</b>
Total	7,798	12,769	16,406	18,035	19,130	21,004	<b>95,142</b>

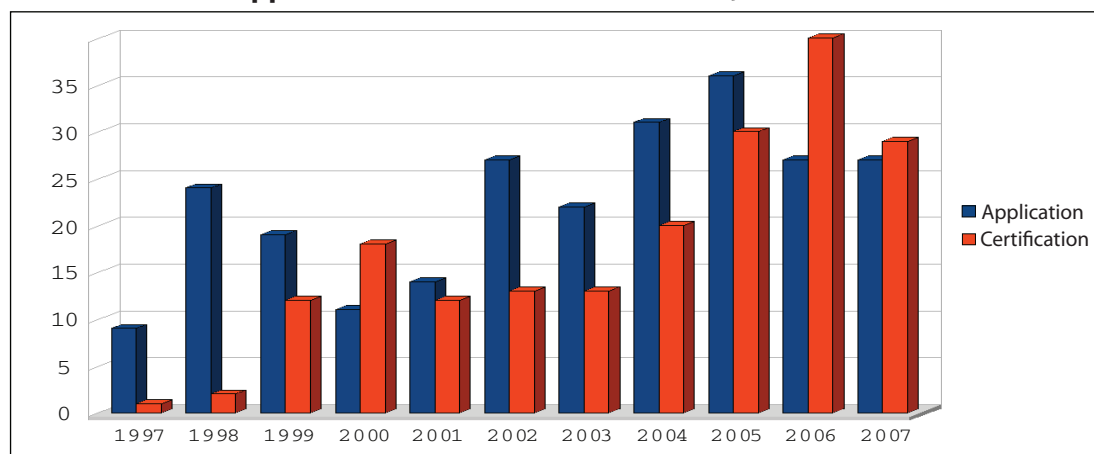
Source: Food Safety and Quality Division, MoH

### HACCP Certification Scheme

HACCP Certification Scheme was introduced by the FSQD at the end of 1997 in view of the mandatory HACCP implementation required from companies exporting fish and fish-based products to the European Union and United States of America. The scheme was launched in 19 April 2001 by Health Minister and it's website had been developed since 2003.

To strengthen the HACCP Certification scheme, FSQD is cooperating with other certification bodies such as SIRIM QAS International Sdn. Bhd. in giving accreditation on quality assurance system to food industries. This can be seen through the integration HACCP-ISO system under the Integration Certification Scheme ISO 9000/HACCP which was launched in 2002. This merger is to expedite the audit and accreditation process due to increasing demand. This will be advantageous to industries especially those involved in export. Figure 24 shows the total of HACCP certified company from 1997 - 2007.

**FIGURE 24**  
**Application and Certification of HACCP, 1997-2007**



Source: Food Safety and Quality Division, MoH

### **GMP (Good Manufacturing Practice) Certification Scheme**

The GMP Certification Scheme was launched by the Health Minister on 19 December 2006. This scheme was developed based on the request for GMP certificates by many importing countries as well as requests from large numbers of small and medium enterprise (SME) in this country. It is certification schemes that will enable small and medium enterprise (SME) achieve a relatively simple food safety assurance system. 'Guidelines on GMP' and 'Guidelines on GMP Certification Scheme' has been developed under this scheme.

### **Food Handlers Training Programme**

The objective of this programme is to provide knowledge and create awareness of the food handlers on the importance of food hygiene, personal hygiene and sanitary premises. In order to improve the training of food handlers, a memorandum of understanding was signed between Ministry of Health (MoH) and University Kebangsaan Malaysia (UKM) on 2 March 2006. Through this memorandum, *Akademi Latihan Kebersihan dan Keselamatan Makanan* (ALKEM) will take over the role of FSQD in training the trainers and organizing *Sekolah Latihan Pengendali Makanan* (SLPM) which include the registration, the function of SLPM and review of the curriculum. Since 2007, 78 trainers were trained and 46 SLPM with 39,507 food handlers were established. FSQD will continue the issuance of recognition for SLPM and carry out surveillance of ALKEM's activities.

## **Food Hygiene and Safety Policy in Schools**

FSQD plays an active role in ensuring the hygiene and safety of food sold and prepared in school canteens and hostel kitchens. Several policies and activities for schools were developed through joint venture efforts between Ministry of Health and Ministry of Education under the *Program Bersepadu Sekolah Sihat* (PBSS) program of food safety guidelines for schools and prepare the questionnaire for the Natural School Health Quiz which is held every year.

## **LEGISLATION (STANDARD DEVELOPMENT) ACTIVITIES**

### **Technical Advisory Committee on the Food Regulations 1985 (JPPM)**

JPPM is the committee which endorses amendments to the Food Regulations 1985. The committee consists of representatives from government bodies, universities, industries as well as professional bodies. There are six (6) working groups under the committee that study applications or petitions from the industries and other stakeholders to amend the Food Regulations 1985 namely, Working Group on Nutrition/Health Claims/Advertisement (JKKN), Working Group on Food Additives and Contaminant, Working Group on Microbiology, Working Group on Food Commodity Standard, Working Group on Drinking Water and Working Group on Genetically Modified Food (GMF).

### **Food Drug Interface (FDI) Product Classification**

In 2007, a total of 900 applications were received where a part of it had been discussed in the FDI Product Classification Committee meetings. An ambiguous product is either classified as food or pharmaceutical products which could be under the jurisdiction of either the Food Safety and Quality Division or the National Pharmaceutical Control Bureau. This application was processed according to the decision tree with the criteria that the committee agreed upon and also by reviewing and revising the ingredient and label to ensure that both comply with the Food Regulations 1985.

## **Labeling and Food Labeling Advisory Services**

This section provides Food Labeling Advisory Services for industries through the Food Labeling Advisory Committee. The industries or an importer which seek advisory service on labeling is charged with RM1,000.00 fees. Food industries have to amend their food label according to the comments given to ensure it complies with the provisions in Food Act 1983 and Food Regulations 1985. Sixty seven (67) labels had been assessed by Labeling Working Committee in 2007.

## **Food Import Regulation**

In 2007, thorough and overall discussion was held regarding the Food Import Regulation draft, and seven (7) meetings were held with the Legal Advisor. One of the meetings was the discussion with the officer from the Attorney General's Chambers and Assistant Officer of Environmental Health in the entry point.

## **Food Irradiation Regulation**

The committee consists of representatives from government bodies which revise and approve the application for food irradiation for internal market under Regulation 396, Food Regulation 1985. In 2007, application for importing irradiated mangoes from Australia was revised and approved. The final draft of the amendment in Food Regulations 1985 resulted from the discussion and comments from the Legal Advisor has been sent to the Legal Advisor Office.

## **Food Hygiene Regulation**

Seven discussions were held in 2007. Final draft resulted from the discussion and comments from the Legal Advisor has been sent to the Legal Advisor Office.

## **Food Analyst Act and Food Analyst Regulation**

Detailed discussion with MIFT was held in 2007. The drafts and comments were sent to the Legal Advisor Office to be reviewed in November 2007.

## **RESEARCH AND MONITORING AND RISK ANALYSIS ACTIVITIES**

Monitoring and research project are divided into three categories:

- (i) National project – involving all states in Malaysia
- (ii) Specific project – involving certain states based on the agreed proposal.
- (iii) Method development – to develop new method of analysis

There were 25 researches and monitoring food projects were planned in the early 2007.

## **CODEX AND INTERNATIONAL ACTIVITIES**

### **International level**

In 2007, Malaysia participated in 15 Codex meetings and 14 Codex Physical Working Group. Malaysia also participated actively in electronic working groups organized by the Codex Committee at the international level.

### **National level**

There were one National Codex Committee (NCC) meeting, 44 National Codex Sub-Committee (NCSC) meetings and five Ad Hoc Task Force meetings held at the national level in preparation for Malaysia's stand on the important Codex issues. In 2007, Malaysia contributed in Codex activities as follows:

Malaysia as a host for Codex Committee on Fats and Oils (CCFO) to replace United Kingdom which had been the committee for 43 years since 1964.

Mrs. Noraini Dato' Mohd Othman, the Deputy Director (Codex) of the Food Safety and Quality Division, Ministry of Health Malaysia, was re-appointed as one of the three (3) Vice-Chairpersons of the CAC for the third semester (2007-2008).

Beside Brazil, Malaysia is a first development country which contributed in Codex Trust Fund. The objective of this fund is to help developing countries to increase their effective participation through funding for attending Codex meetings.

## **SANITARY AND PHYTOSANITARY (SPS) AND REGIONAL ACTIVITIES**

### **World Trade Organization (WTO) /SPS Committee**

FSQD is the National Enquiry Point for all SPS activities pertaining to food safety. This includes preparing SPS notifications, providing reviews of other countries on Malaysia's notifications, summarizing Malaysia's position on issues being discussed at international SPS meetings and etc. In 2007, a total of 873 foreign notifications from WTO/SPS Committee pertaining to food safety were received and evaluated. FSQD was the Secretariat for the SPS and TBT workshop that was held from 16-18 April 2007 in Kuala Lumpur during the Seminar on Globalisation and Liberalisation for Healthcare Sector, in which the toolkit for Trade and Health was prepared.

### **WTO/ Technical Barrier To Trade (TBT) Committee**

FSQD that acts as the Regulatory Agency is responsible for providing technical input on food safety to the WTO/SPS National Committee under the Department of Standard Malaysia (DSM). In 2007, a total of 192 foreign notifications pertaining to food safety were received and evaluated.

### **Trade Agreement Negotiations**

In 2007, FSQD engaged in 3 rounds of negotiations on Malaysia-US Free Trade Agreements (MUSFTA) which discussed on SPS issues. The FSQD was also involved in the Malaysia-Japan (JMEPA) and Malaysia-Brunei bilateral agreement discussions and the ASEAN-Japan CEP and ASEAN-China multilateral agreement discussions.

### **ASEAN**

Malaysia also plays an active role in various cooperation at the ASEAN level such as in the ASEAN Expert Group on Food Safety (AEGFS) and ASEAN Food Safety Improvement Plan (AFSIP) in which Malaysia acts as the coordinator. In 2007, a FAO project under the Programme Area Food Inspection and Certification, entitled "Enhancing Food Safety by Strengthening Food Inspection Systems in ASEAN Member Countries" was started. This project was funded by Japan. The workshop of Bivalve Molluscs was funded by Australia under the ASEAN-Australia Development Cooperation Programme – Regional Partnerships Scheme (AADCP-RPS) framework held by the Malaysia and Australian Marine Science and Technology (AMSAT) cooperation.

Following the EC-ASEAN Standards, Quality and Conformity Assessment Programme which ended in 2005, the Health and Consumer Protection Directorate-General (DG SANCO) of the European Commission sponsored three (3) workshops namely Workshop on EU Food Standards for Fisheries and Aquaculture Products, (18-20 September 2007) in Vietnam; Workshop on EU Food Contact Materials Standards (30-31 October 2007) in Bangkok; and Workshop on ASEAN Fisheries Reference Laboratories (6-7 November 2007) in Vietnam. As the National Coordinator, FSQD was responsible for selecting representatives from various agencies to participate in these workshops.

Malaysia hosted the 7th ASEAN Consultative Committee on Standards and Quality for Prepared Foodstuff Products Working Group (ACCSQ PFPWG) from 16 - 17 July 2007 in Kuala Lumpur. The third SELAMAT meeting Gatekeepers (Safety enhancement of Edible products, Legislation, Analysis and Management, with ASEM countries by mutual Training & Research) was held in Kuala Lumpur from 24-25 August 2007.

### **Special Project – Food Safety Road show in Schools**

In 2007, food poisoning was a hot issue reported by the media. To address this issue, a joint committee was formed incorporating two (2) ministries, namely Ministry of Health and Ministry of Education. Under this committee, two sub-committee were formed, including the Promotion Sub-Committee.

Among the activities undertaken were road shows on food safety focused on primary school children. This activity was carried out in eight (8) states (Selangor, Kedah, Kelantan, Terengganu, Sarawak, Sabah, Johor and Perak) from October to November 2007.

## **HEALTH EDUCATION ACTIVITIES**

### **Healthy Life Style Campaign**

The Healthy Lifestyle Campaign which carries the theme “Be Healthy for Life” emphasized on community roles regardless of age and sex to lead a healthy and wholesome life. The above theme emphasizes five components which includes Healthy Eating, Manage Stress Smartly, Do Not Smoke, Do Physical Activities and Avoid Alcohol. Activities carried out during the 2007 Healthy Lifestyle Campaign were: 677 adverts on television, 3,971 slots on radio, 173 adverts on newspapers and 16 adverts on bill boards. These adverts carried four main messages such as healthy eating, physical exercise, managing stress and avoiding alcohol.

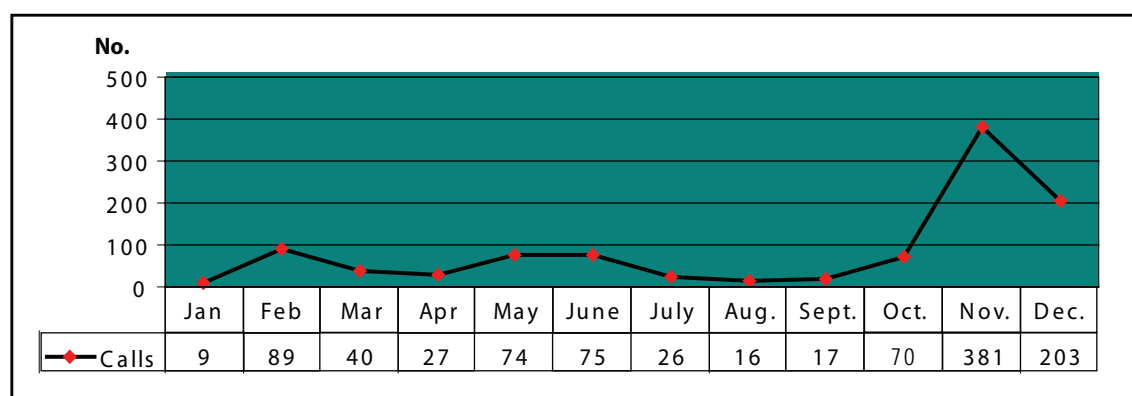
A media research carried out indicated that 64.6% of the population were exposed to this campaign. The healthy lifestyle campaign was also carried out in schools through the ‘Doktor Muda’ or young doctors program which uses the concept of peer educators among the pupils of Standard 4, 5 and 6.

For the year 2007, a total of 819 schools involving 20,700 school children carried out the ‘Doktor Muda’ Program. One of the achievements in this program is that the Ministry of Education has recognized the ‘Doktor Muda’ club as part of the extra curricular activity in primary schools. Apart from this 21,553 talks were delivered by the staff at various health centers. At the community level 1,139 health camps were carried out in collaboration with NGOs and community leaders.

### 'Tak Nak' Media Campaign (Anti Smoking)

This campaign was also a part of the healthy lifestyle campaign. In 2007, the thrust was to get the target population to say 'no' to cigarettes. The campaign was carried out particularly in the public universities. A national cavalcade was organized involving a convoy of vehicles starting from its launching point at Tasik Titiwangsa on 16 June 2007 and ending at Universiti Teknologi Malaysia, Skudai in Johor Bahru on September 2007. Various education materials were distributed to travelers at the various pit stops. Meanwhile, the media campaign that began in 2004 continued through 2007. A media research carried out revealed that 91% of the population were exposed to this campaign. In addition to these activities, an 'infoline' was established which main function was to help smokers to quit smoking by providing them with 'how to quit tips' as well as referring them to their nearest health centre for assistance. Throughout 2007, there were 1,027 calls received. There were 306 'quit smoking' centres in operation with an average attendances of 10 smokers per month.

**FIGURE 25**  
**Number of Calls to Infoline 'Tak Nak Merokok', 2007**



Source: Health Education Division, MoH

## National Media Health Promotion Campaign

In 2007, the Media Campaign was carried out on 5 themes namely:

- (i) Healthy lifestyle
- (ii) 'Tak Nak' (Anti Smoking).
- (iii) HIV/AIDS prevention
- (iv) Prevention of Dengue
- (v) 5M (reduce sugar, reduce oil, reduce salt, add vegetables and add fruits to your diet)

This campaign was carried out over the national media as well as through the print media as well as the bill boards and bus panels. The media broadcast started in September 2007 and continued until December 2007. A media research carried out in 2007 showed that 64.6% of the population were exposed to the healthy lifestyle media campaign, 91% to 'Tak Nak' media campaign, 73% to the dengue prevention media campaign and 83.4% to the HIV/AIDS prevention campaign. The 5M media campaign will be evaluated in the following year.

## Health Promotion Through ICT

Health promotion through ICT is mainly through the Myhealth Portal which can be accessed from [www.myhealth.gov.my](http://www.myhealth.gov.my) and through the *Infosihat* portal at [www.infosihat.gov.my](http://www.infosihat.gov.my). The Myhealth portal has 577 health topics in English and 476 health topics in Bahasa Malaysia. Besides health topics, other services made available to the public are the health services directory, discussion forum, health events and news, quiz, FAQs, Alerts and 'Ask the Expert'. The *infosihat* portal provides a collection of health education materials in the form of posters, pamphlets, booklets and videos which can be downloaded online. As of 2007, the total number of hits for Myhealth and *Infosihat* were 576,800 and 80,494 respectively.



## Health Promotion Activity by Health Staff

Health promotion at the state, district and health centers were carried out by various categories of staff including doctors, nurses, environmental health assistants, and medical assistants. Activities were also carried out in schools, work places and in communities.

Based on the returns compiled, there were 230,536 talks, 24,851 exhibitions, 460,795 demonstrations, 4,624,134 individual advices, 70,934 dialogue sessions, 12,882 public forums and 13,798 video shows held in 2007.

## PUBLIC HEALTH QUALITY IMPROVEMENT ACTIVITIES

In 2007, Public Health quality improvement activities included National Indicator Approach (NIA), Counter Service Quality Award, MS ISO 9001:2000 Certification and Quality Improvement Efforts.

### National Indicator Approach (NIA)

Until 2006, there were 25 NIA indicators for Public Health Services. However, in May 2006, all these indicators were reviewed in view of their relevance, suitability and ease of data collection. This re-evaluation was to identify gaps in performance and opportunities to improve the indicator. All existing NIA indicators were discussed thoroughly, and the panel has agreed to maintain only 16 existing NIA indicators .

Officially, effective July 2007, nine (9) indicators were dropped (but will still be monitored at state level) and sixteen (16) indicators were maintained, of which five of the indicators belongs to the support services (pathology, radiology and pharmacy). The summary of the NIA achievement is shown in Table 15.

**TABLE 15**  
**National Indicator Approach(NIA) , Public Health Program, 2006-2007.**

No	Indicator	STD	Achievement	
			2006	2007
1	TB sputum conversion rate (SCR) Peninsular Malaysia Sabah Sarawak	85%	93.9% 87.6% 94.7%	91.7% 84.5% 95.8%
2	Dengue Notification Time Index Peninsular Malaysia Sabah Sarawak	80%	94% 97.7% 98.4%	94.5% 98.3% 97.9%
3	Dengue outbreak control index (DOCI) Peninsular Malaysia Sabah Sarawak	100%	85.8 100 79.5	89.5 98.1 85

No	Indicator	STD	Achievement	
			2006	2007
4	Malarial deaths Peninsular Malaysia Sabah Sarawak	0 death	7 8 6	5 9 3
5	Incidence rate of needlestick injuries (NSI) among the health care workers (HCW) within the MoH Malaysia	0 Case	4.5 per 1,000 HCW	1.6 per 1,000 HCW
6	Incidence rate of severe neonatal jaundice Peninsular Malaysia Sabah Sarawak	<100 cases per 10,000 live births	76 75 27.2	103.2 84.4 16.3
7	Visual defect detection rate among standard one schoolchildren Peninsular Malaysia Sabah Sarawak	2 % -> 5%	4.7 4.2 2.6	5.8 4.3 3.8
8	% of Asthmatic patients received appropriate management at the health clinic	% respondents achieving 6/6		23.3% (median) achieving the stds
9	% of Diabetic patients receiving appropriate management at the health clinic	% respondents achieving 80%		14.4(median) achieving the stds
10	% of clients perceived the service provided as client friendly	% respondents voting >75%		80.5 (median) achieving the stds
11	Proportion of radiograph accepted	Monitored annually by the relevant support service together with MCH Division	Monitored annually by the relevant support service together with MCH Division	
12	TTAT for Full Blood Count Test (Automation and Manual)			
13	TTAT for Urine FEME			
14	Proportion of wrongly filled prescription detected before dispensing			
15	Proportion of prescription intervened by the pharmacist			
16	Rate of closure of Unsanitary premises: Peninsular Malaysia Sabah Sarawak	>80%	85.5 100 100	90.5 100 100

## Counter Service Quality Award

The seventh series of the Award was conducted in 2007 using a new format; first phase using report evaluation and second phase involving site visits. The emphasis was on client's satisfaction and quality of counter services. The winner for the clinic category in 2007 was *Klinik Kesihatan* (KK) Kuala Pilah, Negeri Sembilan followed by KK Pokok Asam, Perak as runner-up and KK Besut, Terengganu in third place. For the hospital category, Tengku Ampuan Afzan Hospital, Pahang was the winner followed by Tawau Hospital, Sabah as runner-up and Seri Manjung Hospital, Perak in third place.

## Accreditation and Certification MS ISO 9001:2000

Public Health Programme strives to ensure all Health Divisions and Health District offices achieve MS ISO 9001:2000 certification status. As of 2007, Public Health Development Section and Family Health Development Division managed to acquire the certification while Disease Control Division was still in the process of certification. Meanwhile, 77 (71.03%) District Health Offices managed to get the certification.

## Quality Improvement Efforts

For the year 2007, the Quality Improvement Efforts that have been implemented were as follows:-

- Preparations of Key Performance Indicator ( KPI)
- Strengthening of Quality Assurance Programme
- Activities related to health economy
- Improving skills in scientific writing

## Gazettement of Public Health Physician (PHP) and Family Medicine Specialist (FMS)

The gazettement of Public Health Physician started in 2000. As of 2007, a total of 420 officers were gazetted as Public Health Physician and were assigned to various places including Ministry of Health, Universities, and Ministry of Defense.

Gazettement of Family Medicine Specialist is done by Family Health Development Division. The number of Family Medicine Specialist (FMS) serving within the Ministry of Health as of 2007 was 160, an increase of 11.1% as compared to 2006.

## WAY FORWARD

In line with the Midterm Review of the 9th Malaysian Plan and the various International obligations, the strategies and activities related to the prevention and control of diseases will be further strengthened. This is in addition to the anticipated future challenges posed by zoonotic, novel and emerging diseases. The disease surveillance will also be further strengthened to ensure with more timely and comprehensive information on comprehensive disease situation nationwide in ensuring an adequate, appropriate and timely response. The effort to improve the core capacity is in line with compliance to targets and national obligations to among others, the International Health Regulations (IHR) 2005, Asia Pacific Strategy for Emerging Diseases (APSED), and the Biological and Toxin Weapons Convention (BTWC). The wellness concept which focuses on risk factor screening and early detection will be stressed to the public so that they will be able to empower themselves and take desired action. Collaboration and smart partnership with various agencies at all levels – local, national and international will be further strengthened for a comprehensive disease prevention and control implementation. The Public Health Programme will also focus on human capital development. Health personnel capability will be further enhanced with appropriate training to improve their knowledge and task skills required to respond to current needs. This is to ensure that they are well prepared in dealing with emerging disease events and public health related crisis.

Meanwhile, the Public Health Programme will be providing an integrated and comprehensive health services through health promotion and prevention activities, curative as well as rehabilitative services in more than 2,000 health facilities all over Malaysia. The Quality Assurance Programmes and monitoring will be incorporated in the services to further improve the quality of services provided. Community participation in health care will be encouraged through increasing awareness among every individual, family and the community. The public, with the support of Ministry of Health must be responsible of their own health and adopt a healthy lifestyle by not smoking, having a balanced diet and being physically active to help prevent the development of chronic diseases like hypertension, diabetes and cardiovascular diseases. The collaboration with various sector and government as well as non-government organization (NGOs) will be further enhanced.

## CONCLUSION

Throughout 2007, the planning, implementation, monitoring and evaluation of the diseases prevention and control programmes and activities were conducted as planned. Even though the achievements for these activities are laudable, there are still areas which can be further improved and strengthened in order to cope with the future challenges posed by the various changing disease scenarios and health problems.



# **MEDICAL PROGRAMME**



## **MEDICAL PROGRAMME**

### **INTRODUCTION**

The Medical Programme is responsible for matters pertaining to medical services provided in the hospital. It is headed by the Deputy Director-General (Medical). The programme consists of two divisions, the Medical Development Division and Medical Practice Division.

The Medical Development Division is responsible on policy, planning and development of medical services. Its objective is to provide comprehensive medical services that support primary health care, in accordance with Ministry of Health (MoH) policies and standards, by harnessing appropriate technology towards achieving improved health and quality of life to the population. The functions of the Division are carried out by four sections namely Medical Services Development, Medical Professional Development, Quality in Medical Care, and Health Technology Assessment.

The Medical Practice Division has the main objectives of drafting, amending and enforcement of any Act and Regulations under the Medical Programme. It also addresses complaints as well as Medico-Legal issues, and provides technical expertise in liberalising healthcare sector. The Medical Practises Division is divided into sections namely, Medical Practice Control, Legislation and Globalisation, and Complaints, Enforcement and Medico-Legal. It is also the Secretariats to the Malaysian Medical Council, Malaysian Optical Council and Medical Assistant Board.

In 2007, the Medical Programme received an allocation of RM 4,547,817,000 with an increase of 8.4% from previous year allocation. This amount was 54.5% of the total amount allocated to MoH. There was also an additional allocation involving RM37,840,000 approved for 22 New Policies and a further allocation of RM 42,600,000 for payment of assets.

### **ACTIVITIES AND ACHIEVEMENTS**

#### **MEDICAL SERVICES DEVELOPMENT ACTIVITIES**

##### **Hospital Management Services**

Hospital Management Services refer to all aspects of hospital management which includes management and monitoring of hospital facilities, policy development, organisation and services systems, treatment facilities and medical information.

In 2007, the Guidelines for the referral system of MoH hospitals was updated to enhance the effectiveness and efficiency of the system. Integration between primary care and secondary care had been strengthened where mental health, cardiovascular and rehabilitation services was made available in health clinics with the resident Family Medicine specialists and also through the referral system. Patients discharged from the hospitals will be followed-up at these clinics where care was provided nearer to home and resources were thus optimized. The participation of teaching hospitals in provision of specialty care had also benefited policy of networking and improved implementation of services.

Fees charged for patients attending government hospital were based on the Fee Scheduled determined by the Ministry of Finance. However, the schedules had been amended in 2007 to accommodate for the Full Paying Patient Scheme which was implemented as a pilot project in Putrajaya Hospital and Selayang Hospital. Under this scheme, patients were privileged to services such as selection of the specialists and payment according to the new optional fees rate.

The Centralization of Medical Records using Modified Terminal Digital Filing System (MTDF) was also implemented in 2007. It aimed to improve management of medical information in which every patient's medical record will be kept in only one folder. At least one hospital in each state will implement the system. The pilot projects of MTDF had been implemented in five hospitals namely Tengku Ampuan Afzan Hospital, Tuanku Ja'afar Hospital, Duchess of Kent Hospital, Sultanah Fatimah Hospital, and Kulim Hospital.

The implementation of Hospital Information System (HIS) in selected hospitals meant that the hospitals operation shall be based on information technology. HIS had been planned in phases in which nine (9) hospitals were involved in Phase 1 and eleven (11) hospitals in Phase 2.

In 2007, there were 130 hospitals, 6 medical institutions and a National Blood Bank to cater to in the whole country (Table 1). The total number of inpatient beds for MoH Hospitals had increased by 2.17% (673 beds) to 31,642 in 2007 as compared to 2006.

A total of 1,964,903 hospital admissions to MoH hospitals with a bed occupancy rate of 64.23% were also recorded in 2007 (Table 2). One of the contributing factors to the decrease in the rate was probably due to the increasing number of ambulatory care activities.

**TABLE 1**  
**Number of MoH Hospitals and Medical Institutions by State, 2006 - 2007**

State	Medical institutions		Hospital with specialist		Hospital without specialist		Total	
	2006	2007	2006	2007	2006	2007	2006	2007
Perlis	-	-	1	1	-	-	1	1
Kedah	-	-	4	4	5	5	9	9
Penang	-	-	4	4	2	2	6	6
Perak	1	1	5	5	9	9	15	15
Selangor	1	1	7	7	3	3	11	11
F.T. KL and Putrajaya	1	1	2	2	-	-	3	3
F.T. Labuan	-	-	1	1	-	-	1	1
Negeri Sembilan	-	-	3	3	3	3	6	6
Melaka	-	-	1	1	2	2	3	3
Johor	1	1	6	6	5	5	12	12
Pahang	-	-	3	3	7	7	10	10
Trengganu	-	-	2	2	4	4	6	6
Kelantan	-	-	3	3	6	6	9	9
Sabah	1	1	6	6	15	16	22	23
Sarawak	1	1	7	7	12	13	20	21
<b>Total</b>	<b>6</b>	<b>6</b>	<b>55</b>	<b>55</b>	<b>73</b>	<b>75</b>	<b>134</b>	<b>136</b>

Source: Health Informatics Centre, MoH

**TABLE 2**  
**Number of Beds, Bed Occupancy Rate, Number of Admissions, and Bed Ratio per 1,000 Population in MoH Hospitals and Medical Institutions, 2006 – 2007**

Subject	2006	2007
Number of beds (hospital and institution)	35,739	37,149
Bed occupancy rate (%)	65.07	64.23
Number of admissions	1,905,089	1,964,903
Population	26,640,200	27,173,600
Bed per 1,000 population ratio	1.34	1.37

Source: Health Informatics Centre, MoH

## Medical Services

Medical (Specialty) Services are medical-based specialist services namely General Medicine, Dermatology, Respiratory Medicine, Psychiatry, Nephrology, Neurology, Radiotherapy and Oncology, Cardiology, Gastroenterology, Haematology, Hepatology, Endocrinology, Rheumatology, Infectious Diseases, Palliative Medicine and Geriatrics.

In 2007, these services were further developed with the provision of Geriatric Service at Sarawak General Hospital and Sultan Haji Ahmad Shah Hospital; initiation of Extracorporeal Photopheresis (ECP) Service at Ampang Hospital to treat T-Cell Lymphoma and Refractory Graft Versus Host Disease; establishment of Haemodialysis Service at Jeli Hospital and expansion of the service at Seri Manjung Hospital; establishment of Cardiology Service at Sultanah Bahiyah Hospital; establishment of Day Care Service at the Institute of Respiratory Medicine of Kuala Lumpur; and provision of Rheumatology Services at Sultan Ismail Hospital. The total number of patients treated at medical (specialist) clinics for various medical conditions increased by 5.62% as compared to 2006 (Table 3).

**TABLE 3**  
**Number of Outpatients at Medical (Specialty) Clinics, 2006 – 2007**

Disciplines	No. of patients at specialist clinics		Difference (%)
	2006	2007	
General Medicine	730,726	779,386	6.66
Dermatology	235,887	248,569	5.28
Respiratory Medicine	245,106	238,893	-2.53
Psychiatry	312,527	324,450	3.82
Nephrology	116,156	129,697	11.66
Neurology	27,523	26,844	-2.47
Radiotherapy and Oncology	51,714	59,739	15.52
Cardiology	62,429	74,639	19.56
<b>Total</b>	<b>1,782,068</b>	<b>1,882,217</b>	<b>5.62</b>

Source: Health Informatics Centre, MoH

Apart from that, the total admissions in medical (speciality) wards increased by 4.55% from the figures in 2006. The increments were most pronounced in infectious diseases, radiotherapy and oncology, and respiratory medicine specialties (Table 4).

**TABLE 4**  
**Number of Admissions for Medical (Specialty) Wards, 2006 – 2007**

Disciplines	Total patient admissions		Difference (%)
	2006	2007	
General Medicine	432,323	450,862	4.29
Dermatology	889	979	10.12
Respiratory Medicine	5,117	6,550	28.00
Psychiatry	22,667	21,852	-3.60
Nephrology	9,891	9,780	-1.12
Neurology	3,591	3,780	5.26
Radiotherapy & Oncology	8,795	11,302	28.50
Cardiology	5,965	5,711	-4.26
Infectious Diseases	2,199	2,957	34.47
Hepatology	1,390	1,481	6.55
<b>Total</b>	<b>492,827</b>	<b>515,254</b>	<b>4.55</b>

Source: Health Informatics Centre, MoH

### Obstetrics and Gynaecology Service

A significant number of achievements had been made in the Obstetrics & Gynecology Service. The year 2007 saw the establishment of Assisted Reproductive Technique Services at regional centres (Kuala Lumpur Hospital, Likas Hospital and Sultanah Nur Zahirah Hospital) and satellite centres (Selayang Hospital, Tengku Ampuan Rahimah Hospital and Raja Permaisuri Bainun Hospital). There were also an establishment of regional centres for Gynaecology Services in Kuala Lumpur Hospital, Likas Hospital, Melaka Hospital and Sarawak General Hospital and establishment of Uro-Gynaecology and Pelvic Reconstructive Surgery Service at Sultanah Nur Zahirah Hospital.

Apart from that, the Consent Form for IUI and IVF for Assisted Reproductive Technique (ART) Services were made available in all ART centres. Also, amendments had been made for the *Garispanduan Pengeluaran Sijil Cuti Sakit O&G* and its second edition had been distributed to all MoH hospitals in September 2007.

### Paediatric Service

Among the many achievement of Paediatric Service was the establishment of the Management of Inborn Error of Metabolism Diseases with outsourcing the confirmatory genetic tests overseas via Kuala Lumpur Hospital. In addition, Home Ventilation Programme was established and will initially be provided at Paediatric Institute, Kuala Lumpur Hospital before being expanded to other hospitals.

An allocation of RM32 million had been approved for the establishment of Stem Cell Services in the country. This was in line with the new development and public awareness of the services. The Guidelines on Stem Cell Research had been published in 2007 and MoH is revising it for the second edition. The National Standards for Haemopoietic Stem Cell Therapy in Malaysia and The National Standards for Cord Blood Banking & Transplantation were prepared by the technical working committee comprising of pathologists, paediatrician and researchers. This was in tandem with the policies and guidelines outlined by The National Organ, Tissue and Cell Policy of MoH.

Other documents published were Guidelines on Ethical Issues in Medical Genetics and Genetics Service in Malaysia, *Garispanduan Sistem Kawalan Keselamatan Bayi di Hospital-Hospital KKM Edisi 2* and Manual myThalassaemia. The latter serves as a guide for synthesizing data for National Thalassaemia Registry.

### Surgical Services

Surgical (Specialty) Services include general surgery, orthopaedics, ophthalmology, otorhinolaryngology, urology, neurosurgery, plastic surgery and various subspecialties. General surgery and orthopedic services are available in almost all hospitals with specialists. Certain surgical disciplines e.g. ophthalmology and subspecialties e.g. vascular surgery provided networking services.

The outpatient attendances to surgical (specialty) clinics shown in Table 5 indicated an increase in the number of patients except for attendances in cardiothoracic surgical discipline.

**TABLE 5**  
**Number of Outpatients at Surgical (Specialty) Clinics, 2006 - 2007**

Disciplines	No. of Outpatients		Difference (%)
	2006	2007	
General Surgery	472,008	514,287	8.96
Orthopedic	592,055	639,222	7.97
Ophthalmology	548,976	620,649	13.06
Otorhinolaryngology	313,447	336,127	7.24
Urology	86,727	90,168	3.97
Neurosurgery	23,410	26,026	11.33
Cardiothoracic surgery	14,068	10,936	-22.26
Plastic Surgery	30,560	34,939	14.33
Hand & Microsurgery	3,446	7,037	104.21
Hepatopancreaticobiliary	NA	NA	NA
<b>Total</b>	<b>2,084,697</b>	<b>2,279,427</b>	<b>9.34</b>

Note : NA-not available

Source: Health Informatics Centre, MoH

The number of inpatients in all surgical (specialty) wards are shown in Table 6. Like surgical outpatient attendees, there was an overall increment in admission in 2007 as compared to 2006.

**TABLE 6**  
**Number of Beds, Inpatient and Bed Occupancy Rate by Surgical (Specialty)**  
**Wards, 2006 – 2007**

Discipline	No. of Beds		No. of Inpatients		Bed Occupancy Rate (%)	
	2006	2007	2006	2007	2006	2007
General Surgery	3,603	3,829	224,913	230,152	65.44	57.81
Orthopaedic	2,691	2,745	118,367	122,235	65.44	67.97
Ophthalmology	638	679	30,346	31,749	47.42	51.98
Otorhinolaryngology	338	373	13,512	15,120	52.49	45.37
Urology	216	228	8,894	9,166	61.98	59.98
Neurosurgery	193	245	4,975	6,111	78.50	69.70
Cardiothoracic	68	68	687	573	34.08	32.28
Plastic Surgery	131	131	2,565	2,698	46.40	49.07
Hand & Microsurgery	12	18	365	231	69.54	29.79
Hepatopancreaticobiliary	28	28	1,042	1,126	84.79	67.23
<b>Total</b>	<b>7,918</b>	<b>8,344</b>	<b>405,666</b>	<b>419,461</b>		

Source: Health Informatics Centre, MoH

Apart from the above core activities, Surgical (Specialty) Services had also achieved important milestone in 2007 which included the establishment of Cardiothoracic Surgery in Serdang Hospital; the establishment of Paediatric Ophthalmology Service in Kuala Lumpur Hospital and Sg. Buloh Hospital; the establishment of Arthroplasty under orthopaedic discipline in Sultanah Bahiyah Hospital, Kuala Lumpur Hospital and Sarawak General Hospital; the establishment of hearing screening on high risk newborn in all hospitals with audiology services under the ENT speciality; and the establishment of new networking service of Vascular surgery i.e. creating arteriovenous fistula for patient with End-Stage Renal Failure from the Northern Zone at Kepala Batas Hospital.

## EMERGENCY MEDICINE SERVICE

There was an increase of 7% in the number of patients seen at the Emergency Department as compared to 2006. The number of Emergency Physicians also increased to 35 from 27 in 2006. Pre-Hospital Care was one of the most important elements in emergency services for 9th Malaysia Plan and 25 hospitals throughout the country had been identified as hubs for Medical Emergency Coordinating Centre. The function of these hubs was to coordinate all emergency calls in their coverage area and this has improved the response time (target being 30 minutes).

## Transplant Service

The National Organ Tissue and Cell Transplantation Policy was published in June 2007 with the main aims of promoting development of transplantation activity and ensuring practice of transplantation carried out in accordance with highest ethical and professional standards. The Cadaveric organ/tissue donation rate was recorded at 0.96 donations per million population (or 25 cadaveric donors). The number of Malaysians pledged to be organ/tissue donors had increased to 110,290 with the Chinese recorded as the biggest registered ethnic group at 60.4% of total donors. There were a total of 206 cadaveric donors in Malaysia since 1975.

## Pathology Service

Pathology Service includes Biochemical, Medical Microbiology, Haematology, Genetic, Histopathology and Cytology investigations. There was a 21% increment of total workload of Pathology Services compared to 2006 (Table 7).

**TABLE 7**  
**Workload of Pathology Services in 2007**

Healthcare Facility	Inpatients	Outpatients	Total
Hospital in Peninsular Malaysia	49,692,147	62,096,633	111,788,780
Hospital in Sabah	4,515,161	6,092,724	10,607,885
Hospital in Sarawak	6,596,607	5,080,147	11,676,754
Medical Institution	328,741	3,279,451	3,608,192
<b>Total</b>	<b>61,132,656</b>	<b>76,548,955</b>	<b>137,681,611</b>

Source: National Advisor of Pathology Services, MoH

## Blood Transfusion Service

The main objective of Blood Transfusion Service is to provide a continuous and adequate supply of blood and blood products, which are safe, of good quality and easily accessible to those in need. The National Blood Centre is responsible to plan, initiate and develop the services and other activities related to blood donation. The National Blood Policy was at the final stage of editing. Except for Replacement Donor, the workload of activities under Blood Transfusion Service had increased from 2006 to 2007 (Table 8).

**TABLE 8**  
**Workload of Blood Transfusion Service, 2005 – 2007**

Activity	2005	2006	2007
Blood Collection at Centre/Hospital	124,163	122,924	124,657
Blood Collection by Mobile Unit	348,071	354,441	382,805
<b>Total Blood Collection</b>	<b>472,234</b>	<b>447,365</b>	<b>507,462</b>
Voluntary Donation	46 8,156	473,866	506,808
Replacement Donor	4,077	3,499	654
Recipients of Blood and Blood Products	220,673	253,968	270,213

Source: Medical Development Division, MoH

## Medical Forensic Service

The Medical Forensic Service includes Forensic Pathology, Clinical Forensic Medicine and Forensic Sciences. National Institute of Medical Forensic acts as the main referral centre and is also concern with the development of six other Regional Medical Forensic Centres and satellite centres. The Manual Medical Forensic Service had been updated. Normal death contributed the main bulk of workload in the Medical Forensic Service in 2007 and the workload as shown in Table 9.

**TABLE 9**  
**The Workload of Medical Forensic Service in 2007**

State	Type of Cases		Total	Percentage of Post Mortem
	Normal Death	Post Mortem		
Perlis	784	105	889	11.8
Kedah	1,415	305	1,719	17.7
Penang	1,737	495	2,232	22.2
Perak*	7,448	1,612	9,060	17.8
Selangor	1,614	721	2,335	30.9
Kuala Lumpur	2,610	694	3,304	21.0
Negeri Sembilan	1,589	400	1,989	20.1
Melaka	1,493	393	1,886	20.8
Johor*	6,526	1,058	7,584	14.0
Pahang	1,261	287	1,548	18.5
Terengganu	1,626	228	1,854	12.3
Kelantan**	2,033	451	2,484	18.2
Sabah	696	232	928	25.0
Sarawak	872	131	1,003	13.1
<b>Grand total</b>	<b>31,704</b>	<b>7,112</b>	<b>38,816</b>	<b>18.3</b>

Note: \* Total death at the hospitals in the state

\*\* Total post mortem cases only in Kelantan

Source: Medical Development Division, MoH

## Diagnostic Imaging (Radiology) Service

Radiology Service covers all type of imaging modalities including General Radiography, Magnetic Resonance Imaging (MRI), Ultrasound with Doppler, Fluoroscopy, Mammography (MMG) and Interventional Radiology. With the introduction of the high-end CT scans, examinations had moved from Cross-Sectional CT studies to the 3-Dimensional and Volumetric studies which enhanced diagnostic capabilities. However, General Radiography still contributed the highest number of imaging performed i.e. 85% of the total imaging (Table 10).

**TABLE 10**  
**Workload of Diagnostic Imaging Service, 2003 – 2007**

Imaging Modalities	2003	2004	2005	2006	2007
General Radiography	2,276,705	2,478,354	2,680,627	2,955,958	3,157,057
Special Radiography	35,663	28,586	30,440	30,517	31,070
CT Scan	89,541	101,830	114,267	141,471	182,562
MRI	11,845	16,037	16,432	24,182	27,917
Ultrasonography	159,553	202,469	239,442	268,776	266,628
Additional Examination	26,270	28,165	36,095	35,403	40,300
<b>Total</b>	<b>2,599,577</b>	<b>2,856,441</b>	<b>3,110,542</b>	<b>3,456,307</b>	<b>3,705,534</b>
<b>Percentage of Annual Workload Increment</b>	<b>6.1</b>	<b>10.0</b>	<b>8.8</b>	<b>11.1</b>	<b>7.2</b>

Source: National Advisor of Diagnostic Imaging Services, MoH

## Nuclear Medicine Service

Nuclear Medicine Service comprises of investigative, diagnostic and treatment of cancer cases using radioactive substances. There are four referral centres providing the services as shown in Table 11. In 2007, Putrajaya Hospital started its own PET-CT scan and Cyclotron services, while Penang Hospital and Sultanah Aminah Hospital had received a new Gamma Camera System.

**TABLE 11**  
**Number of Scan/Treatment by Referral Center, 2005 – 2007**

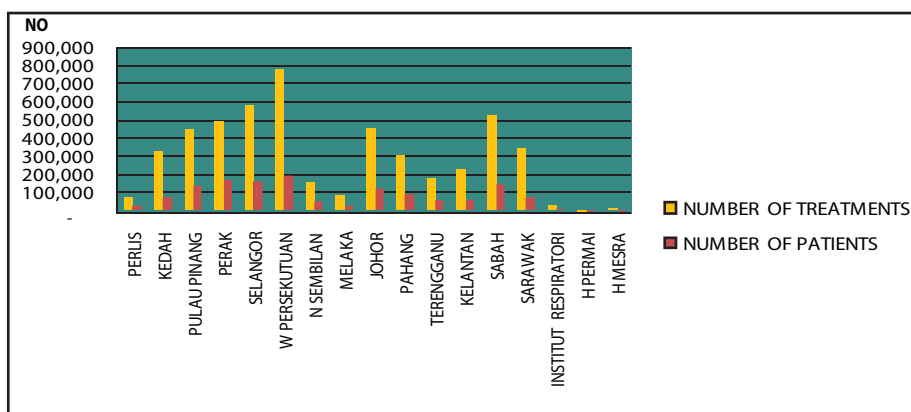
Hospital	Total Scan/Treatment		
	2005	2006	2007
Kuala Lumpur Hospital	4,493	6,222	7,654
Sarawak General Hospital	849	995	1,098
Penang Hospital	2,082	2,422	2,797
Sultanah Aminah Hospital	1,241	951	1,143
<b>Total</b>	<b>8,665</b>	<b>10,590</b>	<b>12,692</b>

Source: Medical Development Division, MoH

## Physiotherapy Service

Physiotherapy is concerned with assessment, maintenance and restoration of the physical function of the body. Federal Territory provided the most services from the overall workload in 2007 (Figure 1).

**FIGURE 1**  
**Workload of Physiotherapy in 2007**



Source: Medical Development Division, MoH

## Occupational Therapy Service

Occupational Therapy focuses on fine movements necessary for daily living. There was obvious increment in workload of this service in 2007 as compared to 2006 (Figure 2).

**FIGURE 2**  
**Workload of Occupational Therapy , 2006-2007**

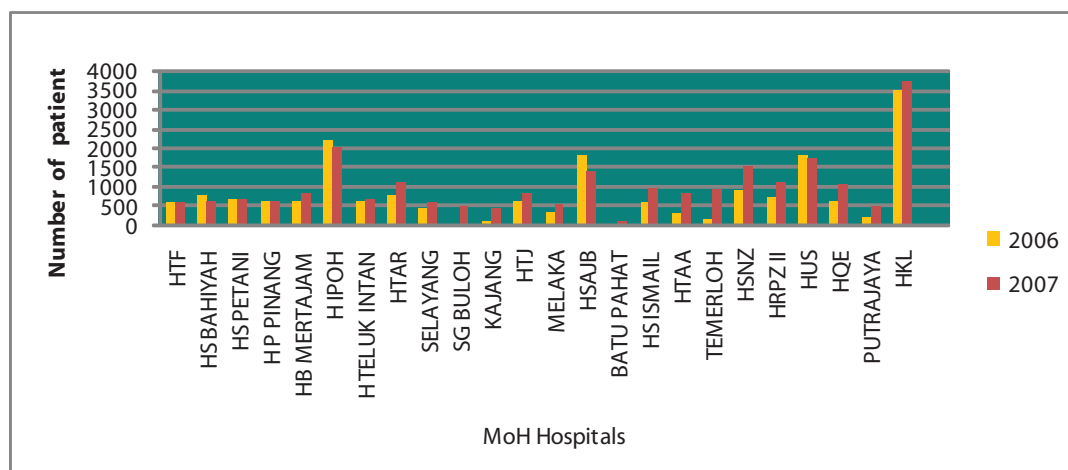


Source: Occupational Therapy Unit, Kuala Lumpur Hospital

## Speech Therapy Service

Speech language pathology is the study of human communication, its development and disorders, and is concerned with prevention, identification, assessment of speech and language problems, and rehabilitation of patient with speech and language problems. Kuala Lumpur Hospital had the highest workload of this therapy in 2007 (Figure 3).

**FIGURE 3**  
**Workload of Speech Language Therapy, 2006-2007**



Source: Speech Language Therapy Unit, Kuala Lumpur Hospital

## Catering Service

This service is responsible for the preparation of food for in-patients (normal diet and therapeutic diets, enteral feeding and infant formulas for babies), food for the doctors-on-call and night ration for night shift staff. The number of diets served in the MoH hospitals had reduced in 2007 (Table 12).

**TABLE 12**  
**Diets Served in Ministry of Health Hospitals, 2006-2007**

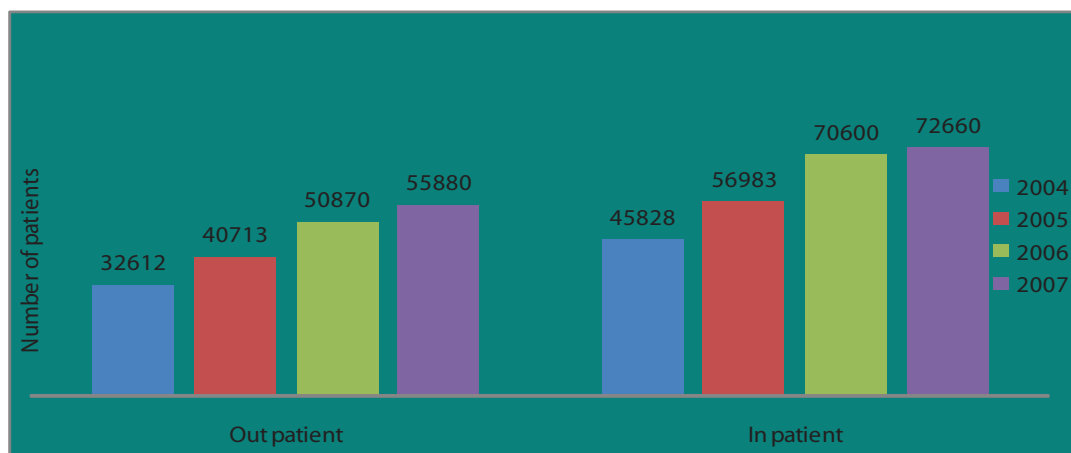
Year	Number	Expenditure (RM)
2006	15,999,470	86,361,954.55
2007	14,089,864	78,614,341.00

Source: Dietetic and Catering Department, Kuala Lumpur Hospital

## Dietetic Service

Dietetic Service includes clinical dietitian services, community dietitian services, food preparation services, and training and research. There was an increasing trend in Dietician Counseling from 2004 to 2007 (Figure 4).

**FIGURE 4**  
**Workload of Dietetian Counselling, 2004-2007**

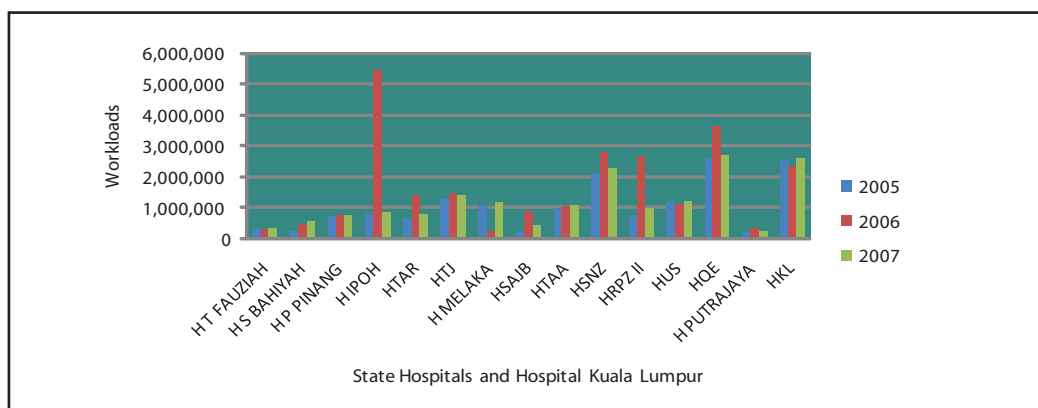


Source: Dietetic and Catering Department, Kuala Lumpur Hospital

## CENTRAL STERILISATION SUPPLY (CSSU) ACTIVITIES

The Sterilisation Supply activities include preparing, processing, storing and disinfecting sterile and non-sterile medical and surgical supplies and equipment required for patient diagnosis, treatment and ongoing care. There was a mixture of workload trend of the service as shown in Figure 5.

**FIGURE 5**  
**Workload of Central Sterilisation Supply, 2005-2007**



Source: Central Sterilisation Unit

## MEDICAL PROFESSIONAL DEVELOPMENT ACTIVITIES

### Gazettement and Credentialling of Clinical Specialists

The use of log book which introduced in 2005 had facilitated the gazettment process of specialists. The total number of specialists being gazetted in 2007 was 296, decreased by 8.6% as compared to 2006 (Table 13). Among them, the largest number of specialists was from the specialty of Internal Medicine, followed by Anaesthesiology and Obstetric & Gynaecology (O & G). All specialists were automatically credentialed in their respective core procedures once they had been gazetted.

**TABLE 13**  
**Number of Specialists Gazetted Based on Specialty, 2006 – 2007**

Specialty	No. of specialist* gazetted in 2006	No. of specialist gazetted in 2007
Internal Medicine	46	49
Paediatric	32	20
Psychiatric	7	4
Orthopaedic	22	17
Pathology	21	9
Ophthalmology	16	20
Anaesthesiology	29	39
ORL	19	14
General Surgery	43	21
O&G	39	39
Radiology	21	22
Radiotherapy & Oncology	-	1
Nephrology	2	3
Plastic Surgery	4	3
Urology	2	1
Gastroenterology	1	3
Cardiothoracic Surgery	2	2
Neurology	-	3
Cardiology	3	4
Emergency Medicine	5	6
Respiratory Medicine	5	1
Sport Medicine	-	-
Paediatric Surgery	-	1
Dermatology	-	3
Neurosurgery	3	1
Rehabilitation	1	4
Rheumatology	1	-
Geriatric	-	1
Endocrine	-	2
Hand & Micro Surgery	-	1
Breast & Endocrine Surgery	-	2
<b>Total</b>	<b>324</b>	<b>296</b>

Note: \* Including Contract Specialists

Source: Medical Professional Development Section, MoH.

## Fellowship Training

Applications to join fellowship and subspecialty training increase yearly. There were 359 specialists who underwent the training, an increase of 7.8% as compared to 2006. The total number of specialists from various specialties in MoH Hospitals were 2,413 (including 239 specialists on contract basis) in MoH hospitals i.e a 10% increase in the total number of the specialists. At the moment, 70 subspecialties are being offered and the most popular subspecialty was cardiology, followed by gastroenterology and nephrology. Subspecialties with increasing trend were colorectal surgery, urology and spine orthopaedics.

## Continuous Medical Education (CME)/Continuous Professional Development (CPD)

The increment in financial allocation for human resources development had enabled more officers to attend CME/CPD activities either locally or internationally. Table 14 indicates a general increase in the expenditure and number of activities as compared to 2006.

**TABLE 14**  
**Continuous Medical Education (CME) Activities, 2006 – 2007**

Trainings	Total Allocations (RM)	Expenditure (RM)	No. of CME	No. of officers
<b>2006</b>				
Overseas	3,320,376.00	2,381,623.88	57	120
Local	6,195,000.00	4,694,605.00	2,235	49,786
<b>Total</b>	<b>9,515,376.00</b>	<b>7,076,228.88</b>	<b>2,292</b>	<b>49,906</b>
<b>2007</b>				
Overseas	4,000,000.00	2,577,372.00	64	116
Local	18,912,766.00	17,335,394.00	9,368	127,207
<b>Total</b>	<b>22,912,766.00</b>	<b>19,912,766.00</b>	<b>9,432</b>	<b>127,323</b>

Source: Medical Professional Development Section, MoH

## Engagement of Private Practitioners

Private practitioners continue to be employed on sessional or honorary basis due to the need for provision of certain specialties in some MoH hospitals. There were 26 applicants as compared to only 18 in 2006. The specialists worked in hospitals in Kuala Lumpur, Selayang, Penang, Johor Bahru, Kuching and Sibul.

## QUALITY IN MEDICAL CARE ACTIVITIES

The goal for quality of patient care under Quality Assurance Programme (QAP) is 'internalising and institutionalising quality' within the Medical Programme so that patients and clients will receive high quality healthcare as well as attain better health. While many factors affect the quality of health care delivered, it is the mission of the Section on Quality in Medical Care to promulgate and implement the essential Quality Improvement (QI) activities in the hospitals. This will explicitly reflect the quality of care delivered in the Medical Programme of MoH.

Clinical Performance Benchmarking at national level was achieved via the National Indicator Approach where 58 new National Indicators (covering 15 clinical disciplines and five allied health disciplines) were implemented in 2007. To improve timely data analysis and performance feedback, a web-based Centralised National Data Collection and Analysis Software reporting (eNIA) had been developed for piloting in selected MoH hospitals before full implementation nation-wide. Similarly, a total of 128 Key Performance Indicators/KPI (nine for Deputy State Health Directors (Medical), ten for Hospital Directors and 109 for 16 clinical disciplines) had been developed and implemented which was followed by eKPI (a web-based reporting).

To ensure that hospitals meet professional standards set by their peers, a total of 71 hospitals and two institutions had achieved accreditation status. Hospitals were also required to undergo ISO certification as per the Government Improvement Circulars (PKPA) and thus, 72 hospitals received the MS ISO 9001:2000 certification up to the end of 2007.

The MoH was one of the earlier signatories to the World Alliance for Patient Safety of World Health Organization and will continue to support international programmes such as "Clean Care Is Safer Care" (enhancing the hospital infection control system and hand disinfection campaigns) as well as "Safe Surgery" campaign. The final draft of the National Antibiotic and Disinfection Guidelines had also been produced. Activities in relation to WHO '5 Moments in Hand Hygiene Observation' were also initiated. Improvements to the present Incident Reporting and Learning Manual (using the WHO's Incident Classification for Patient Safety) were being undertaken using a multi-disciplinary approach as well as through web-based reporting to enable rapid feedback. In addition, a national training programme to strengthen the capability in investigating incidents using the "Root Cause Analysis" methodology had been implemented with the assistance of a Patient Safety expert commissioned by the WHO in selected MoH hospitals.

Other important activities included the Peri-operative Mortality Review (POMR) and the National Audit on Adult Intensive Care Units (NAICU) which had resulted in important 'spin-off projects' that enhance patient safety such as the evidence-based Ventilator-Associated Pneumonia (VAP) Care Bundle, Computerised Operating Theatre Documentation System (expended to all state hospitals) and the Acute Pain Service (implemented in all state hospitals).

## HEALTH TECHNOLOGY ASSESSMENT ACTIVITIES

The main activities of Health Technology Assessment were conducting Health Technology Assessments (HTA) and Technology Reviews (TR), developing Clinical Practice Guidelines (CPG) and also related training. In 2007, one HTA report, four CPGs and 22 TR reports were produced (Table 15). All reports and guidelines can be accessed in the MoH website.

**TABLE 15**  
**Number of Health Technology Assessments (HTA), Clinical Practice Guidelines (CPG) and Technology Reviews (TR) Produced in 2007**

Report / Guideline	No. of Report
<b>Health Technology Assessment</b> <ul style="list-style-type: none"> <li>• Point of Care Testing</li> </ul>	1
<b>Clinical Practice Guidelines</b> <ul style="list-style-type: none"> <li>• Management of Acute Variceal Bleeding</li> <li>• Management of Depressive Disorder</li> <li>• Management of Heart Failure</li> <li>• Management of Acute ST Elevation Myocardial Infarction (2<sup>nd</sup> edition)</li> </ul>	4
<b>Technology Reviews</b>	22

Source: Health Technology Assessment Section, MoH

## PRIVATE MEDICAL PRACTICE CONTROL ACTIVITIES

The main function of the Private Medical Practice Control Section is to enforce the Private Healthcare Facilities and Services Act (PHFSA) 1998 (Act 586) and its Regulations. This section regulates and controls the licensing of private hospitals, maternity homes, haemodialysis and other private healthcare facilities and services, and registration of all private medical clinics and dental clinics.

Dialogue sessions with the professional bodies were carried out throughout the year to further explained and discussed the implementation of the Act 586. The application and registration of private clinics were done totally via on-line (<http://medpcs.MoH.gov.my>). A total of 6,299 applications for registration from private medical clinics and 1,434 from private dental clinics were received through State Health Departments. As for the private hospitals and other private healthcare facilities, the on-line licensing process was carried out in phases. There were 229 of such institutions being licensed (Table 16) and 260 applications to establish and maintain private haemodialysis centres received in 2007.

**TABLE 16**  
**Number of Private Hospital and Healthcare Facilities by State, 2007**

State	Private hospitals, maternity homes and nursing homes	Number of beds
Johor	35	1,007
Melaka	5	801
Negeri Sembilan	6	304
Selangor	52	2,807
F.T. Kuala Lumpur	43	2,523
Perak	15	818
Kedah	12	463
Penang	25	1,921
Perlis	1	2
Kelantan	3	114
Terengganu	3	31
Pahang	9	209
Sarawak	11	431
Sabah	9	291
F.T. Labuan	-	-
<b>Total</b>	<b>229</b>	<b>11,722</b>

Source: Private Medical Practice Control Section, MoH

## MEDICAL LEGISLATION AND GLOBALISATION ACTIVITIES

The Medical Legislation and Globalisation Section is responsible for the drafting of new medical laws and amendment of the existing ones. It also functions as the technical point in services for healthcare sector liberalisation. In 2007, the Pathology Laboratory Act was finally enacted. Some of the Bill and Regulations that being discussed and drafted were Allied Health Profession Bill, Human Reproductive Cloning Bill, Cosmetology Bill, Mental Health Regulations, Assisted Reproductive Techniques Bill, Amendment to the Medical Act 1971, Amendment to the Human Tissue Act 1974 and Amendment to the Medical Assistant (Registration) Act 1977 and Regulations 1979.

Some of the liberalisation activities conducted in 2007 were:

i. Seminar on Liberalization of Healthcare Sector

The seminar was conducted on 15-18 April 2007 and was organized in collaboration with national and international agencies. The objectives were to enlighten stakeholders on issues of liberalisation from trade and health perspectives, to gather consensus on liberalisation issues and health implications, and to decide on approaches in addressing the issues. The seminar had also adopted the WHO's diagnostic toolkit in policy making in developing countries.

## ii. Bilateral Free Trade Agreement (FTA)

There were a few of free trade agreement negotiations in 2007 i.e. Malaysia –Pakistan FTA (concluded and signed end of 2007); Malaysia–United States FTA (negotiation is still on-going); Malaysia–Chile FTA (negotiation proper started since end of 2007); and Malaysia–Australia FTA and Malaysia–New Zealand FTA (both negotiations had stalled since 2006).

## iii. Multilateral Free Trade Agreement – World Trade Organisation (WTO)

Meetings related to revision of Malaysia's commitment in healthcare services and providing inputs regarding domestic regulation text had been conducted.

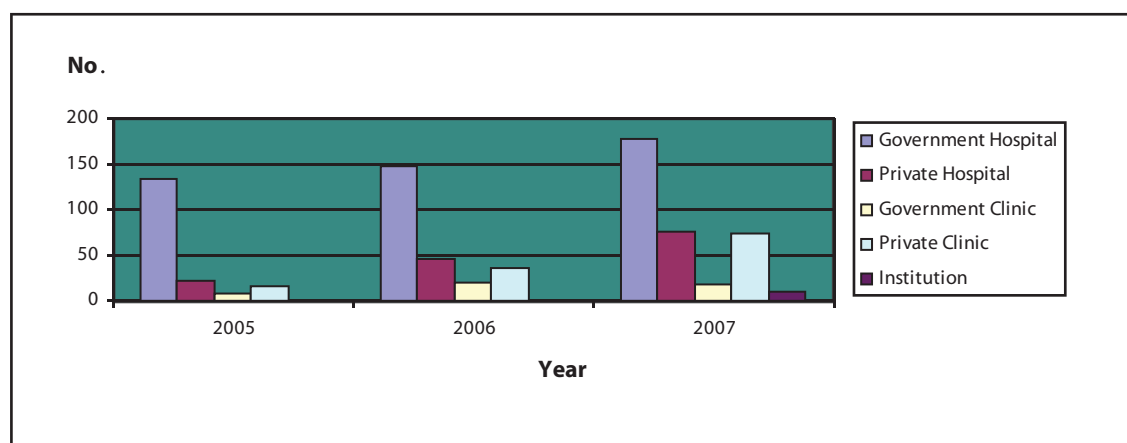
## iv. ASEAN Coordinating Committee on Services (CCS)

Mutual Recognition Agreement (MRA) on Nursing Services with the ASEAN countries was signed in 2006 and is currently in the implementation stage. MRA for Medical Practitioners was finalized, discussion on MRA for Dental Practitioner was commenced and review of commitments under ASEAN Framework Agreement on Services had been done.

## COMPLAINTS, ENFORCEMENT AND MEDICO-LEGAL ACTIVITIES

In 2007, a total of 360 complaints were received as compared with 251 in 2006 (Figure 6). The increased involved both public and private healthcare services.

**FIGURE 6**  
**Complaints Involving Public and Private Healthcare Services, 2005 - 2007**



Source: Complaints, Enforcement and Medico-Legal Section, MoH

Enforcement of the PHFSA 1998 was started on 1 May 2006. Total number of licensed/unlicensed premises raided in 2007 was 36 (Table 17).

**TABLE 17**  
**Number of Enforcement Activities by State, 2007**

State	Raid
Perlis	0
Kedah	1
Penang	4
Perak	2
Selangor	10
F.T. Kuala Lumpur	5
Negeri Sembilan	1
Melaka	0
Johor	12
Pahang	0
Terengganu	0
Kelantan	0
Sarawak	1
Sabah	0
F.T. Labuan	0
<b>Total</b>	<b>36</b>

Source: Complaints, Enforcement and Medico-Legal Section, MoH

For the period of 2000-2007, the discipline of Obstetrics & Gynaecology contributed the highest number of medico-legal cases and paid compensations (Table 18 and 19).

**TABLE 18**  
**Number of Medico-legal Including Cases Settled (including summonses) in Public Hospitals by Discipline, 2000-2007**

Discipline	2000	2001	2002	2003	2004	2005	2006	2007	Total
O & G	4	1	2	5	3	4	8	7	<b>34</b>
Surgery	1	1	1	2	1	1	3	2	<b>12</b>
Orthopaedic	4	0	1	0	1	1	0	1	<b>8</b>
Paediatric	0	0	0	0	0	3	3	2	<b>8</b>
Anaesthesia	0	0	1	0	0	0	0	0	<b>1</b>
Medicine	0	0	2	0	2	0	1	3	<b>8</b>
Psychiatry	0	0	0	0	0	0	1	0	<b>1</b>
Ophthalmology	0	0	1	0	0	0	0	0	<b>1</b>
ENT	0	1	0	0	2	0	0	0	<b>3</b>
Urology	0	0	0	0	0	0	0	0	<b>0</b>
<b>Grand Total</b>	<b>9</b>	<b>3</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>15</b>	<b>76</b>

Source: Complaints, Enforcement and Medico-Legal Section, MoH

**TABLE 19**  
**Amount of Compensation Paid by Court Order, Out of Court Order and**  
**Ex-Gratia Payments to Patient, 2000-2007**

Discipline	Amount of Compensation (RM)								
	2000	2001	2002	2003	2004	2005	2006	2007	Total
O&G	152,974	55,000	22,500	179,853	55,000	257,994	315,224	328,775	1,367,320
Surgery	20,000	326,002	303,000	66,000	50,000	25,779	121,809	28,265	940,855
Orthopaedic	46,534	-	5,112	-	66,000	15,000	-	10,000	142,646
Paediatric	-	-	-	-	-	30,000	32,907	293,819	356,726
Anaesthesia	-	-	512,827	-	-	-	-	-	512,827
Medicine	-	-	65,000	-	30,250	-	613,057	423,353	1,131,660
Psychiatry	-	-	-	-	-	-	141,993	-	141,993
Ophthalmology	-	49,500	13,200	-	-	-	-	-	62,700
ENT	-	-	-	-	55,560	-	-	-	55,560
Urology	-	-	30,250	-	-	-	-	-	30,250
<b>Grand Total Compensation Paid (RM)</b>									<b>4,742,537</b>

Source: Complaints, Enforcement and Medico-Legal Section, MoH

## MALAYSIAN MEDICAL COUNCIL ACTIVITIES

Malaysian Medical Council was established with the purpose of providing safe and competent medical and health care services in the country. As a whole, there was an increase in the number of new registration and Annual Practising Certificates issued for medical practitioner in 2007 (Table 20 and 21). On contrary, the number of full registration in housemanship period had declined in the same year (Table 22).

**TABLE 20**  
**Number of New Registration According to Category, 2000 - 2007**

Type of registration	2000	2001	2002	2003	2004	2005	2006	2007
a. Provisional Registration	996	1,029	1,104	1,083	1,126	1,112	1,122	1,534
b. Full Registration (without condition)	893	1,060	1,088	653	968	1,060	1,801	1,726
c. Full Registration (with condition)	133	163	76	128	267	296	240	200
<b>Total</b>	<b>2,021</b>	<b>2,252</b>	<b>2,268</b>	<b>1,864</b>	<b>2,361</b>	<b>2,468</b>	<b>3,163</b>	<b>3,460</b>

Source: Malaysia Medical Council

**TABLE 21**  
**Number of Annual Practising Certificates Issued According to State and Sector, 2000 -2007**

	2000		2001		2002		2003		2004		2005		2006		2007	
	Pb	Pr	Pb	Pr	Pb	Pr	Pb	Pr	Pb	Pr	Pb	Pr	Pb	Pr	Pb	Pr
F.T. Kuala Lumpur	1,534	1,360	1,527	1,418	1,645	1,542	1,778	1,623	1,700	1,783	1,686	1,825	1,675	1,545	2,239	1,762
F.T. Labuan	10	14	12	16	10	16	7	16	9	15	8	15	13	12	18	16
F.T. Putrajaya	2	0	21	0	36	0	82	0	85	3	119	3	202	6	254	9
Johor	352	777	367	807	407	846	456	862	461	874	477	891	456	924	612	981
Kedah	255	382	282	398	326	411	316	410	338	447	349	457	355	444	446	458
Kelantan	531	170	582	172	623	176	574	186	584	186	595	194	595	192	637	209
Melaka	173	252	186	268	185	283	173	293	239	333	247	344	231	326	306	378
N. Sembilan	194	265	219	271	227	280	259	290	290	320	306	334	212	319	354	341
Pahang	201	235	243	252	272	274	286	289	305	311	316	319	223	311	340	355
Penang	282	728	294	773	311	796	320	781	346	841	357	853	370	822	514	874
Perak	411	711	427	741	418	777	507	764	514	892	527	919	483	773	662	803
Perlis	49	33	44	31	56	32	50	37	78	36	83	44	60	33	95	28
Selangor	677	1,606	651	1,685	615	1,830	685	1,891	721	2,044	735	2,097	757	2,103	1,198	2,337
Terengganu	141	123	156	127	174	135	210	140	201	144	219	153	227	141	260	166
Sabah	202	277	239	292	284	309	200	288	268	329	279	337	225	312	462	342
Sarawak	205	276	220	286	262	311	308	343	327	362	332	377	300	339	471	357
<b>Total</b>	<b>5,219</b>	<b>7,209</b>	<b>5,470</b>	<b>7,537</b>	<b>5,851</b>	<b>8,018</b>	<b>6,211</b>	<b>8,213</b>	<b>6,466</b>	<b>8,920</b>	<b>6,635</b>	<b>9,162</b>	<b>6,384</b>	<b>8,602</b>	<b>8,868</b>	<b>9,416</b>
<b>Grand Total</b>	<b>12,428</b>		<b>13,007</b>		<b>13,869</b>		<b>14,424</b>		<b>15,386</b>		<b>15,797</b>		<b>14,986</b>		<b>18,284</b>	

(Key: Pb = Public; Pr = Private)  
Source: Malaysian Medical Council

**TABLE 22**  
**Full Registration According to Housemanship, 2000 – 2007**

Full registration	2000	2001	2002	2003	2004	2005	2006	2007
<b>a. Registered According to Section 14</b>								
• Malaysians Completing Housemanship Locally	819	996	1,002	568	858	1,060	1,695	1,604
• Malaysians Completing Housemanship Overseas	74	64	86	85	110	77	106	122
<b>Total</b>	<b>893</b>	<b>1,060</b>	<b>1,088</b>	<b>653</b>	<b>968</b>	<b>1,137</b>	<b>1,801</b>	<b>1,726</b>
<b>b. Registered According to Section 14/(3)</b>								
• Foreigners Completing Housemanship Locally	10	13	9	15	16	-	8	18
• Foreigners Completing Housemanship Overseas	123	150	67	113	251	296	232	182
<b>Total</b>	<b>133</b>	<b>163</b>	<b>76</b>	<b>128</b>	<b>267</b>	<b>296</b>	<b>240</b>	<b>200</b>

Source: Malaysian Medical Council

Letter of Good Standing is required for the purpose of registration with foreign medical councils or registering bodies and 496 letters had been issued in 2007.

Graduates from colleges not recognized by Malaysian Medical Council (MMC) had to sit and pass the Medical Qualifying Examination conducted by the three local universities or examining bodies in order to qualify for registration with the council (Table 23).

**TABLE 23**  
**Candidates Attended/Passed Medical Qualifying Examination in 2007**

Details	March			October		
	UKM	USM	UM	UKM	USM	UM
Candidates registered	5	3	2	5	5	3
Repeat candidates	2	0	1	10	7	4
Total candidates registered	7	3	3	15	12	7
Deferring examination	0	0	1	0	0	10
Candidates sitting for exam	3	0	2	12	10	4
Fail (1 <sup>st</sup> attempt)	1	0	1	5	2	2
Fail (2 <sup>nd</sup> attempt)	1	0	0	4	1	2
Fail (3 <sup>rd</sup> attempt)	1	0	1	2	0	2
Total candidates failed	3	0	2	11	3	6
Candidates passed	0	0	0	1	7	0
Percentage passed	0	0	0	8.3	70	0

Source: Malaysian Medical Council

A total of 11 local medical training institutions had been approved and accredited while 11 more were waiting to be accredited (Table 24 and 25).

**TABLE 24**  
**Accredited Local Medical Training Institution**

Local Medical Training Institution	Accreditation Date
<b>Public Institution</b>	
University Malaya	15 January 1971
National University of Malaysia (UKM)	22 June 1979
Science University of Malaysia (USM)	11 July 1986
University Malaysia Sarawak (UNIMAS)	15 May 2000
University of Putra Malaysia (UPM)	05 June 2001
International Islamic University of Malaysia	14 May 2002
<b>Private Institution</b>	
Penang Medical College	June 2001
International Medical University	19 February 2002
Melaka-Manipal Medical College	09 July 2003
Perak Royal College of Medicine (University of Sheffield)	19 January 2006
Asian Institute of Medicine, Science & Technology (AIMST)	17 August 2007

Source: Malaysian Medical Council

**TABLE 25**  
**Local Medical Training Institution Awaiting Accreditation**

Local Medical Training Institution	Year Established	Year to be Accredited
<b>Public Institution</b>		
University Malaysia Sabah	2003	2008
Mara University of Technology	2003	2008
Islamic University College Malaysia	2004	2009
National University of Malaysia with Padjadjaran University Indonesia	2006	2011
<b>Private Institution</b>		
Allianze College of Medical Sciences	2003	2008
University College Sedaya International	2003	2008
Monash University Sunway Campus	2004	2009
Cyberjaya University College of Medical Sciences	2005	2010
International Medical School, Bangalore (under Management & Science University)	2006	2011
University Andalas, Indonesia with Management & Science University, Malaysia	2006	2011
Perak Royal College of Medicine (Kuala Lumpur University)	2007	2012

Source: Malaysian Medical Council

There was about the same number of discipline inquiry and its outcome for the past three years (Table 26).

**TABLE 26**  
**Outcome of Council Inquiry, 2003 – 2007**

Type of punishment	2003	2004	2005	2006	2007
Charge dismissed and practitioner found not guilty	1	5	6	12	10
Name of practitioner struck off from Medical Register	0	0	0	2	0
Name of practitioner suspended off from Medical Register	1	2	9	8	6
Practitioner reprimanded	3	3	5	6	8
<b>Total</b>	<b>5</b>	<b>10</b>	<b>20</b>	<b>28</b>	<b>24</b>

Source: Malaysian Medical Council

## **MALAYSIAN OPTICAL COUNCIL ACTIVITIES**

Malaysian Optical Council is responsible in registration and regulating the optometry practice via the Optical Act 1991 and Optical Regulation 1994 as shown in Table 27.

**TABLE 27**  
**Number of Annual Practising Certificate of Optometry Practitioner in 2007**

Registration Section	Registered Practitioner	Annual Practising Certificate	Photo Name Certificate	Contact Lens Practitioner
<b>Optometrist</b>				
Section 19(1)	607	450	298	607
<b>Optician</b>				
Section 18(1)	675	1,971	2,122	531
Section 18(2)	1,694			
Section 18(3)	1			
<b>Total</b>	<b>2,977</b>	<b>2,421</b>	<b>2,420</b>	<b>1,138</b>

Source: Malaysian Optical Council

The draft of Optical Act 1991 Amendment had been prepared and in the process to be submitted to the Malaysian Optical Council. Apart from that, draft on the Guideline on Criteria and Standard for Accreditation of Optometry/Opticianry Programme in Institution of Higher Education had also been prepared and in the process of review.

## **MEDICAL ASSISTANT BOARD ACTIVITIES**

The Medical Assistant Board had helped in the implementation of Integrated Services Scheme which would give opportunity for promotion of Medical Assistant with degree qualification to the Management and Professional Group through appointment 'Kenaikan Pangkat secara Lantikan'or KPSL. The government had also approved to the new generic name of Medical Assistant to Assistant Medical Officer (AMO) on administrative basis.

## **WAY FORWARD**

With the rapid advancement in medical and information technologies, and an increasingly sophisticated clientele, the Medical Programme is expected to face greater challenges moving forward. The phenomenal increase in the breadth and depth of medical knowledge has resulted in an increasing demand for specialisation and sub-specialisation in virtually every field of medicine, and this demand is coming not only from the medical fraternity itself but also from patients expecting a higher level of care closer to home.

This has in turn resulted in the Medical Programme having to grapple increasingly with the problems of ensuring an adequate supply of such highly skilled medical personnel from our institutions of higher learning and training hospitals; proper and timely recruitment and placement of these personnel in our hospitals together with the necessary supporting staff; ensuring and maintaining a proper skill-mix in our hospitals; appropriate service development, namely putting in place the required infrastructure, equipment, funding, policies, processes, standards and guidelines for the specialty/subspecialty services to function optimally; retaining these personnel in the public sector against the more attractive pull of the private sector; and finally ensuring continuing professional development so that these highly skilled personnel remain competent and relevant with the times.

Thus, there is a need for endless planning, implementation, coordination, monitoring and evaluation efforts not only among all Sections and Divisions of the Medical Programme but also with other Programmes in the Ministry of Health. Moreover, a well-integrated medical service will necessitate clear integration policies not only among the various levels of care but also among the various sectors of the health care system. Existing organisational and service policies therefore need to be reviewed from time to time to ensure smooth interphasing of medical care and to overcome obstacles in the provision of medical services to the population.

## **CONCLUSION**

The Medical Programme strives to provide high quality and improved medical care through the development of the medical services as well as and human resources and regulation of medical practices.

# **RESEARCH & TECHNICAL SUPPORT PROGRAMME**



## RESEARCH & TECHNICAL SUPPORT PROGRAMME

### INTRODUCTION

The Research and Technical Support (R&ST) Programme, established since 1991 has four Divisions under it in carrying out its four main Activities which were Health Planning & Development; Engineering Services; Traditional and Complementary Medicine and Research. All four activities were to provide technical and support services to other Programmes in the Ministry of Health. The Divisions under the R&ST Programme were the Health Planning & Development, Engineering Services, Traditional & Complementary Medicine and the National Institutes of Health (NIH).

The Health Planning & Development Division continued to focus on the implementation and monitoring of the 9th Malaysia Plan (9 MP) including the preparation of the Mid Term Review Report; finalizing the draft of the Malaysian National Health Policy for Cabinet approval and the formulation of the National Healthcare Financing Mechanism. The Division continue to implement and monitor the development of projects allocated in the 9MP.

The Engineering Services Division started off in 1968 as the Environmental Health and Engineering Unit under the Division of Health. During that time it had two sections: Public Health Engineering and Radiation Protection Section. In 1981, this Unit was upgraded to Engineering Services Division. The Engineering Services Division provided important support services to the Medical and Health Programmes. The Division continued to provide and oversee the support services in hospitals; provided increased coverage of the rural water supply and sanitary latrines with emphasis on increasing the number of installation of sullage and solid waste disposal systems and the continuous monitoring of the National Drinking Water Quality Surveillance Programme.

The Medical Device Bureau was instrumental in drafting Medical Device Bill which aims to regulate medical devices to ensure public health and safety and to facilitate trading activities in order to ensure timely availability of beneficial new technologies to medical community and the public.

The Traditional and Complementary Medicine Division (T/CM) established in 2004 played an important role in the establishment of the Integrated Hospitals that integrate both traditional and complementary medicine with modern medicine with the prime objective of enhancing health and quality of life. Piloted in three hospitals, Kepala Batas Hospital has been established and operated since 2007, with Sultan Ismail Hospital and Putrajaya Hospital to be operated in 2008.

The National Institutes of Health (NIH) which comprises of the Institute for Medical Research (IMR); Institute for Public Health (IPH); Network of Clinical Research Centres (CRCs); Institute for Health Management (IHM); Institute for Health Systems Research (IHSR) and Institute for Health Behavioural Research (IHBR) continued their activities in research, training,

consultancy and diagnostics services in supporting the programmes of the MoH. Each institute continued to focus on research to address the 9MP Health Research Priority Areas and in the core research areas of each institute, thus further strengthening their functions as Centres of Excellence for health research.

The NIH Secretariat continued to provide the research management and support for the NIH Institutes. In strengthening the process of research management, the NIH developed a web portal system called the National Medical Research Register (NMRR) for the purpose of research registration, submission and approval. The prototype developed was tested successfully and the system will be further developed to cover all research aspects and procedures.

The Institute for Medical Research (IMR) was the research arm of the MoH and its main function was to carry out research to identify, elucidate, control and prevent diseases and health issues prevalent in the country. The IMR also provides specialized diagnostic services, training in specialized fields and consultative or advisory services.

The Institute for Public Health has undergone tremendous expansion in her function during the 39 years of contribution towards the advancement of health status in the country. At present, the main functions of the IPH were to provide training in various specialized fields including to carry out research projects, dissemination of health information and provide consultancy in health care. Since its inception, it has successfully trained various categories of health personnel at the basic and advanced levels. The Institute also carried out major research projects such as the National Health Morbidity Survey I, II and III and National Ear and Hearing Disorders Survey.

The Clinical Research Centre (CRC) faced 2007 with the daunting task of transforming CRC into a leading clinical research organization in Asia. With strong foundation established since 2000, CRC was able to fulfill its mission to improve patients' outcomes through quality and ethical clinical research. As the clinical research arm of the MoH, CRC underwent rapid expansion with development of infrastructure to house and equip a network of 17 centres located in major public hospitals nationwide. The official launch of the Network of Clinical Research Centres by the Director-General of Health in April 2007 was a timely boost for CRC in helping to promote clinical research in Malaysia. Attended by MoH officials from around the country, an industry dialogue held in conjunction with the launching drew participants from industry keen on what Malaysia had to offer.

The Institute for Health Management (IHM), Institute for Health Systems Research (IHSR) and Institute for Health Behavioural Research (IBHR) continued to conduct research in improving the health systems and health management of the MoH. These institutes conducted training and consultancies on their respective expertise.

## ACTIVITIES AND ACHIEVEMENTS

### HEALTH PLANNING & DEVELOPMENT

#### Health Plan Monitoring and Evaluation

The Ministry of Health commitments under Ninth Malaysia Plan (9MP) were documented in Chapter 20 of the Ninth Malaysia Plan, 2006-2020 published by the Economic Planning Unit, Prime Minister's Department and Book II - "Programme Health Plan, 9th MP 2006-2010" published by Planning & Development Division, Ministry of Health, Malaysia (MoH). Progress in the implementation of this 5-year Health Plan was to be monitored annually through analysis of performance indicators identified at the outset of 9MP. In this respect, MoH had met the targets set where all Programmes and Activities submitted their progress reports for the year 2007.

#### Mid Term Review of the Ninth Malaysia Plan

Mid Term Review of the Ninth Malaysia Plan (MTR-9MP) was done in compliance with the *Ketua Setiausaha Negara Pekeliling (61, dlm UPE(S): 12-9/13/9 Jilid 5)* dated 5th November, 2007. In contrast to the previous Malaysia Plans, it emphasised the need for all Ministries and Government agencies to ensure that their programmes and projects were in line with the 5 National Mission Thrusts namely:

- Thrust 1: To move the economy up the value chain
- Thrust 2: To raise the capacity for knowledge and innovation and nurture "first class mentality"
- Thrust 3: To address persistent socio-economic inequalities constructively and productively
- Thrust 4: To improve the standard and sustainability of quality of life, and
- Thrust 5: To strengthen the institutional and implementation capacity

Ministries and Government agencies were required to realign their programmes and projects to these National Mission Thrusts and to then evaluate their progress and achievements using a Outcome Based Approach (OBA) and to conduct an "outcome" assessment vis-à-vis these National Mission Thrusts.

In response to this, Planning & Development Division conducted an echo OBA Workshop in December 2007 for MoH officers whereby participants realigned their programmes/projects to the 5 National Mission Thrusts, identified outcome measurements for each of their 9MP Development projects/programmes as well as worked out the actual outcome achieved for the years 2006 and 2007, depending on data availability. This exercise will be the launching pad for the next step in the new MTR of 9MP to be conducted in early 2008.

### **Malaysian National Health Policy (MNHP)**

The need for a National Health Policy was identified at the mid-term review of the Sixth Malaysia Plan. The purpose of NHP was to enhance integration among health and health-related agencies towards achieving desired national objectives, the Vision for Health and ultimately help to realize the Vision 2020. Since then, several drafts of a “national health policy” documents were developed. In 2005, a national health policy framework was formulated and a draft entitled “The Malaysian National Health Policy Edition 1, 2007 (MNHP)” was prepared. This draft delineated 3 main policy goals or objectives to be met for the next 15 years up to 2020 namely:

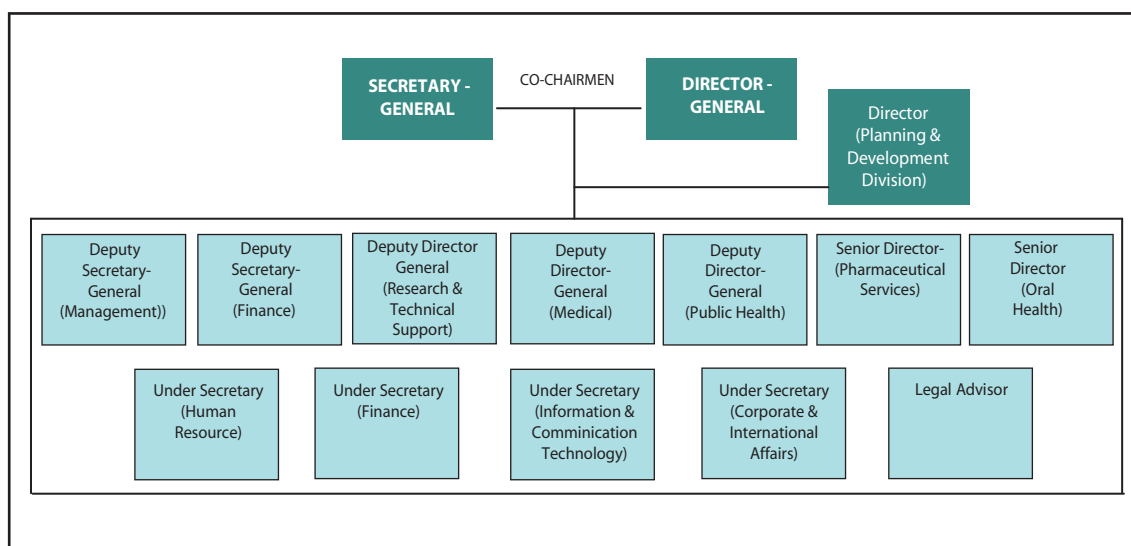
- MNHP 1:        Malaysian Population Health Goals
- MNHP 2:        National Capacity Building Goals for Health
- MNHP 3:        National Capacity Building Towards Competitiveness in the Health Market

As health was a shared responsibility, it was imperative that views from all relevant stakeholders-in-health be considered. A ‘*Mesyuarat Khas Dasar Kesihatan Negara*’ held on 30 May – 1 June 2007 to discuss the proposed MNHP draft saw active participation of members from 93 organizations from public and private sectors including non-governmental organisations. The proposed MNHP draft was amended taking into consideration input and recommendations of the participating organizations. The final draft was approved by the *Jawatankuasa Dasar dan Perancangan, Kementerian Kesihatan (JDPKK)*. It was subsequently endorsed by the Minister of Health and will be submitted to the Cabinet for approval.

### ***Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan Malaysia (JDPKK)***

The *Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan Malaysia* (JDPKK) was the highest policy decision making committee for the Ministry of Health. In 2007, membership and terms of reference (TOR) of this Committee were reviewed to reflect its role as the highest decision making authority. The membership was trimmed from 35 to 15 members only with Planning & Development Division remaining its secretariat (Chart 1). To enhance the Committee's effectiveness, the reviewed TOR ensured that all proposed papers to be discussed focus primarily on policy matters.

**Chart 1 : *Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan Malaysia* (JDPKK), 2007**



Source : Planning And Development Division , MoH.

In 2007, a total of 4 JDPKK meetings were held and 10 policy papers were presented out of which eight policies were approved (Table 1).

**TABLE 1**  
**List of Policies Tabled in JDPKK in 2007**

Paper No.	Policy	Status	Programme/Activity
<b>JDPKK 1/2007</b>			
(1/4)	The Proposal for the Upgrading of Genetic Services in Malaysia to enhance clinical treatment and genetic laboratory services in Malaysia	Approved with conditions	Medical Development Division
(2/4)	A policy relating to The 'MoH's Medical Protection Team Coverage' to ensure that prompt and coordinated services are provided to the public.	Approved. 'Pekeliling KPK Bil 2/2007' was circulated on 19 June 2007.	Medical Development Division & Federal Territory State Office
(3/4)	A policy on MoH hospital procurement of selected medical equipment via leasing to reduce the down time for equipment maintenance and allow upgrading of equipment, in-line with new technologies.	Approved and implemented	Medical Development Division
(4/4)	'The Proposal to Implement Home Care Nursing in the Primary Health Care Services for the Country' to encourage self care once the patients are discharged to their home.	Discussed but decision postponed until pilot project is completed	Family Health Development Division
<b>JDPKK 2/2007</b>			
(1/2)	The 'National Oral Health Plan For 2010 : Malaysia' to reduce the burden of dental caries, periodontal conditions, oral malignancies and dental injuries of the nation.	Approved to be reviewed in-line with the 9MP	Oral Health Division
(2/2)	The National Organ, Tissue and Cell Transplant Policy to promote, monitor, facilitate and support organ, tissue and cell transplant in the country.	Approved for implementation	Medical Development Division
<b>JDPKK 3/2007</b>			
(1/3)	A policy gazetting Sarawak as a state with iodine deficiency problems to ensure only iodinated salts are available in Sarawak help reduce health burden resulting from iodine deficiency.	Approved for implementation	Family Health Development Division
(2/3)	The Malaysian National Health Policy, Edition 1, 2007' to enhance integration among health and health-related agencies in achieving the desired national objectives, Vision for Health and ultimately towards the realization of the Vision 2020 was approved and to be submitted for approval by the Cabinet.	Approved. Awaiting Cabinet Approval	Planning and Development Division
(3/3)	Review of the terms of reference and the committee members of the MoH's Planning and Policy committee to further enhance the effectiveness of the committee.	Approved and implemented	Planning and Development Division
<b>JDPKK 4/2007</b>			
(1/1)	A policy relating to compulsory supervised service for the newly recruited medical assistants to provide them adequate experience and training before being posted out.	Approved and implemented	Medical Practices Division

## **National Healthcare Financing Mechanism (NHFM)**

In 2005, engagement of NHFM consultancy service was approved by the EPU and this consultancy service was funded by the United Nations Development Programme (UNDP). A corollary study on Benefit Package currently provided by the government hospitals was funded by UNDP and conducted by Universiti Kebangsaan Malaysia (UKM) and the final report was submitted in May 2007. The outcome of this survey will be used as input in the development of the essential benefit package in NHFM.

Among the activities to be implemented in the near future include Healthcare costing studies, Public Perception survey, Accuracy of Diagnosis survey and Social marketing. Other major activities include the development of the essential benefit package options, appropriate provider payment mechanism, institutional development (National Health Financing Authority), legislations and social marketing.

## **Malaysian National Health Account (MNHA)**

In 2007, the Malaysia National Health Accounts (MNHA) Unit conducted the second cycle of data collection. The national health expenditure data that included both, the public and private sector, covered a period of four years from 2003 to 2006. The analysis was completed at the end of 2007 to be presented to the Steering Committee in January 2008. Consultancy Services was provided in defining the methodology for data collection and analysis to ensure that the national health expenditure estimations was in line with the international standard that uses the OECD framework.

## **Health Facility Planning And Development**

In the 9th Malaysia Plan (9MP), a development allocation of RM10.176 billion was approved for Ministry of Health to finance the development of 1,644 projects which include hospitals (new and upgrading), urban and rural health facilities, training facilities for health personnel, equipment and vehicles, ICT, health offices, staff facilities (quarters and hostels), health promotion activities, research and development and capacity building (Table 2).

In 2007, a total of RM1.628 billion was allocated. As of December 2007, a sum of RM1.518 billion was spent which represented 93.21% of the total allocation (Table 3).

**TABLE 2**  
**Health Facility Project and Development Allocation for the 9th Malaysia Plan**

Project Detail	Facilities	Number of Projects	Allocation (RM'000)	Percentage	Expenditure (RM'000)	Percentage
001	Training	37	1,515,870	14.86	369,437	24.44
002	Public Health	654	2,204,618	21.66	200,948	9.11
003	Upgrading of Hospital Facilities	316	2,086,826	20.51	468,704	22.46
004	New Hospitals	41	1,521,930	14.96	554,383	36.42
005	Research & Development (R & D)	11	127,800	1.26	80,083	62.66
006	Upgrading and Maintenance	1	300,000	2.95	284,806	94.94
007	Land Acquisition & Maintenance	1	130,000	1.28	227,429	174.95
008	ICT	12	547,560	5.38	219,458	40.08
009	Staff Facilities/quarters	232	1,090,941	10.72	41,588	3.81
010	Promotion	2	50,000	0.49	9,444	18.89
011	Equipment & Vehicles	337	604,455	5.94	271,036	44.84
<b>Total</b>		<b>1,644</b>	<b>10,176,000</b>	<b>100.00</b>	<b>2,727,315</b>	<b>26.80</b>

*Source: Planning and Development Division, MoH*

As 2007 represented the second year of the implementation of the 9MP, the activities that had been carried were identification of project scope, formulation of brief requirement, approval from relevant authorities and design development. Standard Plans for health clinics were reviewed to meet the current service needs, such as the emerging or re-emerging of infectious diseases demands and progressive upgrading of the health service programme. As of December 2007, a total of 541 projects were listed with the allocation of RM 1.628 billion.

**TABLE 3**  
**Development Allocation and Expenditure for Health Facilities Project, 2007**

Project Detail	Facilities	Number of Projects	Allocation (RM)	Expenditure (RM)	Percentage
001	Training	14	213,265,000	203,234,156	95.30
002	Public Health	196	108,142,500	104,174,672	96.33
003	Upgrading of Hospital Facilities	105	198,410,000	147,990,155	74.59
004	New Hospitals	4	168,032,600	164,159,038	97.69
005	Research & Developments (R & D)	1	43,750,000	43,128,287	98.58
006	Upgrading and Maintenance	0	153,000,000	142,656,184	93.24
007	Land Acquisition & Maintenance	0	178,100,000	171,286,635	96.17
008	ICT	2	221,536,400	219,458,064	99.06
009	Staff Facilities/quarters	79	46,087,300	41,587,863	90.24
010	Promotion	0	9,900,000	9,444,162	95.40
011	Equipment & Vehicles	140	288,514,000	271,035,537	93.94
	<b>Total</b>	<b>541</b>	<b>1,628,737,800</b>	<b>1,518,154,753</b>	<b>93.21</b>

Source: Planning and Development Division, MoH

As for capacity building in the aspect of project planning, the Division conducted various courses, workshops and conferences in order to improve the knowledge and skills of staff involved in facility planning and development which include personnel from State Health Department, hospitals and clinics. The courses conducted include project monitoring system, land acquisition/procurement and hospital planning and design.

### **Health Information System Planning And Management**

Health Information Management System (HIMS) was crucial as managers at different management levels require information for planning purposes in order to monitor and assess the performance and achievement of the existing programmes, as well as the evaluation of resource allocation.

## Strengthening the Health Informatics Centre

The establishment of Health Informatics Centre (HIC) was approved by *Jawatankuasa Dasar Perancangan Kementerian Kesihatan* (JDPKK) in 2006 comprises of 3 subunits, that was Strategic Planning and Evaluation Unit, Health Informatics Standard Unit and Operational and Documentation Unit. Efforts to strengthen the establishment of HIC was pursued in 2007.

### HIMS E-Reporting

The HIMS e-reporting project was fully implemented in July 2007 and HIMS subsystem data were electronically submitted to the portal for analysis. All HIMS subsystem reports were made available to all programme managers and users at the district and state level through web based portal.

### Publication of Reports

Health Informatics Centre (HIC) had published several reports and annual publications in 2007, amongst them were:

- a. MoH Annual Reports, 2006
- b. Indicators for Monitoring and Evaluation for Strategy for Health For All, 2006
- c. Health Facts, 2006
- d. HMIS report by sub systems, 2006

### ICD-10 Training

Health Informatics Centre (HIC) conducted several training sessions for Medical Record Officers and Assistant Medical Record Officers (AMRO) throughout the country in International Statistical Classification of Diseases, (ICD-10). HIC in collaboration with Malaysian Health Informatics Association (MHIA) also conducted a training session for the private sector in compliance with the WHO requirement on reporting of diseases.

### Health Informatics Standards

Standardization of health data and health information was vital especially in sharing of information across health care settings both locally and internationally. Various technical working groups have been formed to develop the standards for the various disciplines and activities. The HIC as the custodian of health informatics standards continued to participate in the development, monitoring and updating the standards. Standards for Facility Codes, National Health Data Dictionary were among the standards and datasets that have been developed. This project was done in collaboration with Telehealth Division MoH, universities and other related industries. A Technical Committee on Health Informatics was established in SIRIM. HIC continued to participate in the activities of the committee.

## ENGINEERING SERVICES

Under the Ninth Malaysian Plan (9MP), the main activities of Healthcare Facility Engineering Division was to coordinate and monitor the implementation of new hospitals and minor works for MoH buildings and facilities and also to provide technical advice for development projects, technology assessment and procurement of engineering and medical equipment.

### Hospital Support Services Regulatory Activities

The privatization of Hospital Support Services (HSS) involves a total of 123 hospitals and 4 institutions of the Ministry of Health in 1997. This project involves an annual expenditure of more than RM500 million for a concession period extending for fifteen years. The Concession Agreements between the Government of Malaysia and the three companies namely, Faber Medi-Serve Sdn. Bhd., Radicare (M) Sdn Bhd and Pantai Medivest Sdn. Bhd. were signed on October 1996. The government has also appointed an independent consultant, *Sistem Hospital Awasan Taraf (SIHAT)* to assist the Regulatory Unit to supervise the project.

The main programme of Regulatory Section was to implement the HSS that consist of 5 services which were Clinical Waste Management Services (CWMS), Cleansing Services (CLS), Linen & Laundry Services (LLS), Facility Engineering Management Services (FEMS) and Biomedical Engineering Management Services (BEMS) at all contract hospitals and institutions.

As of 2007, the number of contract hospitals and institutions receiving HSS had increased to 147 from 127 recorded in 1997 (year of implementation). Table 4 shows the number of hospital and institution by concession companies while Table 5 shows the comparison of asset number and contract value for HSS from 1997 to 2007.

**TABLE 4**  
**Number of Hospitals and Institutions by Concession Companies, 1997 and 2007**

Concession	Number of Hospitals and Institutions	
	1997	2007
Faber Medi Serve Sdn. Bhd.	71	78
Radicare (M) Sdn. Bhd.	37	47
Pantai Medivest Sdn. Bhd.	19	22
<b>Total</b>	<b>127</b>	<b>147</b>

Source : Engineering Services Division, MoH

In year 2002, two services were incorporated under Quality Assurance Programme (QAP) namely FEMS and BEMS. The three other services namely CWMS, CLS and LLS had follow suit since October 2006. This QAP was such that plan and management of quality control could be under taken for all services. The quality of all services could be improve continuously with the help of monitoring tools such as Central Management Information System (CMIS) at all level i.e hospital, state, consortia or national level.

**TABLE 5**  
**Number of Assets and Contract Value for HSS, 1997 and 2007**

Item	1997	2007
No. of Contract Hospitals	127	147
No. of Beds	36,319	42,456
Floor Area (m <sup>2</sup> )	4,297,523	5,647,670
Assets FEMS	Estimate 250,000	307,307
Assets BEMS	81,254	139,870
<b>Contract Value</b>	<b>RM/million</b>	<b>RM/million</b>
FEMS	199.53	204.73
BEMS	100.69	104.89
LLS	62.73	102.04
CWMS	24.48	45.37
CLS	100.90	132.08
Variations 5 services	0.00	161.38
<b>Total Value</b>	<b>488.33</b>	<b>750.49</b>

Source : Engineering Services Division, MoH

### Environmental Health Engineering Activities

The Environmental Health Engineering activities consists of three core programmes which include the Water Supply and Rural Environmental Sanitation Programme, the National Drinking Water Quality Surveillance Programme (NDWQSP) and the Environmental Health Protection Programme. These programmes were formulated and planned to meet the following goals:

- To plan, implement, monitor and coordinate preventive health programmes through the application of environmental health engineering principles and methods.
- To improve the environmental sanitation of the rural areas and reduce waterborne diseases.
- To ensure all public water supplies were safe.
- To ensure that environmental health was protected through proper management of solid, clinical and toxic waste.

- To protect public health through proper planning, design, implementation, operation and maintenance of wastewater management systems.
- To protect public health from adverse air quality and indoor environment conditions.

### **Water Supply and Rural Environmental Sanitation Programme**

This programme involves the construction of rural water supply systems, sanitary latrines and proper facilities for the disposal of sullage water and solid waste in the rural area. It was initiated in 1974 as an effort to reduce/control the incidence of water-borne and excreta related diseases, through the provision of water supply and sanitation facilities.

#### **Rural Water Supply**

One of the objectives of this programme was to provide adequate safe water supply to the rural community. The programme incorporates simple technological principles that emphasized on simple design, construction and maintenance. The requirement for the system was to deliver sufficient quantities of water that meets the basic health and hygiene requirement at minimum cost. These systems produce untreated but wholesome water and therefore the rural people were advised to boil their drinking water. The type of systems installed throughout the rural areas in Malaysia were gravity-feed system, sanitary well, sanitary well with house connection and rainwater collection system.

The development of rural water supply in the water supply and rural environmental sanitation programme was planned according to 5 year Malaysia Development Plan. A total of 5,265 of various type of systems were installed in 2007. These systems provided service to 6,636 houses. The overall status of the rural water supply coverage was 95.41% representing 1,677,751 of rural houses (Table 6).

**TABLE 6**  
**Construction Of Rural Water Supply Project By Ministry of Health In 2007**

State	Total Houses In Rural Area	Sanitary Well			Sanitary Well With House Connection			Gravity Feed System			Rainwater Collection			JKR/KKM Connection			Total		Total Houses Supplied (Cumulative)	Coverage (%)
		Nos. Built	No. of Houses Supplied		Nos. Built	No. of Houses Supplied		Nos. Built	No. of Houses Supplied		Nos. Built	No. of Houses Supplied		Nos. Built	No. of Houses Supplied		Nos. Built	No. of Houses Supplied		
Perlis	38,718	0	0	0	0	0	0	0	0	0	0	0	0	178	178	0	178	178	38,162	98.56
Kedah	180,670	21	21	11	13	0	0	0	0	0	0	0	0	915	915	0	947	949	175,858	97.34
P.Pinang	71,437	0	0	0	0	10	28	0	0	0	0	0	0	156	156	0	166	184	71,120	99.56
Perak	150,787	6	6	0	0	6	180	0	0	0	0	0	0	85	85	0	97	271	147,129	97.57
Selangor	101,566	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101,566	100.00
N.Sembilan	66,848	0	0	0	0	0	0	0	0	0	0	0	0	121	121	0	121	121	66,723	99.81
Melaka	69,275	0	0	0	0	0	0	0	0	0	0	0	0	31	31	0	31	31	69,164	99.84
Johor	146,034	0	0	4	28	5	213	50	50	50	50	50	50	59	59	0	118	350	145,997	99.97
Pahang	151,366	14	54	7	52	11	290	4	4	4	4	4	4	271	271	0	307	671	149,386	98.69
Terengganu	134,138	27	27	0	0	0	0	0	0	0	0	0	0	582	582	0	609	609	130,476	97.27
Kelantan	252,822	0	0	142	268	11	109	0	0	0	0	0	0	893	893	0	1,046	1,270	205,753	81.38
Sarawak	194,454	0	0	0	0	8	236	209	209	209	209	209	209	0	0	0	217	445	187,721	96.54
Sabah	200,411	2	27	0	0	2	106	1,424	1,424	1,424	1,424	1,424	1,424	0	0	0	1,428	1,557	188,696	94.15
<b>Malaysia</b>	<b>1,758,526</b>	<b>70</b>	<b>135</b>	<b>164</b>	<b>361</b>	<b>53</b>	<b>1,162</b>	<b>1,687</b>	<b>1,687</b>	<b>1,687</b>	<b>1,687</b>	<b>1,687</b>	<b>1,687</b>	<b>3,291</b>	<b>3,291</b>	<b>5,265</b>	<b>6,636</b>	<b>1,677,751</b>	<b>95.41</b>	

Source : Engineering Services Division, MoH.

## **Sanitary Latrines**

Sanitary latrine was to be constructed for every household in the rural area. The most effective and cheap method for disposal of excreta in rural areas was by the pour-flush latrine. Population densities, soil conditions, cultural habits, the depth of water table and the availability of water to flush the bowl were the criteria considered for the system to operate satisfactorily. The system eliminates odours, flies and generally provides a more aesthetic environment.

The construction of sanitary latrines provided the means to initiate efforts to educate rural people on the use of more comfortable and hygienic method for disposal of excreta. It was hoped that after sometime, the people will realize the benefit of such a practice and will construct their own latrines in the future when replacement is needed.

In 2007, the MoH constructed a total of 5,918 pour flush latrines. The coverage of sanitary latrines as at the end of 2007 was 97.88 % representing 1,721,284 of rural houses (Table 7).

## **Sullage and Solid waste Disposal**

In the early stages of the BAKAS programme, the installation of sullage and solid waste disposal systems were given lower priority due to the urgent need for water supply and sanitary latrines. As the coverage of water supply and sanitary latrines has achieved almost 100%, the installation of sullage and solid waste disposal systems has now been given higher priority. In 2007, a total of 4,526 sullage disposal systems and 4,437 solid waste disposal systems were constructed and these represent a total household coverage of 61.54% (1,082,191) and 68.70% (1,208,113) respectively (Table 7).

**TABLE 7**  
**Construction Of Latrines, Sullage and Solid Waste Disposal System By Ministry of Health In 2007**

State	Total Houses In Rural Area	Latrines			Sullage			Solid Waste Disposal System		
		Nos. Built	No. Of Houses Supplied	Coverage (%)	Nos. Built	No. Of Houses Supplied	Coverage (%)	Nos. Built	No. Of Houses Supplied	Coverage (%)
Perlis	38,718	175	38,498	99.43	156	19,724	50.94	110	22,714	58.67
Kedah	180,670	609	178,068	98.56	439	92,375	51.13	637	122,490	67.80
P.Pinang	71,437	105	71,228	99.71	83	53,735	75.22	274	64,472	90.25
Perak	150,787	472	148,562	98.52	181	78,446	52.02	235	86,258	57.21
Selangor	101,566	38	100,590	99.04	161	93,398	91.96	514	93,907	92.46
N.Sembilan	66,848	54	66,823	99.96	217	52,593	78.68	27	50,038	74.85
Melaka	69,275	42	69,153	99.82	106	57,434	82.91	63	63,999	92.38
Johor	146,034	685	145,884	99.90	0	133,751	91.59	0	136,652	93.58
Pahang	151,366	400	147,868	97.69	168	102,281	67.57	281	97,051	64.12
Terengganu	134,138	443	133,490	99.52	445	66,646	49.68	338	84,343	62.88
Kelantan	252,822	815	246,307	97.42	38	79,248	31.35	31	127,163	50.30
Sarawak	194,454	515	189,700	97.56	2131	118,296	60.83	1,803	112,599	57.91
Sabah	200,411	1,565	185,113	92.37	401	134,264	66.99	124	146,427	73.06
<b>Malaysia</b>	<b>1,758,526</b>	<b>5,918</b>	<b>1,721,284</b>	<b>97.88</b>	<b>4,526</b>	<b>1,082,191</b>	<b>61.54</b>	<b>4,437</b>	<b>1,208,113</b>	<b>68.70</b>

Source : Engineering Services Division, MoH.

## **The National Drinking Water Quality Surveillance Programme**

The National Drinking Water Quality Surveillance Programme (NDWQSP) was designed for continual improvement of drinking water quality towards zero defect. As a result, guidelines for the implementation of an effective and comprehensive NDWQSP were formulated with the co-operation of agencies such as World Health Organisation (WHO), Public Works Department (PWD), Department of Chemistry (DOC) and Department of Environment (DOE) in early 1980s. These guidelines form the foundation for the launching of the NDWQSP in 1983. However, in 2004, the guidelines were revised and compiled into a NDWQSP manual that was being used nationwide.

The principal objective of NDWQSP was to raise the standards of health by ensuring the safety and acceptability of the drinking water provided to the public within the standard stipulated, thereby reducing the incidence of water-borne diseases or intoxication associated with poor quality of public water supplies through effective surveillance. This programme ensures the public health and water works personnel will be alerted in time if the quality of drinking water deteriorates. Thus, this will enable them to take preventive or remedial measures before any major outbreak of disease or poisoning occurs.

The NDWQSP which was adopted nationwide since 1983 provides a mechanism towards improving drinking water quality through five key programme elements; i.e. monitoring, sanitary survey, data processing and evaluation, remedial action and institutional examination. Since the implementation of the programme, the drinking water quality in the country has generally improved and the current status of drinking water can be readily assessed.

The main activity under the NDWQSP was monitoring of public water supply systems. It covers all monitoring and assessment activities at public water supply systems (urban and rural areas); i.e. routine sampling, sanitary surveys, technical audits, etc. In the year 2007, 151,303 water samples were taken from 479 water courses covering the whole of Malaysia. The water sampling performance for 2007 is shown in Table 8.

Other activities under the NDWQSP were the investigation and assessment at estates, resort islands and rural areas. Most of the water supply systems in the stated areas were privately owned or were rural public water supply systems which were provided by the Ministry of Health through the Rural Environment and Sanitary Programme (RESP). More than 420 estates all over Malaysia and 104 resort islands in Johor, Kedah, Pahang, Terengganu, Sabah and Sarawak were investigated and assessed in 2007.

In 2007, in collaboration with Food Safety Division, more than 50 technical comments were also given on local and international manufacturers requesting licenses to produce packaged drinking water/natural mineral water.

**TABLE 8**  
**Summary of Sampling Performance for Malaysia , 2007**

State	Group 1			Group 2			Group 3			Group 4			Total Number of Samples Taken
	A	B	C	A	B	C	A	B	C	A	B	C	
Perlis	718	718	100.00	158	158	100.00	51	51	100.00	25	25	100.00	115,757
P.Pinang	4,119	4,116	99.54	812	811	99.88	298	298	100.00	104	104	100.00	
Kedah	10,477	10,032	95.75	3,575	3,389	94.80	888	846	95.27	355	321	90.42	
Perak	11,930	12,238	102.58	2,538	2,592	102.13	797	822	103.14	400	400	100.00	
Selangor	12,198	11,932	97.82	2,854	2,794	97.90	818	805	98.41	237	237	100.00	
F.T. Kuala Lumpur	2,178	1,244	57.12	422	193	45.73	148	62	41.89	24	13	54.17	
Negeri Sembilan	5,593	4,921	87.98	1,266	1,083	85.55	434	398	91.71	184	156	84.78	
Melaka	2,319	2,218	95.64	724	657	90.75	239	234	97.91	45	44	97.78	
Johor	13,981	13,355	95.52	3,575	3,389	94.80	888	846	95.27	335	321	95.82	
Terengganu	6,483	6,463	99.69	1,433	1,360	94.91	384	355	92.45	123	114	92.68	
Kelantan	5,145	5,087	98.87	1,230	1,176	95.61	398	373	93.72	192	179	93.23	115,757
Pahang	13,868	13,043	94.05	3,923	3,604	91.81	1,163	1,094	94.07	653	578	88.51	
F.T. Putrajaya	494	412	83.40	106	83	78.30	28	25	89.29	4	4	100.00	
<b>P. Malaysia</b>	<b>89,503</b>	<b>85,763</b>	<b>95.82</b>	<b>22,616</b>	<b>21,289</b>	<b>94.13</b>	<b>6,534</b>	<b>6,209</b>	<b>95.03</b>	<b>2,681</b>	<b>2,496</b>	<b>93.10</b>	
Sarawak	19,895	17,923	90.09	4,562	3,419	74.95	1,410	1,018	72.20	615	340	55.28	151,303
Sabah	10,176	9,157	89.99	2,110	1,540	1,540	625	468	74.88	238	169	71.01	
F.T. Labuan	2,178	1,244	57.12	422	193	45.73	148	62	41.89	24	13	54.17	
<b>Malaysia</b>	<b>121,752</b>	<b>114,087</b>	<b>93.70</b>	<b>29,710</b>	<b>26,441</b>	<b>89.00</b>	<b>8,717</b>	<b>7,757</b>	<b>88.99</b>	<b>3,558</b>	<b>3,018</b>	<b>84.82</b>	<b>151,303</b>

Note :

Group 1 - Bacteriological and physical parameters.

Group 2 - Chemical parameters.

Group 3 - Heavy metals, trihalomethane and inorganic compounds.

Group 4 - Pesticides and organic compounds.

A = Number of samples scheduled (ideal schedule)

B = Number of samples taken.

C = Percentage of samples taken.

Source : Engineering Services Division, MoH.

## Quality Assurance Programme (QAP) for National Drinking Water

### Quality Surveillance Programme (NDWQSP)

To further enhance the effectiveness of the programme, a Quality Assurance Programme (QAP) for NDWQSP was launched in December 1992 and implemented by all states in Malaysia in January 1993. Since 2004, the QAP standards were set based on five performance indicators; i.e. violation rates for residual chlorine, E.coli, combined residual chlorine and E.coli, turbidity and aluminium. The standards were revised each year so that it can be made more stringent to be consistent with any improvement of the national annual average. Table 9 indicates a compliance trend for every performance indicator from 1993 to 2007, while Table 10 shows the breakdown of the NDWQSP QAP performance for 2007.

**TABLE 9**  
**A Compliance Trend for Every NDWQSP QAP Performance Indicator ,1993 to 2007**

Year	Residual Chlorine (%)	E.coli (%)	Residual Chlorine & E.coli (%)	Turbidity (%)	Aluminium (%)
1993	8.5	2.5	1.3	-	-
1994	5.3	1.3	0.5	-	-
1995	5.1	1.3	0.4	-	-
1996	4.8	1.3	0.4	7.7	-
1997	3.3	1.3	0.3	7.6	-
1998	3.1	1.3	0.3	6.7	-
1999	3.1	1.3	0.3	5.8	-
2000	3.1	1.3	0.3	4.8	-
2001	2.8	0.9	0.3	4.1	-
2002	2.8	0.9	0.3	3.8	-
2003	2.8	0.9	0.3	3.4	-
2004	2.8	0.5	0.3	3.2	10.2
2005	2.8	0.4	0.3	3.2	10.2
2006	2.2	0.4	0.3	2.8	10.2
2007	2.2	0.4	0.3	2.2	10.2

Source : Engineering Services Division, MoH.

**TABLE 10**  
**Performance of QAP for NDWQSP in Malaysia , 2007.**

State /Indicator	Residual Chlorine (QAP < 2.8%)			E. coli (QAP < 0.4%)			Residual Chlorine & E. coli (QAP < 0.3%)			Turbidity (QAP < 2.2%)			Aluminium (QAP < 10.2 %)		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Perlis	276	0	0	276	1	0.36	276	1	0.36	276	0	0	72	26	36.11
P.Pinang	3322	79	2.38	3322	6	0.18	3322	3	0.09	3322	15	0.45	623	42	6.74
Kedah	8903	147	1.65	8906	23	0.26	8903	28	0.31	8901	261	2.93	1856	220	11.85
Perak	9845	106	1.08	9848	6	0.06	9845	3	0.03	9481	188	1.98	1978	242	12.23
Selangor	9351	314	3.36	9354	6	0.06	9351	4	0.04	9328	33	0.35	2015	194	9.63
F. T. K. Lumpur	1,161	0	0	1,161	0	0	1,161	0	0	1,161	3	0.60	171	3	3.30
N.Sembilan	4,417	98	2.22	4,417	17	0.38	4,417	15	0.34	4,416	120	2.72	941	195	20.72
Melaka	3,096	45	1.45	3,096	2	0.06	3,096	1	0.03	3,096	13	0.42	604	23	3.81
Johor	12,810	693	5.41	12,811	37	0.29	12,810	4	0.03	10,141	57	0.56	3,066	805	26.26
Terengganu	5,601	32	0.57	5,611	2	0.04	5,601	2	0.04	5,600	52	0.93	1,122	102	9.09
Kelantan	5,207	293	5.63	5,207	8	0.15	5,207	23	0.44	5,207	376	7.22	1,090	195	17.89
Pahang	10,558	268	2.54	10,554	183	1.73	10,553	115	1.09	10,547	394	3.74	2,685	571	21.27
F.T. Putrajaya	412	19	4.61	412	0	0	412	0	0	412	5	1.21	83	3	3.61
<b>P. Malaysia</b>	<b>74,959</b>	<b>2,094</b>	<b>2.79</b>	<b>74,975</b>	<b>291</b>	<b>0.39</b>	<b>74,954</b>	<b>199</b>	<b>0.27</b>	<b>71,888</b>	<b>1,517</b>	<b>2.11</b>	<b>16,306</b>	<b>2,621</b>	<b>16.07</b>
Sarawak	11,807	150	1.27	11,969	33	0.28	11,422	0	0	7,813	12	0.15	2,154	526	24.42
Sabah	7,225	545	7.54	7,096	24	0.34	7,086	88	1.24	6,832	578	8.46	822	182	22.14
F.T. Labuan	338	95	28.11	337	2	0.59	335	2	0.60	338	2	0.59	70	5	7.14
<b>Malaysia</b>	<b>94,329</b>	<b>2,884</b>	<b>3.06</b>	<b>94,377</b>	<b>350</b>	<b>0.37</b>	<b>93,797</b>	<b>289</b>	<b>0.31</b>	<b>86,871</b>	<b>2,109</b>	<b>2.43</b>	<b>19,352</b>	<b>3,334</b>	<b>17.23</b>

Note: A = Number of samples analyzed. B = Number of samples violated. C = Percentage of samples violated.

Source : Engineering Services Division, MoH

## **Environmental Health Protection Programme (PEKA)**

The PEKA programme includes activities such as Environmental Health Impact Assessment (EHIA), sewage, solid waste management and indoor air quality. The program was developed to ensure environmental health aspects related to sewage, solid waste management, and indoor air quality were being monitored. This will ensure timely intervention to protect public health.

All new projects requiring environmental impact assessments to be carried out will also be required to include studies on impact to public health through EHIA since it was introduced by the Division in 1997.

For indoor air quality activities, training for engineers, scientists, and environmental health officers was conducted in 2007 in collaboration with NIOSH. Training on indoor air quality for environmental health officers was also done through post-basic training conducted annually. A pilot project was successfully carried out for three hospitals namely Tengku Ampuan Rahimah Klang, Kajang and Putrajaya for parameters identified under the Code of Practice for Indoor Air Quality under the Department of Occupational Safety and Health (DOSH). The Division was also actively involved in the development of standards under SIRIM for activities related to indoor air quality.

For solid waste management, the Division continues to actively participate in giving technical inputs to the National Program for Solid Waste Management under the Ministry of Housing and Local Government (MHLG) especially in Technical Committees for Technology Assessment for Solid Waste and strategic master plan for solid waste management. The Division was also actively involved in standards development under SIRIM participating in the technical committee for waste management, working groups for hazardous waste, domestic waste and site remediation.

The year 2007 saw active participation by the Division in National Technical Committee for river quality improvement. Sanitation assessment for resort areas was initiated through the development of a monitoring format and a trial run. A few states were selected to carry out the assessment projects.

## **Radiation Health & Safety Activities**

The main objectives of this activities were to ensure the safe, optimum and efficacious use of irradiating apparatus and associated facilities in medicine. It also ensures that the hazards associated with the application of ionizing radiation and non-ionizing radiation in medicine were minimized and within acceptable levels.

Strategies of the programmes were to:

- o Enhance the present computerized licensing system to ensure that the issuance of licenses were done effectively and efficiently
- o Strengthen the monitoring and enforcement unit to ensure compliance with Act 304
- o Increase enforcement activities
- o Review and develop the regulations, guidelines, standards, codes of practice for IR and NIR

### Licensing under the atomic Energy Licensing Act 1984

A total of 1,051 licences were issued to the private sector in 2007. These comprise of 138 new and 913 renewal licenses. As of December 2007, a total of 2,829 premises comprising 640 registered government and 2,189 private premises were licensed (Table 11).

**TABLE 11**  
**Number Of Licenses Issued by Type of Premises**

Type of Premises	No. of Premises		Total
	Government	Private	
Hospitals	148	95	243
Health Clinics	144	NR	144
Dental Clinics	344	962	1,306
Radiotherapy Centre	3	22	25
Radiology Clinics	NR	44	44
GP's/Non - X - Ray Sp. Clinics	NR	1,023	1,023
Veterinary Clinics	1	43	44
<b>Total</b>	<b>640</b>	<b>2,189</b>	<b>2,829</b>

Note: NR - Not related

Source: Engineering Services Division, MoH

There were 4,696 irradiating apparatus in both the government and private sectors. The number of irradiating apparatus for different modalities until December 2007 is shown in Table 12.

**TABLE 12**  
**Total of Irradiating Apparatus by Type as of December 2007**

Type of Irradiating Apparatus	No. of Premises		Total
	Government	Private	
General/Mobile X - Ray	975	1,213	2,188
Dental (intra oral/OPG)	537	1,120	1,657
Fluoroscopy/C-Arm	159	168	327
Angio/Cath-Lab	22	52	74
CT Scanner	41	107	148
Mammography	33	88	121
Lithotripter/Bone Densitometer	12	55	67
Linear Accelerator	10	20	30
Simulator	4	14	18
Co-60/Cs-137/Ir-192	2	52	54
Gamma Camera/PET CT	9	3	12
<b>Total</b>	<b>1,804</b>	<b>2,824</b>	<b>4,696</b>

Source: Engineering Services Division, MoH

### Monitoring and Enforcement

These activities include visits, monitoring of complaints, compliance with the quality assurance program requirement and enforcement of licensing activities. All enforcement activities were carried out on all government and private clinics and hospitals who has ionizing radiation facilities to ensure maximum compliance to follow the Atomic Energy Licensing Act (Act 304). A total of 408 premises were inspected, of which 136 premises were government clinics and hospitals. There were 315 (77.2%) premises complied with all licensing requirements while 93 (22.8%) premises did not fully comply with all licensing requirement. A total of 70 warning letters were issued and 23 x-ray machines were given reminders forbidding them to use the equipment.

### Technical Support

Technical support and expertise involving ionizing radiation in medicine were provided to all medical facilities under the MoH. This was with the primary objective of ensuring that all regulatory requirements were complied with. The activities carried out were vetting and evaluation of installation, site visits and inspection. A total of 86 technical specification evaluations and 114 vetting in the area of radiation protection were done in 2007.

Five workshops pertaining to ionizing radiation and non-ionizing radiation were successfully carried out to improve radiation safety and to enhance the quality of medical diagnostic imaging services in government hospitals and in health clinics.

### **Development of Codes and Standards**

The activities carried out to develop Codes and Standards include:

- (a) Carry out "Study On Medical Radiation Exposure in Malaysia" both in the government and the private sector. The data obtained will be used to form the basis of guidance reference levels for the safe usage of radiation in medicine and will also be used as an indicator for good practice. This will be done in conjunction with the United Nation Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) dose survey which will be finalised by the year 2010.
- (b) Plan and develop manual/guidelines/guidance note.
- (c) Carry out studies related to the safety of ionizing radiation and non-ionizing radiation usage.
- (d) Organise a national conference with stakeholders for the purpose of circulating information and obtaining feedback from the public.
- (e) Participate as a member of International Advisory Committee (IAC) for International Electromagnetic Fields (EMF) Project developed by the World Health Organization (WHO).
- (f) Collaboration with SIRIM in developing relevant standards.
- (g) Plan and coordinate for international quality assurance (QA) programme in nuclear medicine, radiotherapy and radiation protection activity.

### **Voluntary Registration Scheme for Establishments Dealing with Medical Devices (MeDVER)**

Registration of establishment and their medical devices was considered to be the most basic level of regulatory control in the market. MeDVER was a voluntary registration scheme for medical devices establishment in Malaysia. It was a web-based system and registration can be made online. By the end of 2007, about 500 companies dealing with medical devices participated in the Voluntary Registration Scheme for Establishments Dealing with Medical Devices (MeDVER) which was launched in early 2006. Of those who registered, 80% were distributors and importers, 10% exporters and 5% manufacturers of medical devices, whilst the remaining 5% were doing other types of business related to medical devices. More than 30,000 medical devices have also been listed in MeDVER. The implementation of MeDVER will continue until the mandatory phase was enforced.

## **Industry Assistance in Medical Device Industries**

The Government recognises the contribution of the medical device industry to the economic growth and actively facilitates local manufacturers to position themselves in the global arena. During the period of the Third Industrial Master Plan (IMP3) between 2006 and 2020, greater emphasis will be given to medical device industry to broaden its global market access and to sustain its competitiveness. The Ministry is working together with the Malaysian Industrial Development Authority (MIDA), Ministry of International Trade and Industry (MITI), Standards Malaysia, medical device industry, higher learning institutions as well as other government agencies in planning the implementation strategies to achieve the set goals of IMP3.

In addition, Medical Devices Bureau has established the requirements for issuance of manufacturing and free-sale certificates to facilitate the export of “made-in Malaysia” medical device products to certain countries. In 2007, more than 20 manufacturing and free-sale certificates were issued to Malaysian manufacturers who exported their products to such countries.

## **International Relations in Medical Device**

In the international arena, the Ministry plays the lead role in the ASEAN Medical Device Product Working Group (MDPWG) to spearhead the harmonisation of medical device regulatory requirements within ASEAN member countries. In addition, the Ministry also leads the Asian Harmonisation Working Party (AHWP), a non-profit organisation which was working towards harmonisation of medical device regulations in Asia. One of the strategies undertaken by the two groups was the development of a common submission dossier template (CSDT) for medical device products approval. The CSDT was aimed at reducing the regulatory burden on manufacturers associated with current conflicting format and content requirements in different ASEAN member countries. In addition, the two groupings were also developing a framework for post-market alert system for defective and unsafe medical devices.

## **Pilot Implementation of CSDT for Pre-Market Application**

In August 2007, the ASEAN MDPWG decided to implement a pilot program to evaluate the feasibility of using CSDT for pre-market application to ASEAN regulatory authorities. The aims of this pilot implementation were:

- (i) building confidence among ASEAN regulatory authorities; and
- (ii) evaluating the usefulness of the content and format of the CSDT.

For Malaysia, a total of 4 multi-national companies and 3 local companies dealing with medical devices participated in this pilot program. Three companies submitted CSDT for Class B devices, whilst 2 respectively submitted CSDT for Classes C and D devices.

The submissions made by multinational companies were more complete than those submitted by the local companies. This was understood as they have more experience in making similar submissions to countries with established regulatory framework.

It was a good learning experience to evaluate CSDT submitted by the companies. As CSDT was not prescriptive and due to the absence of a clear framework for assessing a product using CSDT, one of the biggest problems was the absence of a common understanding of what were required in the submission. The process towards reaching a common understanding consumed a lot of time and effort before the real assessment was made.

## **Surveillance and Monitoring**

Post-market control was required to ensure continued safety and quality of medical devices. Surveillance and monitoring activities were mainly done through Medical Devices Competent Authorities web page that publish and provide safety information such as alert, recall and field safety corrective action on medical device products. The authorities include United State Food and Drug Agency (US FDA), United Kingdom Medicines and Healthcare Products Regulatory Agency (MHRA), Therapeutic Goods Administration (TGA) Australia, Health Sciences Authority (HSA) Singapore and Department of Health Hong Kong.

In 2007, 11 product recalls, 17 alert notices and 4 field safety corrective actions were issued to all healthcare providers in Malaysia. Apart from that, the Bureau had visited 15 medical devices manufacturers and had assessed them against ISO 13485:2003: Medical Devices-Quality Management Systems- Requirement for regulatory purposes.

## **TRADITIONAL AND COMPLEMENTARY MEDICINE**

### **Integrated Hospital**

Cabinet had approved Ministry of Health proposal to form an Integrated Hospital in January 2006. The approval will path the way for establishment of Hospital that integrates both traditional and complementary medicine and modern medicine with prime objective of enhancing health and quality of life. As a pilot project, three (3) hospitals have been chosen as Integrated Hospital namely Kepala Batas Hospital in Pulau Pinang, Putrajaya Hospital in Putrajaya and Sultan Ismail Hospital in Johor. Among services to be offered were acupunctures and Malay traditional massages for post-stroke treatment and chronic pain as well as adjunct treatment with herbs for cancer. Traditional and Complementary Medicine Unit was officiated in conjunction with opening ceremony Kepala Batas Hospital by the Honourable Prime Minister of Malaysia in 26 October 2007. Traditional and Complementary Medicine Unit in Sultan Ismail Hospital has been operating since 16 January 2007 and in Putrajaya Hospital since 3 March 2007. Initially, only acupunctures and Malay traditional massages were introduced in both hospitals. To ensure highest quality and effective services, traditional chinese medicine physicians from People Republic of China were employed on contract basis as practitioners besides providing on the job training to local traditional practitioners.

## **International Traditional And Complementary Medicine Congress 2007**

On 17 July 2007, Malaysia hosted the 6th International Conference on Traditional and Complementary Medicine (INTRACOM) and 3rd International Congress on Traditional Medicine & Materia Medica (ICTMMM) at Putra World Trade Centre. The 3 days event was officiated by the Guest of Honour, Y. B. Datuk Seri Dr. Chua Soi Lek, Minister of Health, Malaysia representing the Honourable Prime Minister of Malaysia. Running concurrently with the event was the exhibition on Traditional & Complementary Medicine Exhibition (TCME). The event which was organised by the Ministry of Health Malaysia was supported by a string of local and international bodies namely, Inter Islamic Network in Tropical Medicine, OIC (INTROM), Ministry of Science, Technology and Innovation, Islamic Development Bank (IDB), OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH), Traditional Medicine & Materia Medica Research Centre (TMRC) I.R. Iran, Shaheed Beheshti Medical Science University, Iran, Islamic Organisation for Medical Sciences (IOMS) Kuwait, Ministry of Education, Malaysia Tourism Board, Malaysian Herbal Corporation and 7 practitioner bodies in traditional & complementary medicine. With theme "Holistic Medicine - A Partnership Approach to Health", for INTRACOM and "Incorporating Traditional and Complementary Medicine into the National Health Care System: Opportunities and Challenges" for ICTMMM, both events focusing on similar theme of harmonising traditional and complementary medicine with modern medicine. INTRACOM and ICTMMM attracted a total of 83 speakers and total of 565 participants from across the world.

## **NATIONAL INSTITUTES OF HEALTH (NIH)**

### **Institute For Medical Research**

In 2007, the Institute conducted 112 research projects, published 78 scientific papers and produced 20 reports. The reports were generally prepared to meet specific requests made by various government departments and agencies. In addition, staff of the Institute presented 198 papers at local and international seminars.

The Allergy and Immunology Research Centre was engaged in the study of Allergic Fungal Sinusitis (AFS), food allergies, KIR genes and on chronic granulomatous disease (CGD) and Rheumatoid Arthritis (RA). The Centre also provided a specialised diagnostic service, which included the tissue typing for all the transplant programmes in all MoH hospitals.

The Haematology Unit of the Cancer Research Centre (CaRC) was actively involved in breast cancer and leukaemia research. Besides that, cultivation of limbal stem cells for clinical application in severe ocular surface disorder was another research currently conducted in the unit. The Stomatology Unit continues to conduct clinico-pathological research on oral cancer and precancer, jaw tumour, odontogenic cysts and other oral diseases. The unit carried out 2 retrospective studies this year i.e. 'Metastatic tumour to the oral cavity' and 'Fibrous dysplasia of the jaws.' The Molecular Pathology Unit of the Cancer Research Centre further increased its research work on cancers, with particular emphasis on nasopharyngeal carcinoma (NPC).

The unit was instrumental in setting up the Malaysian NPC Study Group, a network of hospitals, universities and organizations from across the country to study NPC. The NPC Research Coordinating Centre was set up at the unit to coordinate the work of network. The unit was also involved in a collaborative project on colorectal carcinoma screening as well as mutational analysis of CYP21 gene in patients with congenital adrenal hyperplasia.

The Environmental Health Research Centre (EHRC) major projects under the 9th Malaysia Plan were: (i) development and assessment of proposed Environmental Health Indicators; (ii) microbial risk assessment of drinking water distributed from Sungai Semenyih water treatment plant; (iii) coastal recreational waters: quality and impact on health; (iv) risk assessment on intake of selected pesticide residues from vegetable consumption among adults in Selangor; (v) residues of organochlorines, organophosphorus and synthetic pyrethroids in leafy vegetables from Selayang wholesale market in Selangor; (vi) environmental and reproductive risk factors for breast and cervical cancers; and (vii) congenital anomalies and its linkage to the environment.

The Information Unit of the Herbal Medicine Research Centre (HMRC) continues its participation in the 'Global Information Hub on Integrated Medicine (GlobinMed)'. The GlobinMed website (<http://www.globinmed.com>) was officially launched by the Minister of Health Malaysia, Y.B. Datuk Seri Dr. Chua Soi Lek, on behalf of the Prime Minister of Malaysia, on 17 July 2007 in Kuala Lumpur during the 6th International Traditional / Complementary Medicine Conference (INTRACOM) / 3rd International Congress on Traditional Medicine & Materia Medica (ICTMMM). Research-based surveys have been conducted to collect data on few aspects concerning Traditional and Complementary Medicine (T/CM) in Malaysia. A 'Survey of Information Requirement on T/CM' was conducted and aimed at gathering the views of the general public, traditional practitioners and medical communities on the information pertaining to T/CM. Preliminary work in determining the population of traditional Malay midwives in Peninsular Malaysia was completed and this was in preparation for the embarkation of the full study with the objective of developing a standard on the practice of traditional Malay natal care. The Phytochemistry Unit's work on extraction and fractionation of *L. pumila* (Myrsinaceae) and *Ganoderma* showed promising activities of anticancer and antioxidant properties. The focus area in the Toxicology & Pharmacology Unit was on anti-addiction research particularly on *Mitragyna speciosa* or ketum. Other research projects include toxicity effects of Malaysian medicinal plants particularly *Orthosiphon stamineus* on the male reproductive system and the embryo development.

The Bioassay Unit has been carrying out various biological tests to screen medicinal plants for anti-malarial, anti-fungal, antibacterial and anti-narcotic properties. One medicinal plant such as *Gonothalamus scorthecinii* showed potential for anti-malarial activity. Other medicinal plants studied included *Curcuma xanthorrhiza* Roxb which contained xanthorrhizol has been documented to have anti-metastatic activity in vivo lung metastasis model, which might have the same properties in breast metastasis model as well. Longilactone C19 was isolated from *Eurycoma longifolia* Jack (Sumaroubaceae) by cytotoxic bioassay guided-fractionation technique for anti-cancer purposes.

The Acarology Unit of the Infectious Diseases Research Centre (IDRC) focused its research in the following areas: tick distribution and tick-borne diseases, evaluation of natural herbal extracts for acaricidal properties, and evaluation of various commercial pest control products against dust mites.

The Medical Entomology Unit conducted the world's first evaluation of genetically sterile RIDL *Ae. aegypti* strains under confined semi-field conditions inside a state-of-the-art, fully-contained field house facility. Following successful confined semi-field trials of the RIDL-SIT Technique, the Institute plans to field-test this promising *Aedes* control technology on an island. Other studies on dengue vectors were to determine oviposition preferences of *Aedes aegypti* to drain water and seasoned tap water. The study on zoonotic viral infection in non-human primates with special reference to arboviruses was initiated. Studies on other insects included : distribution of Phlebotomine sand flies (Pyschodidae) in aborigines areas in Selangor, studies of leishmaniasis among Bangladeshi worker and their potential vector and abundance of biting flies collected from selected surra infected animal farm. Other studies included upscaling the production of sterile maggots used for the debridement of necrotic tissue in diabetic patients and clinical trial of these maggots in diabetic patients. To further strengthen the practice of medico-legal entomology, several studies were conducted using carcass of non-human primate.

The main areas of research interest in Parasitology unit at the moment were in malaria, toxoplasmosis and molecular biology of parasites. Research projects that were carried out since 2006-2007 focused on relationship between human and simian malaria, new diagnostic tools for malaria, toxoplasmosis and amebiasis and initial work on recombinant gene technology for malaria and toxoplasmosis. The unit was actively involved in surveillance of imported leishmaniasis among migrant workers and its potential vector, in collaboration with Entomology Unit. The Virology Unit focused on research pertaining to locally important medical viruses, aiming to determine the epidemiology of the viruses and the development of new technology for rapid diagnosis of these viruses.

The Biochemistry Unit of the Specialised Diagnostic Centre (SDC) focused on research projects to set up diagnostic methods to screen and confirm Inborn Error of Metabolism (IEM). To date, more than 20 diagnostic tests have been developed and enabling IMR to offer tests that previously were not available in Malaysia. With this development, samples were no longer sent to overseas laboratories. The purchase of Tandem Mass Spectrometry has allowed MoH to screen newborn as well as high-risk babies for IEM making it possible to determine the prevalence and incidence of these diseases in Malaysia. Screening and confirmatory methods for Galactosemia were also started this year together with 2 confirmatory methods for diagnosis of other IEM.

The Unit of Molecular Diagnostics and Protein has developed further in two main focus areas through research and development of new specialized diagnostics testing. The two focus areas were as a Reference Laboratory in Multiple Myeloma and Paraproteinemia, and a Centre of Excellence for Molecular Diagnostics for Genetic Diseases and Mitochondrial Disorders including IEM. The molecular diagnostics testing, initiated in 2003 has been

expanded further to offer the molecular testing of more than 10 genetic disorders, encompassing the whole 23 coding regions of the mitochondria DNA and six nucleic genes. The year 2007 saw a number of new diagnostic services being developed and offered as new specialized tests such as Free Light Chain Ratios for Light Chain Multiple Myeloma Disease and CSF oligoclonal band phenotyping. These also include mutational analyses of SURF 1 gene (nucleic gene) for Leigh Syndrome, AMT gene for Non-Ketotic Hyperglycinemia and Mutational analysis of mitochondrial coding region for ND2, COX I and COX II including 7 tRNAs.

The Medical Research Resource Centre (MRRC) consists of 8 units, namely Biotechnology, Biomedical Museum, Epidemiology & Biostatistics, Information Technology, Laboratory Animal Resource, Electron Microscopy, Library & Information Resource and Medical Photography & Audio Visual.

The Epidemiology & Biostatistics Unit was involved in seven research projects. The projects were prevalence of recent illness and injury, chronic illness and health seeking behaviour: results from National Health Morbidity Survey (NHMS III) 2006; epidemiological investigation of rheumatoid arthritis: hospital-based case-control study to determine risk factors for rheumatoid arthritis in selected hospitals in Malaysia; case-control study of human otoacariasis in the state of Pahang; a study to determine the prevalence of ecto and endo-parasites in rodents from four habitats; food poisoning outbreak in Sekolah Rendah Kebangsaan Getting 1, Tumpat Kelantan; sore throat among UTM students and treatment-seeking behaviour of breast cancer patients in HKL.

The Biomedical Museum Unit carried out a research on the prevalence of ecto and endo-parasites among the rodents population in Peninsular Malaysia. The project was expected to be completed in 2008. The Biotechnology Unit conducted a research on angiotensin-converting enzyme (ACE) gene polymorphism in Malaysian patients with coronary heart disease. Among the objectives of the study were to identify types of polymorphism gene ACE among healthy population and patients with coronary heart disease in Malaysia, determine relationship between polymorphism and coronary heart disease and to know the genetic marker which will help in the early prevention either for coronary heart disease patients or carriers. The Biotechnology Unit carried out research on the role of Apo-1/Fas promoter gene polymorphism in the susceptibility to systemic lupus erythematosus and the prevalence of Leptospira antibody and DNA in rodents from a selected area in Kedah using PCR and ELISA.

## **DIAGNOSTIC SERVICES**

A total of 5 laboratories (Parasitology, Stomatology, Virology, Bacteriology and Toxicology & Pharmacology) maintained their accreditation in the field of Medical Testing by NATA (National Association of Testing Authorities, Australia), whilst 2 other (Allergy and Haematology) received their accreditation in 2007. A total of 315,642 tests were performed in 2007 as compared with 146,875 tests in 2006.

IMR staff provided advisory and consultative services to the Ministry of Health (MoH) Malaysia, other government departments, as well as international organizations. Most units of the Institute also serve as referral centres to MoH Laboratories throughout the country. During the year, 57 staff members provided consultative services at the national level, while 6 staff members provided such services at the regional and 14 were on an international level.

Training activities carried out by the Institute comprise regular courses offered annually as well as ad hoc training programmes and attachments to various units for industrial training. The regular training courses include the SEAMEO-TROPED postgraduate courses namely, the Diploma in Applied Parasitology and Entomology and The Diploma in Medical Microbiology courses.

The ad hoc programmes provided training opportunities for 101 scientists, medical doctors and allied personnel from other departments and local and foreign institutes. Of these, 57 were undergraduates from local tertiary institutions who received training through attachments at the various units of the Institute. The Institute also conducted 28 training courses during the year.

A total of 161 staff attended 59 conferences, seminars and scientific meetings, whilst 271 attended short courses at national and international level.

There were 11 officers studying their Master degrees while 5 were pursuing their PhDs. A total of 8 dissertations were submitted in 2007.

### **Institute For Public Health**

The Institute for Public Health (IPH) has successfully completed two mega projects which were the National Health Morbidity Survey III (NHMS III) and the National Ear and Hearing Disorders. These projects had reached the final phase which was report writing. The findings obtained from these researches can be utilized to further improve the health care services in Malaysia.

IPH has been awarded with the MS ISO 9001:2000 certification from SIRIM on 20 July 2007. A Quality Management System (QMS) Committee was formed to develop, document, implement and maintain the quality management system and promote its effectiveness through continuous improvement in line with the requirements of international standard. Hence, the management team of IPH has posed its commitments towards QMS through its various activities conducted in year 2007. Notably, year 2007 has marked some difference in the posts held in IPH through the new re-organizational structure and the increase in the new posts. Through this new organizational chart, IPH remains with only six Divisions instead of seven namely:

- Division of Management
- Division of Community Health Development
- Division of Disease Control

- Division of Nutrition Research
- Division of Occupational Health
- Division of Data Management and Information Systems

In the aspect of financial resources, the total budget allocated for IPH in the financial year of 2007 was RM14.6 million. This includes managing budget, Public Health, Research, New Policy, One-off, Development (BP00500), Development (BP 00600) and Development (BP00800) budgets. From that amount, a total of RM13.5 million has been spent. Table 13 shows the core business activities for IPH in 2007.

**TABLE 13**  
**Core Business of IPH in 2007**

Division	No. of Researches	No. of Trainings	No. of Consultation
Community Health Development	3	5	9
Disease Control	3	14	10
Nutrition Research	6	13	22
Occupational Health	-	6	-
Management	-	3	-
Data Management and Information Systems	-	9	1

*Source: Intitute For Public Health*

### Network Of Clinical Research Centres

Since its establishment in 2000, Clinical Research Centre (CRC) has been involved in clinical trials, clinical epidemiology and economic research, and managing complex medical databases. Under the purview of the National Institutes of Health (NIH), the CRC promotes, supports and conducts quality and ethical research to improve patients' outcomes. In 2007, financial resources were channelled towards building infrastructure for other CRCs in the network such as proper office space, state of the art Information and Communications Technology and high speed internet access. Currently, the Network of CRCs includes Kuala Lumpur Hospital, Ipoh Hospital, Sultanah Aminah Hospital Johor Bahru, Penang Hospital, Raja Perempuan Zainab II Hospital Kota Baru, Sarawak General Hospital Kuching, Queen Elizabeth Hospital Kota Kinabalu, Malacca Hospital, Sultanah Bahiyah Hospital Alor Star, Tuanku Ja'afar Hospital Seremban, Tengku Ampuan Afzan Hospital Kuantan, Sultanah Nur Zahirah Hospital Kuala Terengganu as well as Tengku Ampuan Rahimah Hospital Klang, Selayang Hospital, Ampang Hospital and Serdang Hospital in Selangor.

With a network of 17 centres around the country, the CRC acts as a One-Stop-Centre by providing a single point of contact to access all MoH hospitals and clinics for clinical trial in Malaysia. As a "One-Stop-Centre", the CRC will provide services that include a single point of contact for sponsors to facilitate the recruitment of qualified clinical investigators and trial sites. The One-Stop-Centre offers services that include single instead of multiple research agreements, Good Clinical Practice Certification (GCP) training, GCP certified investigators, qualified nurses as research coordinators and insurance coverage if required.

The CRC has completed over 86 clinical research projects and operates more than 19 disease registers, in a wide range of therapeutic and disease areas, where the clients were from both academic and research institutions and industry. A total of 60 papers in international journals were published inclusive of 16 papers in 2007.

The National Conference on Clinical Research (NCCR 2007) was held in October and was organized by the CRC in collaboration with several partners to promote Malaysia as the regional clinical research hub. The event also incorporated a Training Course on Ethics of Clinical Research and workshops on Clinical Epidemiology and Pharmaco-economics. Aimed at addressing the need for skilled professionals, NCCR 2007 provided an ideal learning and networking opportunity for investigators, sponsors, regulatory agencies and other service providers.

Up to 2007, CRC has continued to conduct various training workshops such as Good Clinical Practice Workshop, Research Methodology and Biostatistics and Clinical Economic Workshops. The Malaysian Biotechnology Corporation (MBC) sponsored one GCP Workshop in collaboration with CRC on human capacity development to grow a pool of highly trained clinical research professionals. The participants were mainly from the Ministry of Health with a few from private hospitals and pharmaceutical agencies. The majority of participants were clinicians, nurses, medical assistants, clinical research associates and researchers.

In fulfilment of its role to promote, support and conduct clinical research, the CRC has seen a gradual increase in the number of Research Consultative Clinics (RCC) over the past four years. The requests for consultations were mainly from clinicians and postgraduate students on attachment in Kuala Lumpur Hospital. In 2007, 86 clients requested consultancy services mostly in statistical analysis in study design, sample size planning, proposal/ protocol development, data management and statistical analysis. Depending on client needs, the CRC team of clinical epidemiologist, clinical trial physician, clinical economist and biostatistician were made available for the discussion. Similar RCC services were being provided by other CRCs in the network.

The National Medical Research Registry (NMRR) was incorporated into the National Institutes of Health (NIH) guidelines on the conduct of research in the Ministry of Health (MoH) institutions and facilities. The rollout to users with 18 briefings and hands on training sessions conducted throughout 2007 on the use of information technology to facilitate the research review and approval process. A circular issued by the Director-General of Health made the NMRR an official procedure that complies with recent changes in international practice on research ethics and regulation.

More applications for approval research are expected to be submitted online via the NMRR following the activation of the link to the MoH Ethical Review Committee (MREC) at the end of 2007. The NMRR will serve as both a trial registry and an investigator registry and will enable the MoH to streamline research approval procedures, reduce the research review time as well as to enable investigators to track the status of their research online. It also enabled MoH management to track the progress of the research approved and/or provided support such as funding.

### **Institute For Health Management (IHM)**

Institute for Health Management was one of the training institutes which provide in-house accommodation. Standing firmly behind its vision; "together we strive for excellence", IHM continuously seeks new opportunities to ensure the institute sustainable performance. The achievements were largely the result of its firm philosophy which inspires excellence, encourage individual initiative and teamwork, harnesses strategic synergy and inculcates high integrity and professionalism.

With the increase in the number of professional capacity, IHM has managed to increase collaborations efforts with government agencies, private and international training agencies. The collaboration activities include conducting trainings, researches, meetings, seminars, forums and launching ceremonies. In 2007, there was an increase in the demand for collaborative activities as compared to the previous year. However, due to the limited capacity of training facilities and increasing number of training conducted by IHM, only 55 collaborative activities carried out as compared to 95 activities in 2006.

Research undertaken by IHM was instrumental to support and determine the nature of courses necessary to enhance further Health management in all level of service whether in the hospital, health clinic or the head quarters. In 2007, 35 research studies were undertaken as compared to only 21 studies in 2006. Out of the researches conducted, 5 research studies were exhibited through poster and oral presentation and another 5 research studies were published in the Journal of Health Management, IHM.

Training activities had shown remarkable improvement and achievement during the 7 years duration of IHM establishment. Since 2006, IHM had 17 trained educators who had attended a teaching methodology course at the Institute of Aminuddin Baki, Ministry of Education, Genting Highlands. The increase in the number of educators and better upgraded of facilities has directly resulted in the increase of courses conducted by IHM. In the year 2007, 71 training activities were conducted as compared to 50 in 2006 (Table 15). Table 16 shows training conducted by each department including those planned at the beginning of the year and courses conducted upon request.

**TABLE 14**  
**Research Conducted by IHM, 2005 – 2007**

Research	Year		
	2005	2006	2007
Number of Research Studies planned	6	21	35
• Research > RM 100,000	2	19	24
• Research < RM 100,000	4	2	11
Number of Research done	13	21	27
Number of Research Findings exhibited ( Oral / Poster )	11	10	5
Number of Research Findings published in Journal	1	11	5

Source: Institute for Health Management.

**TABLE 15**  
**Training Activities Conducted by IHM and Achievement, 2006-2007**

Training	Planned		Conducted		Achievement (%)	
	2006	2007	2006	2007	2006	2007
Number of Training	53	77	50*	71	94.3	93.4

Note: \*total does not include additional courses conducted upon request

Source: Institute for Health Management.

**TABLE 16**  
**Number of Courses Conducted by Department, 2005-2007**

Department	2005	2006	2007
Health Management Development	8	12	8
Quality in Health	12	16	26
Technology and Knowledge Management	16	8	14
Health Policy and Analysis	6	6	6
Economics and Health Initiatives	6	12	17
<b>Total</b>	<b>48*</b>	<b>54*</b>	<b>71*</b>

Note: \*total includes additional courses conducted upon request.

Source: Institute for Health Management.

Institute for Health Management had published various publications which include modules, peer-review journals and books related to Health Management and Training Needs. In 2007, a total of 8 books and journals were published (Table 17).

**TABLE 17**  
**Publications by IHM, 2004 - 2007**

Publications	Year			
	2004	2005	2006	2007
Number of Publications by IHM	3	3	8	8

Source: Institute for Health Management

As for consultancy, IHM conducted, in average, 10 to 15 consultant services in a year. Apart from consultant services rendered within the Ministry of Health, IHM also renders consultancy services to outside agencies such as local universities and the private sector. At present, consultancy was geared towards quality, health economy and financing, and information technology such as audit and documentation related to MS ISO 9001: 2000, Action research, Quality Control Circle and patient safety (Table 18).

**TABLE 18**  
**Consultancy Services Provided by IHM, 2005 – 2007**

Consultancy	2005	2006	2007
Ministry of Health	11	12	14
Outside Agencies	1	1	1
University	0	2	1
<b>Total</b>	<b>12</b>	<b>15</b>	<b>16</b>

Source: Institute for Health Management.

In line with the National Campaign of “*Budi Bahasa Budaya Kita*”, the soft skill elements have been incorporated in the training of internalization of noble values especially at the counter service. In 2007, twenty five (25) sessions of training for the trainers were conducted whereby approximately 540 health care providers were trained.

For the first time, IHM has successfully organized and conducted an international training through the MTCP (Malaysian Technical Cooperation Programme) in collaboration with EPU (Economy Planning Unit, Prime Minister Department) and the Division of Disease Control. Fifteen(15) participants from multiple countries successfully completed the one-month course which started from 4 to 29 June 2007.

## **Institute For Health System Research (IHSR)**

In 2007, there were more than 40 research projects conducted by the IHSR, either as the Principal Investigator, collaborator, or facilitator. Of these, 3 were among those designated as high priority to be carried out in the country during the Ninth Malaysia Plan (9MP) period (2006-2010), namely Improving Patient Safety (involving 13 sub-projects), the evaluation of Private Sector involvement in the Delivery of Primary healthcare Services (involving 3 sub-projects), and a Study on the Effectiveness on Clinical Practice Guidelines (CPG) in Managing Selected Chronic Diseases (involving 3 sub-projects).

Apart from these, projects spearheaded by the IHSR were the Patients' Unvoiced Needs Study which include a Systematic Review, the application of Data Mining Technique in Managing Long Waiting Time at Health Clinic and in Monitoring Cardiac Patient Status at Cardiology Department of a General Hospital, the WHO TRI-Country Study involving Malaysia, Sri Lanka and Hong Kong (comparison of the 3 countries' histories to the present day) documenting the equitable delivery of healthcare and understanding which policies related to the health services delivery system that had resulted in the equitable system seen today, Macro and Micro-costing of Government Hospitals and clinics, the Policy Analysis for the Research and Technical Support Programme of the Ministry of Health in the Mid-Term Review of the 9MP, a Pilot Study on Health Research Systems Analysis as well as a National Health Research Systems Analysis in the WHO Western Pacific Region.

The IHSR was a collaborator to the Family Health Division of Public Health Programme, MoH in the Development of Tele-primary Care (TPC) Data Set in Malaysia through Use of the Johns Hopkins ACG (Adjusted Clinical Groups), to the University of Malaya in the Prevalence and risk factors of asthma, chronic obstructive disease (COPD) and obstructive Sleep Apnea (OSA) in Malaysia Project and to the Institute for Public Health in the National Health & Morbidity Survey III.

More than 28 research projects were facilitated by the IHSR as part of the Research Methodology Workshops conducted. Research findings were disseminated through presentations, publications and scientific reports. There were 43 presentations carried out, of which 6 were at international level. In addition, 102 lectures were delivered in courses conducted by the IHSR as well as other agencies within and outside the MoH. In 2007, 7 publications and more than 30 technical reports, policy briefs, bulletins and manuals were produced by the IHSR. Besides that, two issues of QA Bulletins were produced in June and September 2007.

In 2007, the IHSR conducted 29 courses including Health Systems Research Methodology Workshops, Health Outcomes Workshops and the training of various statistical analyses techniques. These courses were attended by health personnel from all over Malaysia.

All professional members of IHSR were actively engaged in providing consultancies and technical assistance, in areas related to health systems research, quality assurance/improvement, research methodology, statistical analysis, sampling designs, health outcome research, health economics and health policy, within MoH and to external agencies. More than 60 consultations were provided by the IHSR in 2007. Among the agencies that had benefited from consultancies by the IHSR were the World Health Organisation (WHO), other Institutes within the National Institutes of Health (NIH), agencies of the MoH and several local Universities.

The IHSR continued its function as the National Quality Assurance Secretariat for the MoH. In 2007, the IHSR conducted 4 Technical Committee, 1 Steering Committee, and 1 State QA Liaison Officers' meeting to discuss different aspects of the QA activities within the MoH.

Throughout 2007, representatives from the IHSR were invited as judges to evaluate the contestants of the QA Convention in Terengganu, Johor and Kelantan.

A review of the National QA Indicators' performance had been carried out. Out of 141 national QA Indicators, the following 6 were identified to have poor performance in the majority of health facilities. They were percentage of acute myocardial infraction (AMI) patients receiving thrombolytic therapy within 1 hour of presentation at Emergency Department (patient care indicator); incidence of physical food contamination (patient care indicator); incidence rate of severe neonatal jaundice (public health indicator); dengue outbreak control index (DOCI) (public health indicator); incidence rate of needle stick injury among health care workers within the MoH (public health indicator); and proportion of prescription wrongly filled and detected before dispensing to the total number of prescription counter checked at the Outpatient Pharmacy (pharmaceutical care indicator). QA projects with team members from the IHSR, Medical, Public Health and Pharmacy Division and selected hospitals and health centres were organised to further analyse the reasons for shortfalls and to institute the appropriate remedial action. In 2007, the projects were in the data collection stage.

On 1 - 2 November 2007, the IHSR in collaboration with Kedah State Health Department organised the Fourth National Quality Assurance Convention in Langkawi. The theme for this Convention was "Caring". A total of 16 oral and 18 poster presentations were contested. More than 500 participants attended the Convention.

The IHSR also provided attachment programmes for a number of postgraduates and undergraduate students from local universities including 2 final year students from Universiti Utara Malaysia and 3 post-graduate Master of Public Health students from the Faculty of Dentistry, University of Malaya. These students were given an exposure of health systems research methodology, quality assurance and improvement, conduct of national community surveys to a diverse scope of public health issues as well as health informatics. The IHSR hosted international fellow visitors from Nepal under the 'Malaysia's Observational Study' programme sponsored by the WHO; and 26 participants from Lao PDR, China, Vietnam and Mongolia attended a workshop in quality improvement in Malaysia.

## **Institute For Health Behavioral Research (IHBR)**

In 2007, IHBR conducted several researches including Factors Contributing to Contaminants of Food in School Canteens in Kelantan, a collaborative study between IHBR and Kelantan State Health Department; a study on “Determinants of Wellness among older Malaysian” which was carried out collaboratively with the Health Education Division, Geriatrics Unit of the Family Health Development Division, Ministry of Health Malaysia and the Institute of Gerontology, UPM; a study on Evaluating the Effectiveness of Educational Materials among Diabetes Patient in Diabetes Clinics and a collaborative project with the National University of Malaysia (UKM) in the study of Mental Health Screening among Professional & Academic Staff in Ministry of Health and National University of Malaysia (UKM).

IHBR also assisted other institutes and Divisions in conducting research such as the Third National Health and Morbidity Survey conducted by Institute for Public Health. A study on Development of an Effective Intervention Package to Improve Exclusive Breastfeeding Practice in Negeri Sembilan and the Effectiveness of Intervention in Rehabilitation Programs for Malnourished Children in Kelantan and Sarawak were conducted in collaboration with the Family Health Development Division. IHBR also collaborated with Food Quality Division in conducting a study on Knowledge, Attitude and Practice of Malaysian Consumers towards Labelling and Logo Choice in Healthy Eating. It also collaborated with Kuala Lumpur Hospital and Sunway College University to initiate the study on Social, Economic and Emotional Impacts and Level of Stigma of Both Treated and Untreated Childhood Psychiatric Disorders on Patient and Their Family. IHBR was also assisting UKM to prepare a research proposal on Assessment of Need of Health Care Providers in Mental Health Program.

Addressing the Health Research Priority for the 9th Malaysian Plan, IHBR collaborated with Cyberjaya University in conducting a study on the Development of New Therapies and Innovative Strategies for the Management of Ischaemic Heart Diseases (IHD).

IHBR also continued to supervise research projects by trainees of Post Graduate Program in Health Education. A total of eight Information Officers (Health Education) trainee had successfully completed their research studies.

IHBR also conducts Post Graduate Program in Health Education for the newly appointed Information Officers (Health Education) every year. This year, the Post Graduate Program in Health Education Batch 16/2006 students successfully completed their course on December 2007 and obtained Masters in Health Sciences (Health Education) Degree from the National University of Malaysia (UKM). Batch 17/2007 has started their first semester in July 2007. The first semester involved education based on theories which would be applied for their field work during the third semester. IHBR also conducted four short courses for health staff. The courses conducted for the year were Patient Education, Introduction to SPSS, Risk Communication And Statistical Analysis using SPSS.

Expertise in several specific fields such as Risk Communication, Health Communication, Communication Skills, Public Speaking and Health Promotion has made IHBR a referral institute by several agencies. The consultancy service was not just limited to departments in the MoH but also well received by outside organizations including universities.

## **WAY FORWARD**

Planning and Development Division will plan its activities for the preparation of the 10th Malaysia Plan (10MP), pursue with the National Health Policy and MNHA. Projects implementation will be strengthened. Country situational analysis report will be taking place. As for Health Information strengthening, the Phase 2 of HIMS will be implemented, whereby other programmes such as financial and human resource will be included. This will also include the upgrading of HIMS-e portal.

Engineering Service will continue in providing technical services and monitoring in all its activities whereas the Traditional and Complementary Medicine will strengthen its role in coordinating, planning and monitoring the various activities related to practitioners, practice, product and research in traditional and complementary medicine in the MoH.

The NIH Institutes will further strengthen its research capabilities and capacities towards becoming Centres of Excellence. The NIH plans to continue providing support to the MoH through the conduct of research, training and consultancies. It aspires to continue being relevant to the nation through capacity and capability building especially in areas related to development of novel technologies in the diagnostics and prevention of diseases, providing and translating research evidence in health policy decision making. The NIH will further strengthen its credibility through international collaboration and partnerships.

The national mission to make Malaysia the clinical trial hub in Asia will be given more emphasis in the years ahead as strategies that include training skilled professionals for the industry. The One-Stop-Centre, collaboration with public agencies, private sector partners as well as with clinical research centres in universities and private hospitals will strengthen Malaysia's research capability. Effort will be made towards making Malaysia as a clinical research hub in Asia and to ensure Malaysia earn its fair share of the revenue from contract research outsourcing to Asia.

## **CONCLUSION**

The Research & Technical Programme will continue to support all programmes and activities within the Ministry of Health (MoH) and also other sectors towards achieving the best in all health related endeavours and play an important role in ensuring that MoH activities were geared towards achieving national objectives.

Research activities will continue in supporting the other programmes and providing evidence for policy making and improving public health services and health delivery systems.

# ORAL HEALTH PROGRAMME



## **ORAL HEALTH PROGRAMME**

### **INTRODUCTION**

Oral healthcare in Malaysia is available through public and private sector providers. The Ministry of Health (MoH) is the key player in public sector service delivery for oral healthcare, and the population is able to access care through a wide network of dental facilities throughout the country. Leading the direction for oral healthcare of the nation is the Oral Health Division of the Ministry of Health in Putrajaya.

From the year 2006, Oral Health has been considered a programme under the MoH. Previously, Oral Health was under the Public Health Programme. However, dentistry being a technical field in which the scope of service delivery comprises various approaches such as epidemiology, prevention, promotion, screening and early detection of diseases, as well as treatment and rehabilitation provided at primary care and specialist care levels, it became obvious that the focus was not on dental public health alone. A solid organisational structure was necessary for detailed strategic planning to affect a delivery system that is efficient and provides a positive impact on the population. This led to the change in status. For 2007, further streamlining of activities was undertaken.

The Oral Health Division undertakes many roles, which include formulation and development of policies related to the oral health of the population; management of oral health services including planning, organising, monitoring and evaluation of oral healthcare; promotion of oral health to ensure continual improvement of the oral health of the population; and enactment and enforcement of laws and regulations pertaining to the practice of dentistry.

Strategies and activities to improve the oral health status of the population are planned nationally at the Oral Health Division of the MoH. Implementation of activities and the collection of data are responsibilities of the Oral Health Unit at state level. A direct line of communication exists between the Principal Director of Oral Health at the national level and the Deputy Directors of Health (Dental) in the states, with continual interaction and feedback to ensure the smooth implementation of planned activities.

Activities planned are in line with the strategies laid out which includes increased oral health awareness of the community through oral health promotion and education; fluoridating public water supplies at an optimum level of 0.4 – 0.6 ppm; providing clinical preventive oral healthcare services to all school children in need; improving inter-agency and inter-sectoral collaboration and co-operation; providing quality oral health services, which were easily accessed, suitably utilised and technologically appropriate; providing maximum coverage to identified priority (target) groups; rendering the maximum number of school children orally-fit; providing specialist oral healthcare to those in need of these services; and collecting and analysing data, as well as undertaking research aimed at improving the quality of the oral healthcare services provided.

As lead agency, the Oral Health Division is instrumental in ensuring collaboration between public and private sector agencies, from both the dental and non-dental arenas, in order to provide the best oral healthcare for its people. In addition, the secretariat of the Malaysian Dental Council which is responsible for regulating the practice of dentistry in the country, is also located on the same premises as the Oral Health Division.

Various Key Performance Indicators (KPI) for oral health have been identified and were monitored in 2007 (Table 1).

**TABLE 1**  
**Key Performance Indicators (KPI)**

No.	KPI	Performance Target	Monitoring Indicators
1	To provide access to oral healthcare	1. 25% of the population receive oral healthcare from the Ministry of Health	1. Percentage of population utilising MoH oral healthcare facilities 2. Number of new patients seen 3. Total number of attendances
2.	To provide comprehensive oral healthcare for primary and secondary school children	2. 90% of school children treated have received comprehensive care	4. Percentage of primary school children rendered orally-fit 5. Percentage of secondary school children rendered orally-fit
		3. 90% of primary schools visited and school children treated	6. Coverage of primary schools 7. Percentage of primary school children treated
		4. 70% of secondary schools visited and 70% school children treated	8. Coverage of secondary schools 9. Percentage of secondary school children treated

3.	To improve the oral health status of school children	5. 30% of 6-year-old school children have caries-free dentition	10. Percentage of 6-year-old school children with caries-free dentition
		6. 60% of 12-year-old school children have caries-free permanent dentition	11. Percentage of 12-year-old school children with caries-free permanent dentition
		7. 50% of 16-year-old schoolchildren have caries-free permanent dentition	12. Percentage of 16-year-old school children with caries-free permanent dentition
4.	To increase the coverage of population receiving fluoridated water supply	8. 70% of the population receive fluoridated water supply	13. Percentage of population receiving fluoridated public water supply

Source : Oral Health Division, MoH

## ACTIVITIES AND ACHIEVEMENTS

### Recognition of Dental Specialist Qualifications

The dental specialist qualifications granted approval for recognition in 2007 by *Jawatan Kuasa Khas Perubatan* includes Membership of the Faculties of Dental Surgery of the Royal College of Surgeons (MFDSRCS) in conjunction with a Masters Degree from the United Kingdom; Membership of the Joint Dental Faculties of the Royal Colleges of Surgeon (MJDFRCS) in conjunction with a Masters Degree from the United Kingdom; and Fellowship of the Royal Australasian College of Dental Surgeons (FRACDS) and a Master/Doctor in Clinical Dentistry Degree from Australia or New Zealand.

### Log Book for Dental Officers with Dental Public Health Qualifications

In 2007, pre-gazettement log books for Dental Public Health specialists were ready and approved for use.

## Post-graduate Training

Thirty one (31) Federal Scholarships for postgraduate training were awarded for various disciplines in 2007, which included oral surgery, orthodontics, periodontics, paediatric dentistry, oral pathology and oral medicine (OP/OM), restorative dentistry, and dental public health. Two (2) scholarships were awarded for MBBS training. In addition there were 2 scholarships awarded for the newly identified dental specialty for the Ministry of Health i.e. Special Care Dentistry. Approval for incorporation of this new specialty had been granted by the Director-General of Health. Scholarships were also awarded for areas of special interest in oral surgery and dental public health.

## Post-basic Training for Dental Auxiliaries

In 2007, a total of 25 Dental Technologists were given post-basic training in Oral Surgery.

## In-service Training

Under the Ninth Malaysia Plan allocations, dental officers and auxiliaries were opportuned to attend training programmes locally or abroad. The Oral Health Division prepared, coordinated and facilitated a total of 19 training modules for local in-service training in 2006. These modules were compiled and improved in preparation for echo-training at regional level in 2007 (Table 2).

**TABLE 2**  
**In-service Training Performance, 2007**

<b>Performance</b> <b>In-Service Training</b>	<b>Number of Courses</b>	<b>Number of Dental Officers and Dental Auxilliaries Involved</b>	<b>Expenses ( RM )</b>	<b>Percentage</b>
<b>Local</b>	152	4,756	1,067,638.10	99.78
<b>Overseas</b>	25	30	688,870	97.20

Source : Oral Health Division, MoH

## Continuing Professional Development (CPD)

CPD log book use was being monitored while at the same time, the use of online CPD was encouraged.

## **Penilaian Tahap Kecekapan ( PTK )**

*Lembaga Penilaian Kompetensi Perkhidmatan Awam* chaired by the Director General of the Public Service on 5 October 2007 approved the integration of PTK with CPD (*Kaedah PTK-CPD*) proposed for the non-common user personnel of the MoH. To begin with, this will involve dental officers together with medical officers and pharmacists. A set of guidelines *Garis Panduan Pelaksanaan Penilaian Tahap Kecekapan (PTK) melalui Penggabungan dengan Kaedah Continuing Professional Development (CPD)* have been issued for smooth implementation of the PTK-CPD methodology.

## **National-level Health Quiz for Primary Schools**

The Ministry of Health continues to collaborate with the Ministry of Education in the National Committee for the preparation of questions for the national level health quiz for primary schools. In 2007, five (5) workshop sessions were conducted to build, select, refine and revise questions for the different levels of the competition. The final round of the National Quiz Competition was held in Ipoh, Perak from 4 to 7 November 2007, and the winners came from the state of Selangor.

## **Content Development**

A variety of health educational materials were produced in 2007. Several pamphlets were designed and printed : three on orthodontic treatment, one on endodontic treatment, while other pamphlets covered halitosis and mouth self-examination. Six pamphlets were reviewed and reprinted :

- *Kesihatan Periodontium untuk Keceriaan Sepanjang Hayat*
- *Penjagaan Kesihatan Pergigian Ibu Mengandung*
- *Kekalkan Kesihatan dan Senyuman Anda - Jauhi Tabiat Merokok*
- *Bilakah Anak Anda Perlu memberus Gigi?*
- *Masalah Karies Botol Susu*
- *Pelindung Mulut*

## **Oral Health Seminars**

A seminar on "Dentists' Role in Tobacco Cessation" was held on 2 to 4 April 2007 at the Gem Beach Resort, Kuala Terengganu for 44 participants from Kelantan, Terengganu and Pahang comprising 41 dental officers, 2 dental nurses and 1 periodontist. Two (2) other Oral Health Promotion seminars were held in Pahang (23 to 25 May 2007) and Penang (29 to 31 October 2007).

## Exhibitions

The Oral Health Division organised and participated in several exhibitions in 2007 as follows:

- *'Program Jom Tak Nak Merokok Peringkat Kebangsaan' and 'Sambutan Hari Tanpa Tembakau Sedunia 2007'* were held on 16 to 17 July 2007 at Tasik Titiwangsa, Kuala Lumpur. An exhibition was put up and screening carried out in a mobile dental clinic with conduct of interactive sessions on mouth self-examination (MSE).
- *'Expo Pameran Sempena 50 Tahun Kemerdekaan'* was held at the Putra World Trade Centre (PWTC) from 30 August 2007.
- *'Hari Kesedaran Kesihatan Pergigian'* was held on 22 June 2007 at the Human Resource Division, MoH for the benefit of its staff members.

## Monitoring of Activities

Dental officers and dental nurses carried out a total of 444,555 oral health promotion activities at state level in 2007 (Table 3). This represented an increase of 3.5% as compared to 2006. Generally there was an increase in all categories of activities except for in-service training, puppet shows and TV/radio programmes (mass media).

**TABLE 3**  
**Oral Health Promotion Activities, 2005 - 2007**

Type of Activity	2005	2006	2007
Toothbrushing drill	193,774	188,783	194,336
Dental health talk	191,884	187,826	193,217
In - service training	718	683	344
Exhibitions/ campaigns	2,137	2,389	2,323
Role play	35,543	35,917	41,240
Puppet shows	2,478	2,658	1,954
Community service	1,625	598	884
TV/ radio programmes (Mass media)	746	497	148
Others	5,251	10,129	10,109
<b>Total</b>	<b>434,156</b>	<b>429,480</b>	<b>444,555</b>

Source: Health Informatics Centre, MoH

## Oral Health Programme for Trainee Teachers

Twenty six (26) out of the existing twenty seven (27) teacher training institutes were covered in 2007. The activities carried out under this programme include oral health talks and oral health examination for the trainee teachers. In addition, demonstrations on the conduct of tooth brushing drills were done. The trainee teachers were also given group work to come up

with teaching plans that incorporate oral health messages. The number of trainee teachers participated in these activities increased from 3,418 in 2006 to 4,526 in 2007.

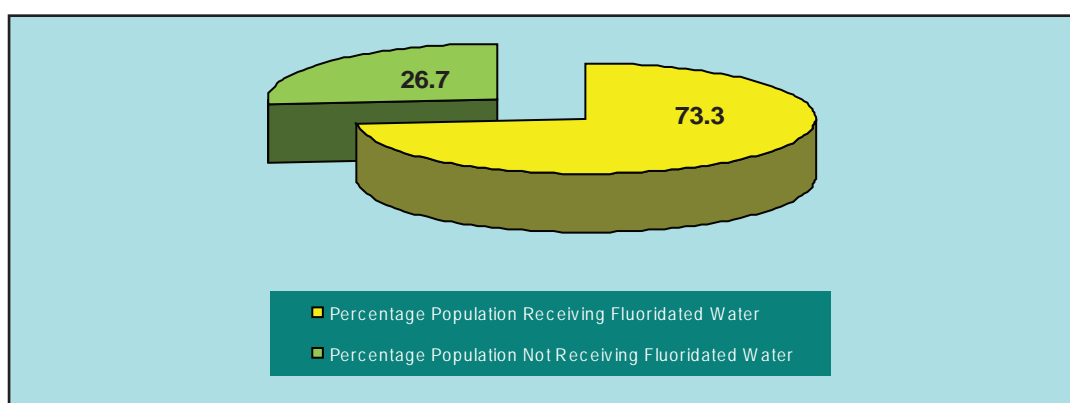
### Oral Health Seminars for Pre-school Teachers

Seminars for pre-school teachers are organised every year at state and district levels to increase oral health awareness and to improve collaboration in the oral health programme for pre-school children. In 2007, a total of 69 seminars were held for 2,577 pre-school teachers. Apart from the usual activities like talks, demonstrations on conducting tooth brushing drills, exhibitions and workgroup discussions, some states also organised other activities like visits to dental clinics, oral screening for teachers, storytelling competitions, tooth brushing song contest and best *tadika* award.

### FLUORIDATION OF PUBLIC WATER SUPPLIES

Public water supplies in Malaysia were fluoridated at 0.4 – 0.6 ppm as a population-based approach for the prevention and control of dental caries. This has been carried out since obtaining cabinet approval in 1972. In 2007, fluoridated water was received by 73.3% of the Malaysian population, almost the same as in year 2006 which was 73.9% (Figure 1).

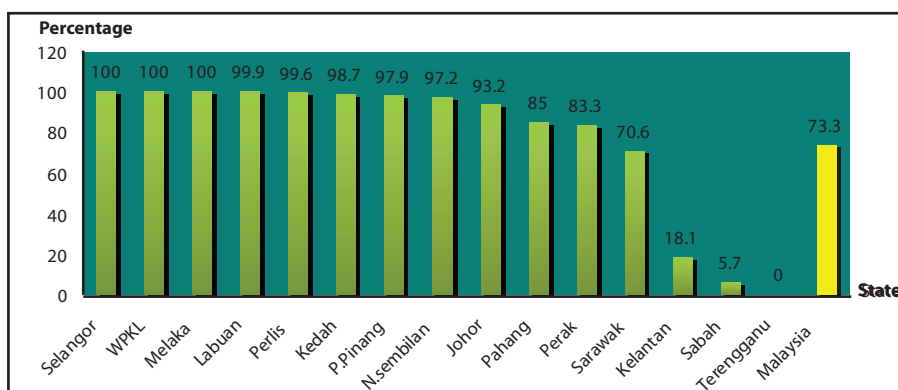
**FIGURE 1**  
**Population Receiving Fluoridated Water, 2007**



Source: Oral Health Division, MoH

In most states, more than 70% of its population received fluoridated water except Sabah, Kelantan and Terengganu. In Kelantan, less than 20% of the population received fluoridated water while in Sabah, it was less than 6%. In Terengganu, the programme was discontinued in 1999 and has remained so (Figure 2).

**FIGURE 2**  
**Population Receiving Fluoridated Water by State, 2007**



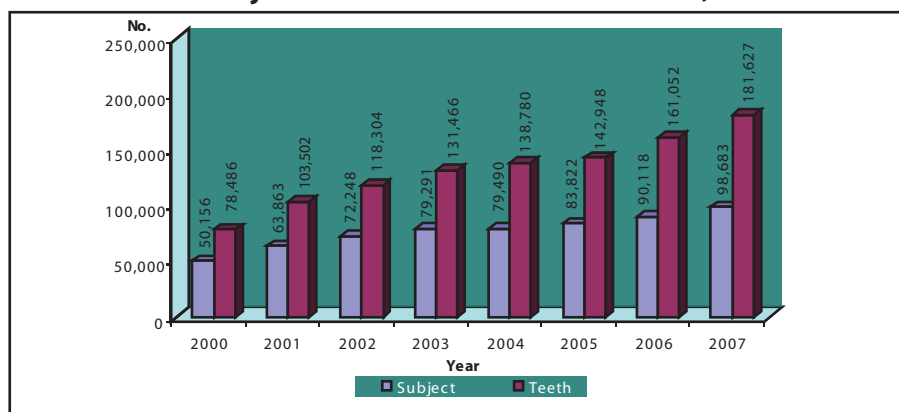
Source: Oral Health Division, MoH

## CLINICAL PREVENTION / FISSURE SEALANT PROGRAMME

Pit-and-fissure sealants can be used effectively as part of a comprehensive approach to caries prevention on an individual basis or as a public health measure for at-risk population. A sealant is a professionally material applied to occlude the pits and fissures on occlusal, buccal and lingual surfaces of posterior teeth to prevent caries initiation and to arrest caries progression by providing a physical barrier that inhibits microorganisms and food particles from collecting in pits and fissures. The School-based Fissure Sealant Program was introduced in 1999 and reviewed in 2002.

There can be seen to be an increasing trend of subjects and teeth provided with fissure sealants from the year it was first implemented. In 2007, the number of subjects who benefited from this programme was more than two thirds from 2000, while the number of teeth in which fissure sealants were placed was more than double in 2007 as compared to year 2000 (Figure 3).

**FIGURE 3**  
**Number of Subjects / Teeth Given Fissure Sealants, 2000 - 2007**



Source: Oral Health Division, MoH

## PRIMARY PREVENTION AND EARLY DETECTION OF ORAL PRE-CANCER AND CANCER PROGRAMME

Oral cancer was the 8th most common form of cancer in the world and it accounts for 250,000 deaths yearly with approximately 500,000 cases being diagnosed annually. The 5-year survival rate over the last three decades was found to be less than 50%, which was lower than the survival rates of colorectal, cervical and breast cancers. The poor overall survival rate is due to late detection as diagnosis is often at an advanced stage, with distant metastases, and the poor response to chemotherapy.

Prevalence for oral cancer is low in Malaysia, at 0.04%. However, there are a number of unique characteristics pertaining to oral pre-cancer and cancer in the country. It predominantly occurs among certain identified communities : 60% of oral lesions are found among communities of Indians who comprise about 8% of the population. Higher prevalence of associated 'precursor' lesions are also found among Indians and the Indigenous groups. Aside from ethnicity being a factor, these communities also practice risk habits found to be associated with oral lesions: namely quid chewing, tobacco use and alcohol consumption. A high-risk strategy aimed at members of these captive communities, with additional opportunistic screening of patients in dental clinics, is the approach used to reduce the incidence and prevalence of oral pre-cancer and cancer in the country.

In 2007, the Oral Cancer and Pre-cancer Screening and Prevention Programme for the high risk population was conducted in 164 villages or estates including a total of 37 villages or estates which had been visited within the past five years. There were 3,717 individuals who were screened for oral cancer and pre-cancer lesions. In addition, 104 exhibitions to promote oral health were held, and 219 oral health talks focusing on oral cancer and pre-cancer were given to 2,819 participants (Table 4).

**TABLE 4**  
**Oral Cancer and Pre-cancer Screening and Prevention Programme, 2007**

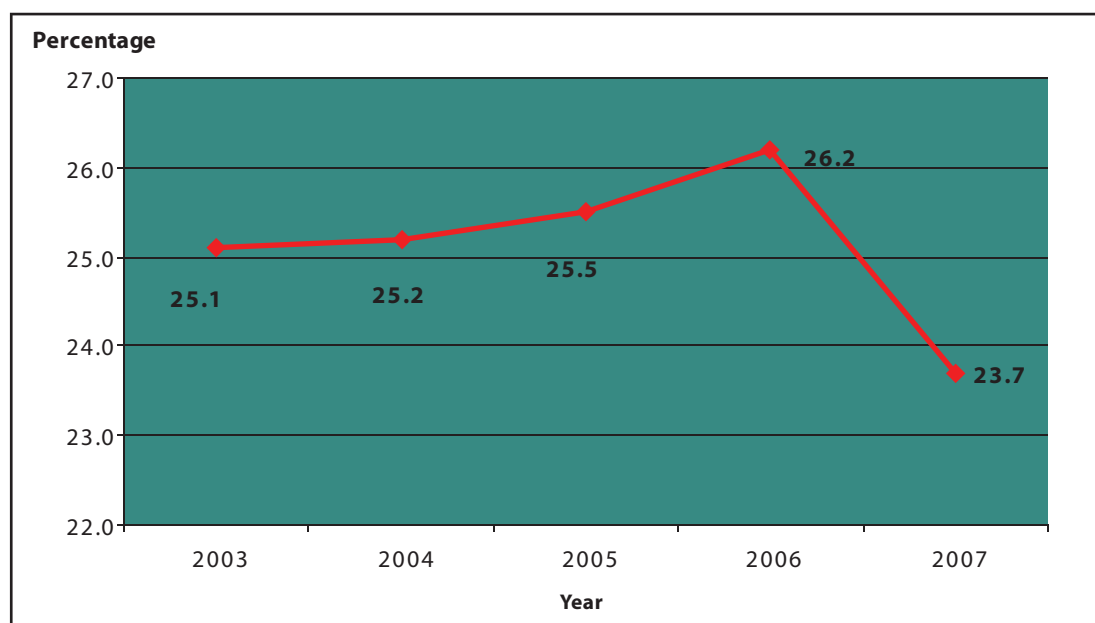
No. of Estate/ Villages Visited		No. of Patients Screened	No. of Health Promotion Activities Held	Dental Health Talks	
New	Repeat			No. of Talks Given	No. of Participants
127	37	3,717	104	219	2,819

Source: Oral Health Division, MoH

## PRIMARY ORAL HEALTH CARE

The proportion of the Malaysian population who attended primary oral healthcare facilities in 2007 was 23.7%. This was a decrease of 2.5% as compared to 26.2% in 2006 (Figure 4).

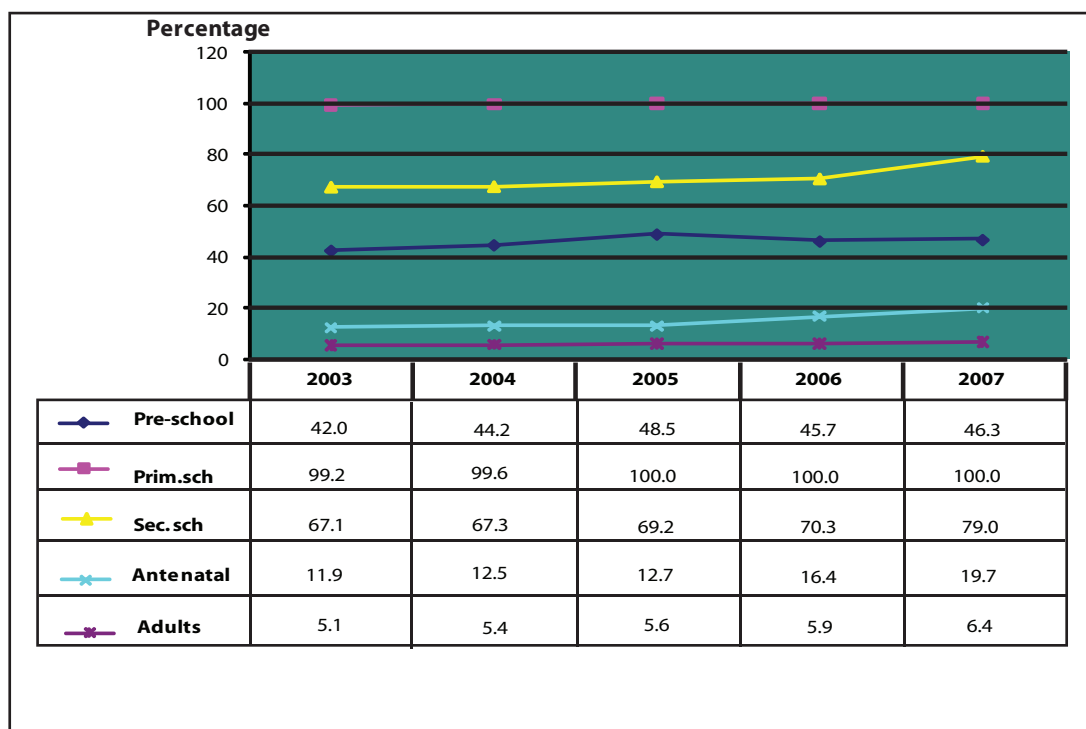
**FIGURE 4**  
**Population Given Primary Oral Health Care, 2003 - 2007**



Source: Health Informatics Centre, MoH

Based on the total estimated population for each target group, the proportion who attended MoH dental facilities in 2007 showed 100% utilization by primary school children while secondary school children showed 79% utilisation. The proportion of adults attending for care was only 6.4%. The pre-school group indicated a substantial increase in coverage of 4.3% between the years 2003 - 2007 while for the antenatal group, coverage ranged from 11.9% in 2003 to 19.7% in 2007 (Figure 5).

**FIGURE 5**  
**Percentage of Population Given Primary Oral Healthcare by Target Group, 2003- 2007**



Source: Health Informatics Centre, MoH

### Impact Indicators

To monitor the oral health status of 6, 12, and 16 year-old school children, a number of impact indicators have been used. In 2007, the proportion of 6-year-old children with caries-free mouths was 32.8%, not far different from the year before (33.8%). Likewise, the proportion of caries-free for 12 year-olds and 16 year-olds showed a slight increase in 2007 (61.0% and 49.0% respectively) as compared to the previous year (58.2% and 47.7% respectively). The proportion of primary school children who did not require treatment (NTR) fell by 2.0% from year 2006 (Table 5). Trends indicate that the oral health status of each of the three age-groups have remained fairly constant. Strengthening of the pre-school and toddler programmes were required if improved oral health status of school children was hoped for.

**TABLE 5**  
**Impact Indicators for the School Dental Service, 2006 - 2007**

Indicators	2006	2007
6 Years Old With Caries - Free Mouth (CFM)	33.8 %	32.8 %
12 Years Old With DMFX=0	58.2 %	61.0 %
Primary School Children With NTR	63.9 %	61.9 %
16 Years Old With DMFX=0	47.7 %	49.0 %

Source: Health Informatics Centre, MoH

### **SPECIALIST ORAL HEALTH CARE**

Complex cases from primary care are referred to dental specialists for further management. Clinical dental specialists based in dental clinics at primary care facilities in major cities and towns, or at hospitals, provide dental specialist care. Presently, clinical dental specialists in the MoH are the oral surgeons, orthodontists, paediatric dental specialists, periodontists, oral pathology or oral medicine specialists, and restorative dental specialists. The orthodontic, periodontic and restorative dentistry clinics are located at primary dental care facilities, whereas the oral surgery, paediatric dentistry and oral pathology or oral medicine clinics are located in hospitals. For 2007, the total number of clinical dental specialists was 129, an increase of 15 as compared to 114 in 2006 (Table 6).

**TABLE 6**  
**Clinical Dental Specialists by Discipline in MoH , 2003 – 2007**

Discipline \ Year	Number of Specialists				
	2003	2004	2005	2006	2007
Oral Surgery	34	34	34	36	42
Orthodontics	28	31	28	26	31
Paediatric Dentistry	10	13	16	20	21
Periodontics	8	10	12	17	19
Oral Pathology/Medicine	4	5	4	6	6
Restorative Dentistry	0	2	3	9	10
<b>Total Clinical Specialists</b>	<b>84</b>	<b>95</b>	<b>97</b>	<b>114</b>	<b>129</b>

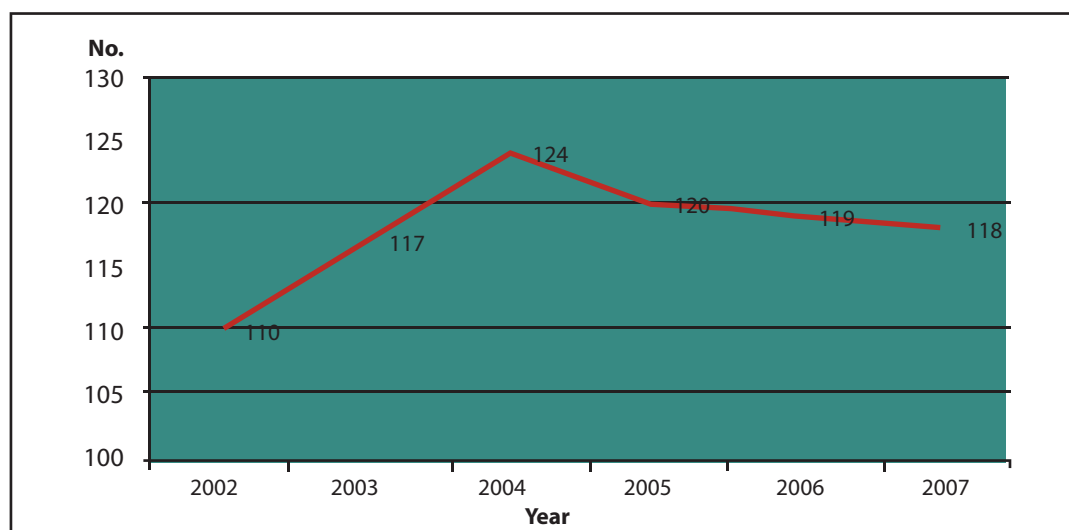
Source : Oral Health Division, MoH

In 2007, the Director-General of Health granted approval for the establishment of a new dental specialty for the MoH, i.e. Special Care (Needs) Dentistry. The scope of care is to patients with physical, sensory, intellectual, mental disabilities, the medically-compromised and those with emotional or social problems. Treatment is also to elderly patients. Two dental officers were offered scholarships to pursue training in this discipline in Australia and New Zealand.

Apart from clinical dental specialists, dental officers with post-graduate qualifications in dental public health provide expertise in community dentistry, treating the community as a whole, unlike the clinical specialist who treats the individual. In addition to management of oral health programmes, amongst their main duties are to provide clinical preventive care to patients at primary care facilities.

In the MoH, the dental public health officers have not been gazetted as specialists. The number of dental officers with dental public health qualifications in 2007 were 118 (Figure 6). Included in this number were 7 who have completed the 4-year Masters in Community Medicine (Oral Health) course at Universiti Sains Malaysia (USM), begun in 2001, and have since returned to serve in the Ministry.

**FIGURE 6**  
**Number of Dental Public Officers, 2002- 2007**



Source : Oral Health Division, MoH

### **Full Paying Patient Fee Schedule**

Dental charges for specialist oral healthcare under the Full Paying Patient Fee Schedule was implemented at Selayang and Putrajaya Hospitals.

### **CPG Study**

A questionnaire survey was conducted by the Institute for Health Systems Research, MoH on 'The Effectiveness of Clinical Practice Guidelines (CPG) in Managing Certain Chronic Diseases and Dental Problems'. Following this, a proposal paper was prepared by dental specialists and dental officers for a study on 'The Effectiveness of the MoH CPG on Prophylactic Antibiotic Usage for Oral Surgery Procedures'.

### **Monitoring of the Specialist Oral Healthcare Programme**

Data collection through e-reporting was done in-toto in year 2007, which involved all dental specialty disciplines. Nevertheless, many problems were encountered and data cleaning need to be done to ensure validity.

### **National Oral Health Centre and Dental Centres of Excellence**

Training in areas of special interest was continued to prepare the required human capital necessary for Centres of Excellence for oral health services. The desire to see materialization of the National Oral Health Centre in the near future has been hampered, as this project has been carried forward into the 10th Malaysia Plan.

## **National Oral Health Survey of Schoolchildren 2007 (NOHSS 2007)**

Research activities in 2007 focused mainly on implementation of the National Oral Health Survey of School children 2007 (NOHSS 2007). Data collection began in May 2007 and continued until October 2007. The survey involved more than 26,000 school children aged 6, 12 and 16 years. A Major Research Grant (MRG) under the Ninth Malaysia Plan Research and Development (9th MP R&D) funds to the amount of RM 1.14 Million was awarded for NOHSS 2007 in March 2007. The funds were spread over two years (2007-2008).

## **National Oral Health Survey of Pre-school Children 2005 (NOHPS 2005)**

Activities for NOHPS 2005 progressed to report writing in 2007 and culminated with the report 'National Oral Health Survey of Pre-school Children 2005 (NOHPS 2005)'. Conclusions and recommendations from the survey were presented at the Second Oral Health Policy and Development Committee Meeting (JDPKP Bil. 2/2007). A decision was made to include a curative component in the existing pre-school programme based on the capacity of each state. The very slow improvement in oral health status of 5-year-olds gave impetus to the decision to re-activate the Oral Health Programme for Toddlers in 2008.

## **The Third National Health and Morbidity Survey (NHMS III)**

The NHMS III is a nationwide project spearheaded by the Institute for Public Health (IPH), Ministry of Health, Malaysia (MoH). The Oral Health Division in collaboration with the Department of Community Dentistry, Dental Faculty, University of Malaya, formulated the 12-item module for 'Oral Health'. Questions on toothbrush ownership, reading of nutrition labels for sugar content, acute oral health conditions (in the past 4 weeks), experience of dental episodes, subsequent seeking of care and costs incurred from these were developed.

Two chapters were written for the final report 'Oral Health: The Third National Health and Morbidity Survey 2006':

Chapter I: Population Practices, Load of Illness and Its Impact, and Oral Healthcare Utilisation

Chapter II: Oral Healthcare Out-of-Pocket Expenditure. Improving Patient Safety

## **Improving Patient Safety**

The Institute for Health Systems Research (IHSR) invited institutions/investigators to propose and undertake studies to improve patient and staff safety in Malaysia. It was decided that a primary research project on 'Cost for Provision of Optimal Instruments to Mobile Dental Squads' would be conducted by the oral health services in 2008.

## **Mercury Exposure in Dental Health Personnel**

There was partial closure of the project with the receipt of the much-awaited report from the Environmental Health Research Centre of the Institute for Medical Research on 'Chemical Health Risks Assessment (CHRA) in dental clinics of the MoH'. This report was undertaken by officers from the Department of Safety and Health (DOSH) who were members of the original research team. Purposive selection of dental clinics in Sarawak, Selangor, Terengganu and Sabah for the CHRA was employed, focusing on facilities where personnel had been found with high spot urine Hg levels, and hence, were not representative of dental facilities of the MoH.

Findings showed that the Time Weighted Average (TWA) values ranged from 0 to 0.006mg/m<sup>3</sup>. These TWA did not exceed the permissible exposure limits of 0.025mg/m<sup>3</sup> under the Occupational Safety and Health Regulations (Use and Standards of Exposure of Chemicals Hazardous to Health). Corrective measures recommended emphasis on management issues on safe handling and use of dental mercury in dental clinics as well as on continuing training for good and safe practices for dental amalgam.

## **Study on 'Product Costing Of Dental Procedures'**

The evaluation exercise for the Oral Health Programme under the Modified Budgeting System (MBS) for the years 2000-2005 included an economic evaluation with the aim of quantifying costs of provision of common dental procedures, i.e. on amalgam and tooth-coloured restorations, and on dental extractions. Two reports were completed in 2007, i.e. 'Costing of Dental Restorations' and Costing of Dental Extractions'.

## **'A Multicentre Study On The Health Outcomes Of Various Methods Of Mandibular Fracture Treatment'**

The research project was extended into year 2008 as data collection was insufficient. Sungai Buloh and Putrajaya Hospitals were included as additional study sites (to Kuala Lumpur Hospital, Selayang Hospital, Tengku Ampuan Rahimah Klang Hospital, Ipoh Hospital, Taiping Hospital, Tuanku Jaafar Seremban Hospital, and Melaka Hospital).

## **Oral Health Clinical Information System (OHCIS)**

The OHCIS Project, a web enabled customer-focused ICT system for the government oral healthcare service, was approved by the Information Communication Technology (ICT) Committee of MAMPU with a total amount of RM10.8 million under the 9th Malaysia Plan. The system design specification includes efficient and centrally managed patient records as well as related clinical data information for decision support and practice administration. The system was also required to include an open and standard interphase gateway for interfacing and integration with any other external systems such as Hospital Information System (HIS), Teleprimary Care (TPC), *Sistem Pengurusan Pesakit* (SPP) available in the government healthcare delivery system. The project was awarded to Global Technological Support Sdn. Bhd.

## **Health Information Management System (HIMS) e-Reporting**

The electronic reporting Health Information Management System (HIMS) developed by the Health Informatics Centre, was an electronic reporting system for the collection, collation and analysis of health information in MoH facilities. In the development process of the application, HIMS reporting formats, instructions and glossaries for the e-forms for all dental specialties were completed in CDs and distributed at training sessions. The project was implemented in May 2007.

## **Oral Health Division Web Portal**

The Oral Health Division Web Portal (<http://ohd.moH.gov.my>) was developed by personnel from the Oral Health Division using XOOPS CMS (eXtensible Object Oriented Portal System Content Management System), which has been successfully integrated with the MoH web portal ([www.myhealth.com.my](http://www.myhealth.com.my)), resulting in an increased in traffic and exposure to the internet users. As of 2007, a total of 47 oral health related topics have been included in the portal. The topics were categorized by age groups from toddlers to teenagers, adults and senior citizens. The public also has access to interactive forums and a total of 26 oral health-related questions were posted and answered by the on-line panel of specialists.

## **APC Online**

The Malaysian Dental Council together with the Oral Health Division and with collaboration of the Information Communication Technology (ICT) Division, held initial discussions to develop a system for online application of the Annual Practicing Certificate. This project is planned for year 2008.

## **QUALITY IMPROVEMENT INITIATIVES**

### **National Indicator Approach (NIA)**

In 2007, six (6) NIA indicators were monitored (Table 7). Four indicators were from the school dental service and two from community dental service. A review of indicators had previously been carried out in 2006. It was found that at national level all the indicators achieved the set standard. However there were still pockets of shortfall in quality in some states.

**TABLE 7**  
**NIA Indicators Monitored in 2007**

Indicators	Standard	Achievement
Percentage of Repeat Fillings done on posterior permanent teeth	≤1 %	0.4%
Percentage of primary school children maintaining orally fit status	≥55%	63.3%
Percentage of secondary school children maintaining orally fit status	≥70%	74.7%
Percentage of 16 year - old free from gingivitis	≥85%	94.3%
Percentage of non - conformance of fluoride level <0.4ppm at reticulation points	≤25%	24.5%
Percentage of non - conformance of fluoride level >0.6ppm at reticulation points	≤7%	6.0%

Source : Oral Health Division, MoH

### **MS ISO 9001: 2000**

In 2007, the Oral Health Division underwent the first surveillance audit after recertification. At the same time, six states and ten districts have undergone surveillance audits. Five states, three districts/divisions and Hospital Umum Sarawak has undergone recertification audit. Sarawak has expanded its scope to Bintulu where compliance audit was carried out in June 2007.

Perak state has adopted the multi-site approach for ISO certification and underwent a compliance audit in October 2007, making a total of twelve (12) states with multi-site certification. With the exception of the state of Pahang, all states with multi-site certification have achieved 100% coverage of districts. Kedah, Pulau Pinang and Sarawak have adopted the district certification approach.

### **Quality Awards**

The Dental Department of Sarikei, Sarawak was awarded *Anugerah Kualiti Setiausaha Persekutuan Negeri Sarawak 2007*. The Paediatric Dentistry Department of Kuala Lumpur Hospital won Best Clinic (*Klinik Terbaik*) 2007 and was also awarded first runner-up for the Kuala Lumpur Hospital Director's Quality Award (*Anugerah Kualiti Pengarah Hospital Kuala Lumpur*).

During the National Quality Convention 2007, two dental projects won first and second place in the technical category :

- 1st place – PREMAXILLA RETRACTOR, Dental Clinic, Kota Baru Hospital, Kelantan
- 2nd place – HYPODENT, Dental Clinic , Kulim, Kedah

Amongst the innovation projects that have won awards at state and zone level were:

- '2C System' from Kedah which won first place at *Pertandingan Konvention Q JKN Kedah*.
- "Corneal Shield' from Sarawak which won second place at *Pertandingan Konvention Q JKN Sarawak*.

## **PROFESSIONAL DENTAL PRACTICE**

### **Laws and Regulation**

In enforcing laws and regulations pertaining to dentistry in the country, several activities were carried out. Inspection of premises of the 57 Registered Dentists was undertaken at the end of 2007 for the purpose of renewal of the Annual Practising Certificate as required under Section 31(5) of the Dental Act 1971. 'Guidelines on Management of Amalgam Waste in Dental Clinics of the MoH Malaysia' were prepared to assist the dental clinics in managing amalgam waste in compliance with Environmental Quality Act 1974 (Act 127) and the Environmental Quality (Scheduled Waste) Regulations 2005. In addition, a checklist was prepared to assist dental inspectors to assess the level of compliance of private dental clinics to the Private Healthcare Facilities and Services Act 1998 (Act 586) during post-registration and surveillance inspections. The proposal on revised charges for Dental Treatment and Procedures was prepared and submitted to the Finance Division of MoH.

### **Accreditation of Dental Degree Programmes**

The Joint Technical Committee on Accreditation of Dental Programmes (JTCADP) held a number of meetings in 2007. Revision of the Guidelines on Standards and Criteria for Accreditation of Dental Degree Programmes and the database/documentation was carried out by a Technical Working Group. A set of guidelines and database/documentation for the Diploma of Dental Technology Programme and for the Certificate of Dental Surgery Assistance Programme were also under preparation.

Site visits were made to several private institutions of higher learning which had applied for approval to conduct dental courses. In addition, visits were also conducted to institutions which had previously been approved and were already conducting courses. In addition, the Dental Faculty of UKM was revisited for the second time on 22 March 2007 in view of expiry of its accreditation status in December 2006. The committee proposed that the Dental Faculty of UKM be given accreditation status for a further five years, which was agreed upon by the Malaysian Dental Council at its meeting on 4 April 2007.

### **Globalisation and Liberalisation of Oral Health Care**

The Oral Health Division, MoH has a representative in the Healthcare Services Sectoral Working Group (HSSWSG) which had meetings with the ASEAN Co-ordinating Committee on Services to facilitate the implementation of globalisation and liberalisation of the healthcare sector, including dental services. The draft of ASEAN Mutual Recognition Arrangement Framework (MRA) on Dental Practitioners has been prepared and was at the level of legal scrubbing. Meanwhile, the Schedule of Commitments on Dental Healthcare for ASEAN was being considered.

### **Credentialing of Dental Specialists**

The registration of dental specialists under the National Specialist Register will involve the establishment of several Specialist Sub-Committees under the National Credentialing Committee. As the Academy of Medicine Malaysia plays a prominent role in this credentialing and registration effort, discussions with the Academy towards the establishment of a College of Dental Surgeons is ongoing.

### **WAY FORWARD**

The CPD programs for all personnel through in-service training locally and abroad needs to be intensified and improved to strengthen the oral health services. Necessary emphasis should be given to the training of clinical dental specialists and dental auxiliaries. Resolutions made at the Symposium on Dental Manpower Development in Malaysia held on 5-6 August 2007 need to be followed up and implemented to ensure the quantum and mix of trained dental personnel until year 2020 meets the nation's requirements.

Aspects of globalisation and liberalisation must not be taken lightly. Tightening of national laws and regulations will be necessary. Relevant statements should not be forgotten in drawing up the MRA to enable smooth liberalisation.

### **CONCLUSION**

The Oral Health Division, in its leadership role for oral health of the nation, has to work cohesively with all agencies in continuing the prevention and reduction of oral disease burden, and towards establishing a first class oral healthcare delivery system which will be held at high esteem.

# PHARMACY PROGRAMME



## **PHARMACY PROGRAMME**

### **INTRODUCTION**

The Pharmacy Programme of the Ministry of Health is responsible to ensure that the Malaysian public gain equitable access to safe, effective and good quality medicines and also promote its rational and cost effective use for improvement of health outcome and quality of life.

The Pharmacy Programme comprises of three main Divisions namely the Pharmacy Regulatory Division (National Pharmaceutical Control Bureau), Pharmacy Enforcement Division and Pharmacy Practice and Development Division. The programme plays three major roles:

- i. To ensure that therapeutic and public healthcare products are safe, effective and of good quality by establishing and implementing the national drug registration for pharmaceutical and healthcare products including regulating the pharmaceutical industry through Good Manufacturing Practices (GMP);
- ii. To protect consumers from consuming hazardous medicines, misleading medicine advertisements and unscrupulous practices through the enforcement of related drug and pharmacy legislation that control the importation, sale and advertisement of drugs and the practices of pharmacy in Malaysia; and
- iii. To optimise drug therapy and the provision of pharmaceutical care by ensuring efficient management of selection, procurement and distribution of pharmaceuticals and by promoting the rational and cost-effective use of medicines through effective up-to-date clinical and professional pharmaceutical services in tandem with current global development.

### **PROGRAMME RESOURCES**

The manpower of the whole Pharmacy Programme, MoH according to category and activity is shown in Table 1 and 2.

**TABLE 1**  
**Pharmacist Manpower in Pharmacy Programme, 2007**

Category/Activity	Grade	No. of Posts	Filled	Vacant	%Filled
Director	JUSA A	1	1	0	100
Pharmacy Practice and Development	U41	2,014	1,584	430	79
	U44	415	208	207	50
	U48	131	78	53	60
	U52	42	29	13	69
	U54	22	21	1	95
	JUSA C	1	1	0	100
Pharmacy Enforcement	U41	243	179	64	74
	U44	67	43	24	64
	U48	37	22	15	59
	U52	3	3	0	100
	U54	2	2	0	100
	JUSA C	1	1	0	100
Pharmacy Regulatory (NPCB)	U41	100	79	21	79
	U44	9	9	0	100
	U48	33	19	14	58
	U52	8	6	2	75
	U54	3	2	1	67
	JUSA C	1	1	0	100
<b>Total</b>		<b>3,133</b>	<b>2,288</b>	<b>845</b>	<b>73</b>

Source: Pharmaceutical Services Division, MoH

**TABLE 2**  
**Pharmacy Assistant Manpower in Pharmacy Programme, 2007**

Category/Activity	Grade	No. of Posts	Filled	Vacant	% Filled
Pharmacy Practice and Development	U29	2,474	2,172	302	88
	U32	358	287	71	80
	U36	70	66	4	94
	U38	30	19	11	63
	U40	7	6	1	86
	U29	8	5	3	63
Pharmacy Enforcement	U32	9	8	1	89
	U36	3	3	0	100
	U38	0	0	0	0
	U40	0	0	0	0
	U29	67	58	9	87
	U32	8	8	0	100
Pharmacy Regulatory (NPCB)	U36	2	2	0	100
	U38	0	0	0	0
Pharmacy Regulatory (NPCB)	U40	0	0	0	0
<b>Total</b>		<b>3,036</b>	<b>2,634</b>	<b>402</b>	<b>87</b>

Source: Pharmaceutical Services Division, MoH

## ACTIVITIES AND ACHIEVEMENTS

### REGULATORY CONTROL OF PHARMACEUTICAL PRODUCTS

#### Pharmaceutical Quality, Efficacy and Safety Assurance

The National Pharmaceutical Control Bureau (NPCB) was Secretariat to the Drug Control Authority (DCA). The DCA ensures that therapeutic products, traditional medicines and cosmetics approved for the local market are safe, effective and of quality.

Drug registration activities started in 1985 and since then a total of 200,314 applications for product registration had been received. Until December 2007, a total of 175,746 products had been registered.

In 2007, a total of 27,974 applications for product registration were submitted electronically to the DCA and a total of 30,607 products were registered by December 2007. The figure includes 449 prescription drugs, 413 non-prescription drugs, 1,342 traditional products and 28,403 cosmetics. A total of 431 products were rejected which include 90 prescription drugs, 59 non-prescription products, 191 traditional medicines and 91 cosmetic products.

During the same year, 114 products were deregistered by the DCA. The deregistration was due to cancellation of agreement for contract manufacturing (48 cosmetic and 2 non-prescription products) and adulteration (64 traditional products).

The introduction of the online QUEST system for product registration and licensing by the NPCB marked a new chapter in the history of pharmaceutical regulatory development in Malaysia. Malaysia was the first regulatory agency in the world to implement the online system for the application of product registration in 2002. The online registration exercise started with cosmetic products and later, in July 2003 extended to include registration of products containing scheduled poisons (controlled items) and non-poison products (over-the-counter products). In January 2004 it was followed by the traditional medicines and finally the veterinary medicine products in August 2007. The number of application for product registration from 1985 until 2007 are shown in Table 3 and 4.

**TABLE 3**  
**Application for Product Registration, 1985-2007**

Year	'Scheduled Poison' Drugs	Non-Poison Drugs	Traditional Products	Cosmetics	Total	
					Yearly	Cumulative
1985 - 1990	9,166	5,935	-	-	15,101	15,101
1991	481	305	-	42	828	15,929
1992	150	60	3,973	145	4,328	20,257
1993	376	111	7,059	51	7,597	27,854
1994	400	168	4,080	31	4,679	32,533
1995	440	239	288	58	1,025	33,558
1996	617	671	415	130	1,833	35,391
1997	532	635	668	123	1,958	37,349
1998	587	606	938	277	2,408	39,757
1999	796	789	1,347	610	3,542	43,299
2000	427	444	1,523	262	2,656	45,955
2001	578	487	1,154	150	2,369	48,324
2002	509	448	1,603	214	2,774	51,098
2003	263	266	1,471	26,177	28,177	79,275
2004	529	720	2,220	30,630	34,099	113,374
2005	703	645	1,807	28,632	31,787	145,161
2006	465	630	1,526	24,558	27,158	172,319
2007	555	560	1,325	25,534	27,974	200,293
<b>Total</b>	<b>17,574</b>	<b>13,698</b>	<b>31,397</b>	<b>137,624</b>	<b>200,293</b>	<b>200,293</b>

Source: Pharmaceutical Services Division, MoH

**TABLE 4**  
**Cumulative Number of Registered Products, 2003-2007**

Year	'Scheduled Poison' Drugs	Non-Poison Drugs	Traditional Products	Cosmetics	Total
2003	9,659	7,206	12,107	6,656	35,628
2004	10,012	7,432	13,077	47,418	77,939
2005	10,339	7,732	14,385	83,430	115,886
2006	11,356	8,686	16,857	108,240	145,139
2007	11,805	9,098	18,200	136,643	175,746

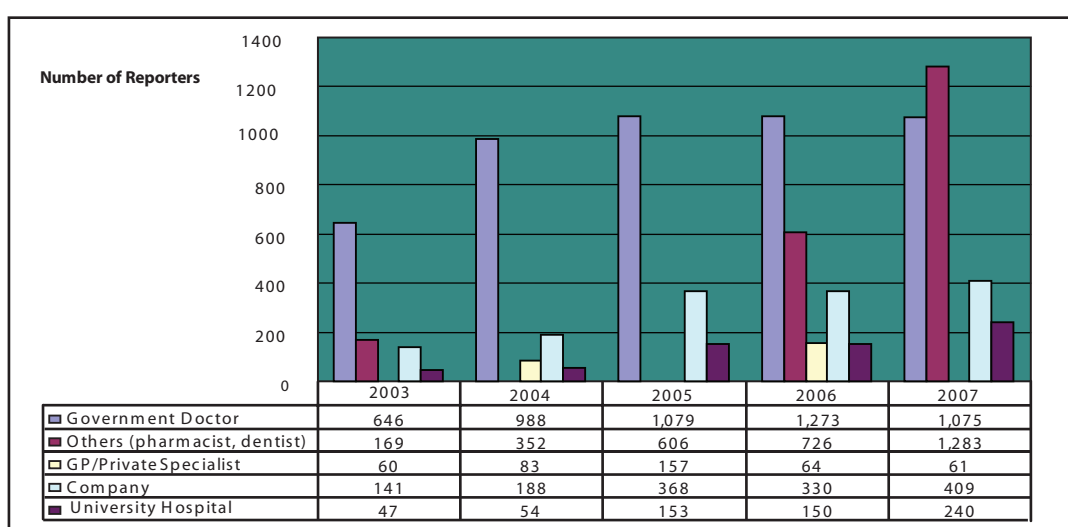
Source: Pharmaceutical Services Division, MoH

As part of the regulatory process to ensure continued compliance to safety, efficacy and quality, samples of registered products were subjected to testing under the post market surveillance programme. A total of 2,538 registered products were sampled in the year 2007 testing. Based on the outcome of the laboratory testing, 6 product batches were subjected to Degree II product recalls (i.e. within 72 hours) and 138 product batches were subjected to Degree III product recalls (i.e. within 30 days) due to quality defects. The recalls involved 17 prescription medicines, 13 non-prescription drugs, 103 traditional medicines and 11 cosmetic products. The registrations of 25 products were cancelled as the samples tested were found to be adulterated with scheduled poisons.

A total of 2,413 labels and package inserts were also checked under the surveillance program. Warning letters were issued to 157 products which were found to be non-compliant with the labeling requirements. The NPCB also investigated 316 product complaints submitted by health professionals and the general public, which subsequently led to punitive actions taken such as recall from the market.

A total of 3,068 Adverse Drug Reaction (ADR) reports were received, an increase of 21% as compared to 2006. Out of these, 2,991 reports were evaluated and subsequently 2,808 reports were submitted to the WHO ADR Monitoring Centre in Uppsala, Sweden. An analysis of the submitted ADR reports showed that slightly more than 41% reports were received from pharmacists and dentists and 35% were from doctors in the government sector (Figure 1).

**FIGURE 1**  
**Number of Adverse Drug Reaction (ADR) by Type of Reporters, 2003-2007**

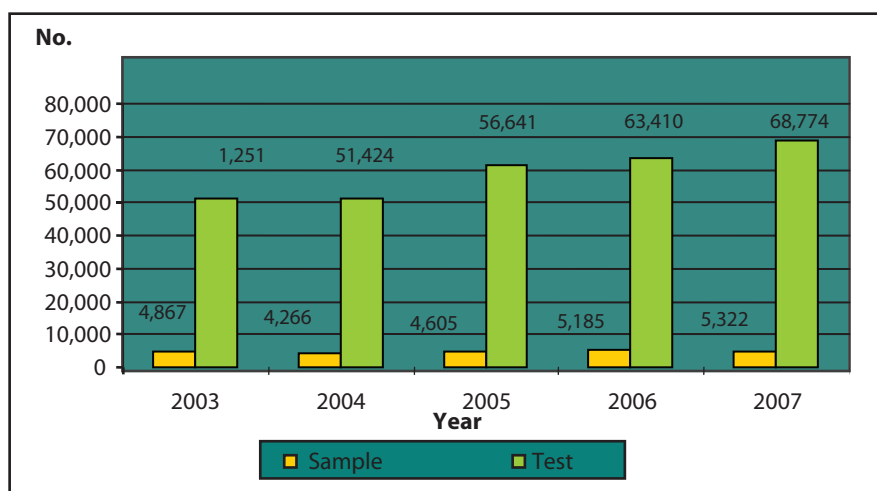


Source: Pharmaceutical Services Division, MoH

A total of 68,774 tests for quality control were done on 5,322 samples (Figure 2). The test were done on 2,128 samples (40.0%) submitted for applications for registration; 2,761 (51.9%) samples from surveillance activities; 155 (2.9%) samples from product complaints; 270 (5.0%) samples were result of enforcement activities; and 8 (0.2%) samples were from other sources.

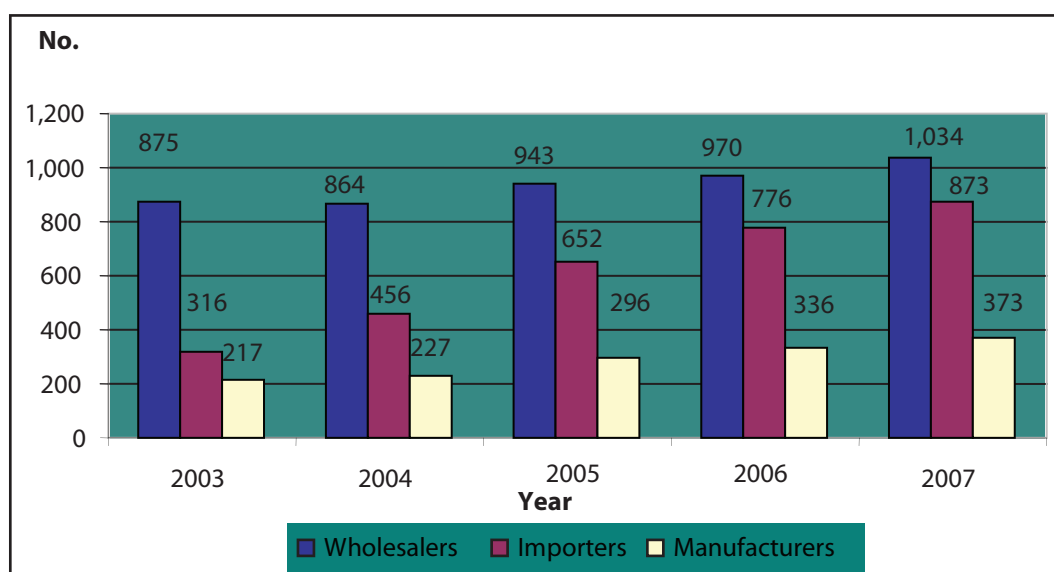
In 2007, a total of 373 manufacturing premise licenses were issued of which 60 (16.1%) were for pharmaceutical products, 175 (46.9%) for traditional medicines and 138 (37.0%) for cosmetic manufacturers. A total of 873 import licenses were issued comprising of 213 (24.4%) pharmaceutical, 152 (17.4%) traditional and 508 (58.2%) cosmetics. As for wholesalers, there were 1,034 licenses issued of which 455 (44.0%) of these licenses were issued to wholesalers of products containing 'scheduled poison' drugs and the remaining 579 (56.0%) licenses were issued to wholesalers dealing with non-poisons, traditional medicines and cosmetics (Figure 3). Information on the licensed manufacturing premises, importers and wholesalers is regularly updated and was available in the NPCB website ([www.bpfk.gov.my](http://www.bpfk.gov.my)).

**FIGURE 2**  
**Number of Samples Tested, 2003-2007**



Source: Pharmaceutical Services Division, MoH

**FIGURE 3**  
**Total License Issued, 2003-2007**



Source: Pharmaceutical Services Division, MoH

## International Involvement

NPCB continued to play an active role in the harmonisation efforts through the ASEAN Consultative Committee for Standards and Quality (ACCSQ); Pharmaceutical Product Working Group (PPWG); ASEAN Cosmetic Committee (ACC); and Traditional Medicines and Health Supplements Product Working Group (PWGTMHS). Other international involvements include facilitating the fast-track ASEAN healthcare integration and EC-ASEAN Economic Cooperation on Quality, Standards and Conformity Assessments, as well as other PIC/S activities. The NPCB had also participated in other international consultations such as Technical Meetings and initiation of Bilateral Arrangements with ASEAN member countries as well as participation in the Malaysia-US Free Trade Agreement (MUSFTA) negotiations.

## Visits and Training of Visitors from Overseas

Throughout 2007, NPCB received a total of 65 international visitors from various countries such as Bhutan, Mongolia, Nigeria, Singapore, Philippines, Ghana, Saudi Arabia, Vietnam, United Kingdom, Sri Lanka, Lao PDR, Uganda, China and Macedonia. Those who came on educational visits were given training according to their respective specific needs. Training given was in the aspect of Quality Control, Product Registration, Good Manufacturing Practices and Licensing or Pharmacovigilance and Surveillance.

## ENFORCEMENT

### Control of Advertisement

The Medicines (Advertisement and Sale) Act 1956 provides for the establishment of the Medicine Advertisement Board (MAB), who is responsible for the control of advertisement of medicines, appliances, remedies and control of advertisement that relate to health services. The Board issued two guidelines to help advertisers in devising advertisement formats which are deemed acceptable and suitable for publication in the various media in the country. The number and type of applications received in 2007 is shown in Table 5 and the number of applications received from the year 2005 until 2007 is shown in Table 6.

**TABLE 5**  
**Applications for Advertisement by Type, 2007**

Type	Application Received	Fast Track Approval	Non Fast Track Approval	Not Approved	Don't Require MAB Approval	Fees Collected (RM)
Advertisement on products	1,772	1,218	1,486	40	29	177,200
Advertisement on services	208	88	133	28	3	20,800
<b>Total</b>	<b>1,980</b>	<b>1,306</b>	<b>1,619</b>	<b>68</b>	<b>32</b>	<b>198,000</b>

Source: Pharmaceutical Services Division, MoH

**TABLE 6**  
**Applications for Advertisement by Activities, 2005–2007**

	Activities/Year	2005	2006	2007
1.	Total number of applications	1,613	1,657	1,980
2.	Total number of approvals	1,338	1,428	1,619
3.	Number of approvals through the "Fast Track System"	843 [52.3%]	1,028 [62.0%]	1,306 [66.0%]
4.	Total fees collected (RM)	161,300	165,700	198,000

Source: Pharmaceutical Services Division, MoH

### Monitoring Advertisements

The monitoring programme involves scrutinizing all publication from the print media such as newspapers, magazines, pamphlets and brochures for public; promotional materials generated by direct selling companies; and all advertisements in electronic media including radio, television and internet. The activities were initiated by complaints received from the public, advertisers, companies and non-government organisations (NGO). Warning letters were issued to advertisers and product owners who published their advertisements that were not approved by the Medicine Advertisement Board (MAB) and the number is shown in Table 7.

**TABLE 7**  
**Number of Warning Letters Issued for Contravening The Medicines  
 (Advertisement and Sale) Act 1956 in 2007**

Warning letters sent to	Number
Editors	19
Advertisers (Products and Services)	97
Editors & Advertisers	172
<b>Total</b>	<b>288</b>

Source: Pharmaceutical Services Division, MoH

## Dialogue with Media

Advertisement editors and media has a major role to play in protecting consumers from misleading advertisements by ensuring that only advertisements approved by the Medicine Advertisement Board (MAB) are published. There were 8 dialogues sessions conducted in 2007 to ensure continuous co-operation from the industry.

## Investigation

In 2007, a total of 973 cases were investigated as compared to 765 cases in 2006. The investigations were for cases that contravene the Poisons Act 1952, Sales Of Drug Act 1952 , Medicines (Advertisement and Sales) Act 1956, Pharmacy Registration Act 1951 and Dangerous Drug Act 1952. The investigations were carried out by the respective State Pharmacy Enforcement.

## Licensing

The total number for all types of poison licenses issued in 2007 were 6,870, an increase of 15.1% as compared to 2006 (Table 8).

**TABLE 8**  
**Number of Licenses and Permit Issued, 2005-2007**

Licence and Permit	2005	2006	2007
Poison Licence Type A	2,956	2,803	3,005
Poison Licence Type B	1,340	1,366	1,674
Poison Licence Type D	5	8	9
Poison Licence Type E	19	8	16
NaOH Permit	1,654	1,783	2,166
Total Licensed and Permit Issued	5,974	5,968	6,870
Total Number of Pharmacy Premises	1,935	2,032	1,994

Source: Pharmaceutical Services Division, MoH

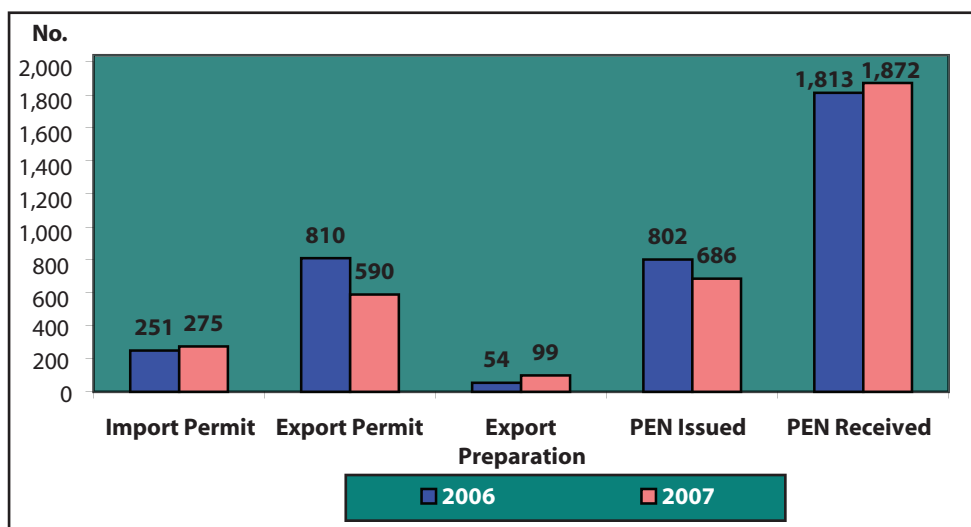
**PICTURE 1**  
**Inspection and Raids on Premises**



## The Control of Precursors and Controlled Chemicals

The Pharmacy Programme was the competent authority for precursor control under the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988. This includes other chemicals which have illegal market. All precursors and controlled chemicals were listed under the Custom Order (Prohibition of Import) and Custom Order (Prohibition of Export). Precursors and controlled chemicals were also listed in the Poisons list under the Poisons Act 1952. Pre-Export Notification (PEN) was issued to the competent authority of the importing countries to prevent diversion to illicit market. The application of import/export authorisation and PEN using electronic means has improved the communication and the efficiency of the process. E-permit has been established and is being used for import and export approvals beginning August and September 2007 respectively (Figure 4).

**FIGURE 4**  
**Number of Import/Export Authorization, Export Preparation(Containing Ephedrine/Pseudoephedrine) and PEN Received/Issued, 2006 and 2007**



Source: Pharmaceutical Services Division, MoH

## Diversion Control

In 2007, the Audit-Monitoring and Research or A-MORE approach was implemented where the diversion audit component was combined with monitoring and research components for the control of action against psychotropic substances and control medicines. Registered products such as methadone, ketamine and dihydrocodeine, which were scheduled as psychotropic substances since September 2006, was monitored closely together with other controlled medicines. From 108 licensed premises that have been investigated, 31 (29%) were found to be associated with various offences under the Poisons Act 1952.

## Prosecution

A total of 505 cases were prosecuted in 2007 with a total collection of RM1,028,100 in fines imposed. The breakdown of prosecution completed within the period according to the Acts enforced by the respective states is shown in Table 9. The amount collected in fines from offences under the Sales of Drugs Act 1952 were the highest with RM772,450 (75.1%) followed by offences under the Poisons Act 1952 with RM174,150 (17.0%). The high collection of fines under the Sales of Drugs Act was mainly due to the high penalty imposed by Section 12(1) of the Act with a maximum fine of RM25,000 for individual offenders and by Section 12(2), with a maximum fine of RM50,000 for corporate offenders. Furthermore, the total number of cases that completed prosecution within this Act was the highest with a total of 309 cases as compared to 143 cases under the Poisons Act 1952.

**TABLE 9**  
**Prosecution (Completed) According to Act and State, 2007**

No	State	Poison Act 1952	Poison Act 1952 (Psychotropic Substances)	Sale Of Drug Act 1952	Medicines (Sales and Advertisement 1956)	Total			
						Case	%	Total Collection (RM)	%
1.	Perlis	1	0	3	0	4	0.8	9,800	1.0
2.	Kedah	1	0	0	0	1	0.2	0	0
3.	Pulau Pinang	15	8	16	1	40	7.9	76,300	7.4
4.	Perak	10	0	11	1	22	4.3	34,750	3.4
5.	Selangor	19	8	142	3	172	34.1	196,500	19.1
6.	F.T.K.Lumpur	9	0	28	2	39	7.7	158,500	15.4
7.	Negeri Sembilan	10	2	6	0	18	3.6	22,950	2.3
8.	Melaka	1	0	19	0	20	4.0	86,800	8.4
9.	Johor	20	4	18	2	44	8.7	112,400	10.9
10.	Pahang	2	0	1	0	3	0.6	6,300	0.6
11.	Terenganu	11	7	3	1	22	4.3	40,500	3.9
12.	Kelantan	6	0	11	0	17	3.4	13,400	1.3
13.	Sarawak	16	0	18	1	35	6.9	100,400	9.8
14.	Sabah	21	6	30	0	57	11.3	157,900	15.4
15.	F.T.Labuan	1	0	3	1	5	1.0	6,300	0.6
16.	BPF, KKM	0	0	0	6	6	1.2	5,300	0.5
<b>Total</b>		<b>143</b>	<b>35</b>	<b>309</b>	<b>18</b>	<b>505</b>		<b>1,028,100</b>	<b>100</b>
<b>Percentage</b>		<b>28.3</b>	<b>6.9</b>	<b>61.2</b>	<b>3.6</b>	<b>100</b>			
<b>Total Fine Collected(RM)</b>		<b>174,150</b>	<b>64,700</b>	<b>772,450</b>	<b>16,800</b>	<b>1,028,100</b>			
<b>Percentage</b>		<b>17.0</b>	<b>6.3</b>	<b>75.1</b>	<b>1.6</b>				

Source: Pharmaceutical Services Division, MoH

## Consumer Protection

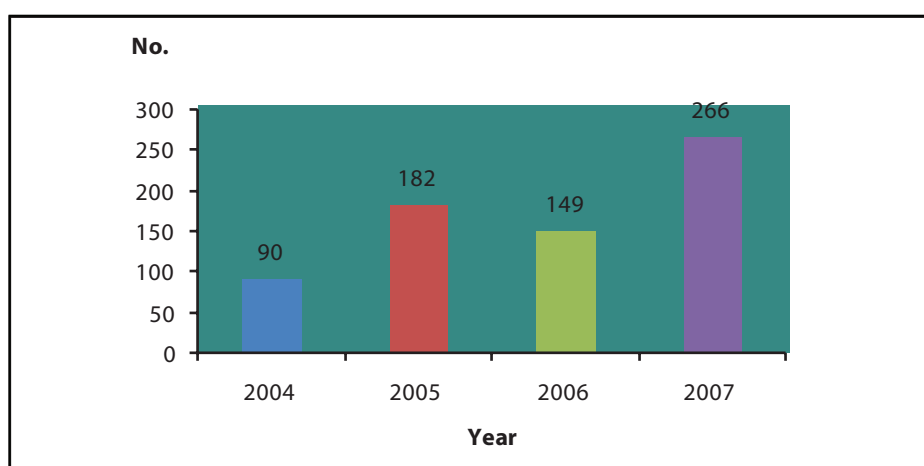
The focus of consumer protection was on the dissemination of information and education to the public and target groups on the control of selling and usage of medicines and cosmetics in the market. The emphasis was on the role played by target groups involving individuals, family members and general public in urban and rural areas on the use of medicines and cosmetics.

Communication strategy involving electronic and mass media was used to disseminate information to increase knowledge and awareness of the said target groups. Road shows on awareness of the hologram labels were conducted for community pharmacist and they were trained on how to identify genuine hologram by using "Hologram decoder". The number of activities in relation to this roadshow is shown in Figure 5 and Table 10.

**PICTURE 2**  
**Dissemination of Information through Mass-Media and Exhibitions**



**FIGURE 5**  
**Number of Activities on Consumer Protection, 2004-2007**



Source: Pharmaceutical Services Division, MoH

**TABLE 10**  
**Achievement on Dissemination of Information, 2007**

Activities	Achievement
Dissemination Of Calendars	25,000 x set
Dissemination Of Posters	15,000 x pieces
Dissemination Of Post Cards	200,000 x pieces
Talks	100
Dialog	11
Exhibitions	155
TV1 & TV3 Appearance	3 (TV1) & 1 (TV2)
Radio	2 (RTM) & 1 (Era)
Dissemination through Newspapers	3

*Source: Pharmaceutical Services Division, MoH*

## **PHARMACY PRACTICE AND DEVELOPMENT**

### **Pharmaceutical Procurement**

The pharmaceutical procurement involved identification on the need of the existing and new drugs to be processed for procurement by tender. In 2007, there were 2 Technical Specification meetings to draw up 95 drug specifications to be tendered. The total value of all drug contracts handled in 2007 was RM385.9 million and the total value of drugs procured for the use in all hospitals and health clinics in MoH for 2007 was RM1,328 million.

### **Formulary Management**

A total of 186 drug proformas were received in the year 2007 of which 2 were proforma A (proposal to delete any drug/dosage form/strength from the MoH Formulary), 80 proforma B (proposal to add or alter formulation/dosage form/ dose/prescriber category/indication in the MoH Formulary) and 104 proforma D (proposal to introduce a new drug into MoH Formulary). One traditional preparation was also added into the Formulary. As of 2007, a total of 1,389 preparations were listed in the Ministry of Health Drug Formulary (Table 11 and Figure 6).

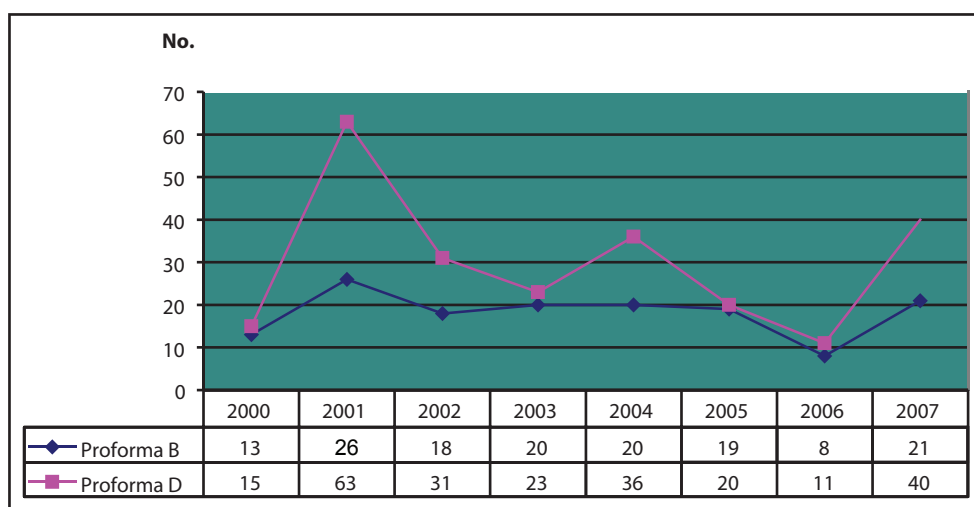
**TABLE 11**  
**Statistics for MoH Drug Formulary, 2000 – 2007**

Year	Proforma Received	No. of Panel Meeting	No. of Drug Circulars	Drugs Approved		Drug Deleted
				New Strength/Formulation	New Drug	
2000	201	2	1	13	15	76
2001	206	2	3	26	63	3
2002	199	2	3	18	31	8
2003	270	2	3	20	23	40
2004	192	3	3	20	36	17
2005	152	3	2	19	20	106
2006	197	3	4	8	11	4
2007	186	3	3	21	40	15

Source: Pharmaceutical Services Division, MoH

In 2007, three drug circulars were issued by PSD, MoH and the MoH Drug. Formulary was consistently updated through this process. The latest Formulary updates are available for in-house use via the Pharmacy Programme intranet at [www.pharmacy.gov.my/intranet](http://www.pharmacy.gov.my/intranet). The MoH Drug Formulary listed by generic name, Malaysian Drug Code (MDC) and prescriber category was available for public viewing at [www.pharmacy.gov.my](http://www.pharmacy.gov.my). The NEDL which was intended for use by all health sectors was first launched in 2000. An updated list has been prepared and presented in the Panel Drug Review meeting in 2007 and was currently undergoing final editing.

**FIGURE 6**  
**Statistics of New Drugs Approved into FUKKM, 2000-2007**



Source: Pharmaceutical Services Division, MoH

## Request of Special Drugs

The following drugs require special approval prior to its use:

- a) Drugs that are registered but not listed in the MoH Formulary
- b) Drugs not registered with the Drug Control Authority
- c) Drugs in the MoH Formulary but no longer registered with Drug Control Authority (DCA) or no longer available in the market

Approval for use of these special drugs in patients was accorded under circumstances where existing drugs in the formulary were either ineffective or unsuitable (Table 12).

**TABLE 12**  
**Request for Approval for Special Drugs, 2004-2007**

Year	Status of Drugs	Description	Approved	Not Approved
2004	Registered Drugs	Approximate cost (RM)	7,429,006.00	1,544,310.29
		Types of Drugs	120	82
		No. of request	501	153
	Non-Registered Drugs [including those from formulary]	Approximate cost (RM)	5,924,699.22	1,131,656.36
		Types of Drugs	140	51
		No. of request	323	67
2005	Registered Drugs	Approximate cost (RM)	11,936,387.00	3,551,758.38
		Types of Drugs	152	90
		No. of request	452	166
	Non-Registered Drugs [including those from formulary]	Approximate cost (RM)	11,345,203.00	1,191,774.53
		Types of Drugs	64	34
		No. of request	512	52
2006	Registered Drugs	Approximate cost (RM)	18,152,974.13	3,297,931.70
		Types of Drugs	169	105
		No. of request	912	175
	Non-Registered Drugs	Approximate cost (RM)	16,643,764.62	8,497,116.00
		Types of Drugs	147	33
		No. of request	711	69
2007	Registered Drugs	Approximate cost (RM)	21,764,912.16	5,522,728.53
		Types of Drugs	227	170
		No. of request	1,040	249
	Non-Registered Drugs [including those from formulary]	Approximate cost (RM)	16,465,014.86	57,629.00
		Types of Drugs	173	10
		No. of request	926	13

Source : Pharmaceutical Services Division, MoH

## Malaysian Drug Code (MDC)

The Malaysian Drug Code (MDC) is a code developed for a particular drug up to its brand name, based on structure and principle of the 'Anatomical Therapeutic Chemical (ATC) Classification by World Health Organization (WHO) for identification purposes. In 2007, the third edition of MDC for 5,511 products was completed and available at [www.pharmacy.gov.my](http://www.pharmacy.gov.my).

## Good Governance in Medicine (GGM)

In 2004, WHO initiated a project aimed towards promoting good governance in medicine. Malaysia was one of the first four countries to join this programme. The goal of GGM was to curb corruption in pharmaceutical sector systems through the application of transparent and accountable administrative procedures and the promotion of ethical practices among health professionals. This programme shall be implemented in three phases. Malaysia organised a Biregional Informal Consultation in Kuala Lumpur for WHO from 18-20 June 2007 involving delegates from eight countries namely Malaysia, Cambodia, Laos PDR, Philippines, Thailand, Mongolia, Indonesia and Papua New Guinea, WHO representatives, Management Sciences for Health, short-term consultant, five observers and seven temporary advisers. The objective of the meeting was to share the progress and experience in developing and adopting national ethical infrastructures aimed at promoting GGM and to define effective ways of implementing it. On 21 June 2007, WHO Informal Global Consultation for the Good Governance for Medicines programme was held where an informal Global Advisory Group was formed.

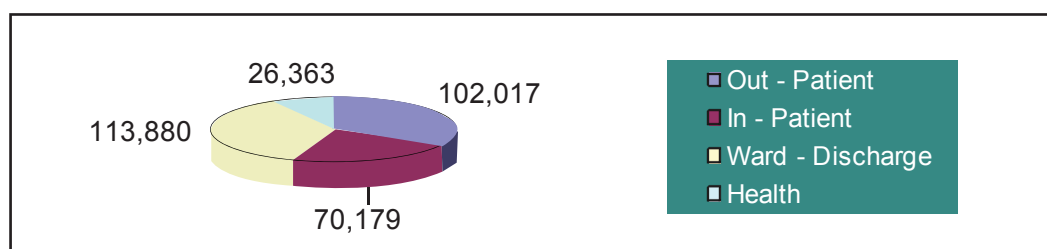
## Clinical Pharmacy Services

The Pharmaceutical Service of hospitals and health clinics under the Ministry of Health aim to provide comprehensive patient-centered pharmaceutical care.

## Pharmacy Ambulatory Care Service

Medication counselling through individual, discharge and group sessions was carried out by pharmacists to help patients achieve intended health outcomes. In 2007, a total of 312,439 patients were counselled on their medications as shown in Figure 7. A few major hospitals had established the "Medication Therapy Adherence Clinics (MTAC)" whereby in these clinics, pharmacists in collaboration with doctors and other healthcare professionals provide pharmaceutical care to patients in critical areas of treatment. The activity was focused on the pharmacotherapy management for diabetes mellitus, anticoagulant (Warfarin) and HIV/AIDs in year 2007. The Pharmacy Ambulatory Care Services also included methadone dispensing and counseling activities in Methadone Clinics set up under the Harm Reduction Programme of Ministry of Health.

**FIGURE 7**  
**Number of Patients Counselling in 2007**



Source : Pharmaceutical Services Division, MoH

### Medication Therapy Adherence Clinic (MTAC)

The first MTAC was established in 2004 and to date there were 9 types of MTAC in 16 hospitals (Table 13).

**TABLE 13**  
**Type of MTAC in MoH Hospitals, 2004-2007**

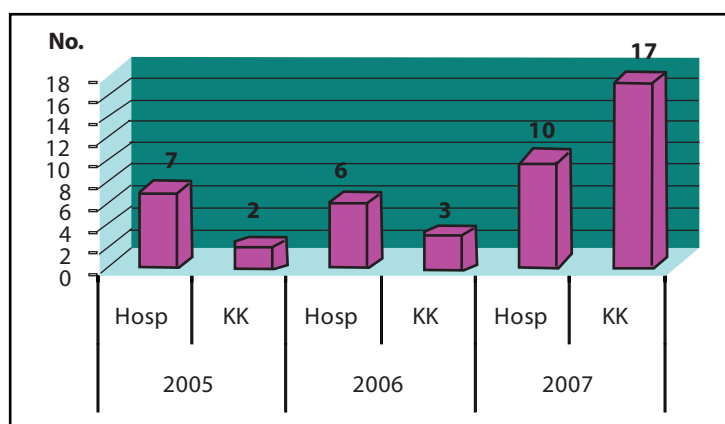
Year	Type of MTAC	Hospital
2004	HIV/AIDS	Pulau Pinang
2005	Warfarin	Tuanku Jaafar, Seremban
		Duchess of Kent, Sandakan
	Renal Transplant	Selayang
2006	Hepatitis C	Selayang
	HIV/AIDS	Sultanah Bahiyah, Alor Setar
		Kangar
	Diabetes	Pulau Pinang
2007	Liver Transplant	Selayang
	Diabetes	Selayang
		Sultanah Aminah, JB
		Putrajaya
	HIV/AIDS	Sg. Buloh
		Melaka
		Sultanah Aminah, JB
		Raja Perempuan Zainab II, Kota Bharu
	Warfarin	Serdang
		Tuanku Ampuan Rahimah, Klang
		Melaka
		Umum Sarawak
	Respiratory	Melaka
	Neurology	Sultanah Nur Zahirah, Kuala Terengganu
	Neurology (paediatric)	Melaka

Source: Pharmaceutical Services Division, MoH

## Methadone Dispensing and Counselling Programme

As end of 2007, there were 46 (90%) MoH hospitals and health centres providing Methadone Dispensing and Counselling services under the Harm Reduction Programme, MoH (Figure 8). Pharmacists provide Methadone dispensing service everyday including weekends and public holidays. All patients will be given medication counselling through individually and by group counselling sessions before starting the methadone maintenance therapy. Almost 70% of patients consume methadone by Direct Observe Therapy (DOT) and 30% were allowed take away doses.

**FIGURE 8**  
**Implementation of Methadone Dispensing in MoH Pharmacy Facilities, 2005-2007**



Source: Pharmaceutical Services Division, MoH

## Drug Information Service (DIS)

Hospital Drug Information Service (DIS) is equipped with sufficient resources to respond to queries by healthcare professionals and patients with the goal to improve the quality of patient care. In 2007, a total of 30,485 enquiries were received by hospital pharmacies. The Drug Information Units also facilitated the reporting of 2,340 Adverse Drug Reactions (ADR) cases to the Malaysian Adverse Drug Reaction Advisory Committee (MADRAC).

## Ward Pharmacy Service

Almost all hospital pharmacies throughout the country had adopted individualized drug delivery system for in-patients by implementing the Unit-of-Use or Unit Dose System. This system of medication delivery has the advantage of providing personalised and continuous supply of medication to patients, to improve compliance and reduce wastage as otherwise compared to the traditional system where the wards order drugs in large quantities, and had led to overstocking. Specialisation in clinical pharmacy practice in the following pharmacotherapy disciplines and hospitals had been established in 2007 to improve the quality of pharmaceutical care to patients:

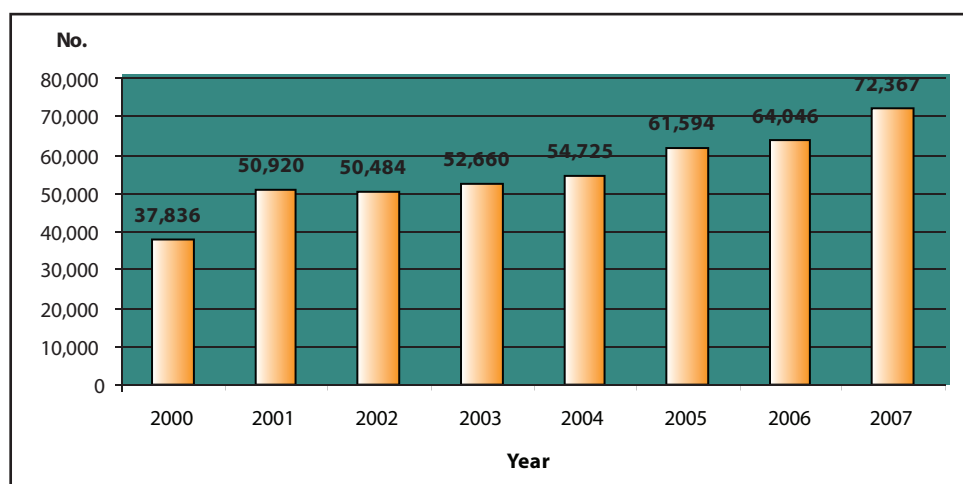
Critical Care pharmacy	-	All State Hospitals
Nephrology pharmacy	-	Selayang and Kuala Lumpur Hospital
Respiratory pharmacy	-	Melaka Hospital
Surgical Pharmacy	-	Melaka, Kuala Lumpur and Sibu Hospital
Cardiology Pharmacy	-	Kuala Lumpur, Umum Sarawak, Selayang and Penang Hospital

The Selayang, Melaka, Pulau Pinang and Kuala Lumpur Hospitals have also been designated as national training centres for various fields of clinical pharmacy practice.

### Clinical Pharmacokinetic Service (CPS)

The Clinical Pharmacokinetic Service (CPS) is essential towards ensuring the safe and effective use of medications particularly those with narrow therapeutic windows. In 2007, a total of 72,367 patients had received individualised drug therapy through the pharmacy CPS provided by 82 hospitals throughout the country (Figure 9).

**FIGURE 9**  
**Number of CPS Cases Received, 2000 - 2007**



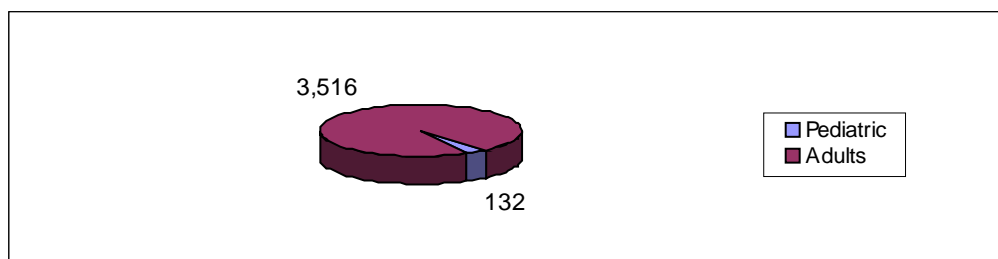
Source: Pharmaceutical Services Division, MoH

Through the CPS, pharmacist provides consultation on appropriate dosing of 14 types of drugs namely:

- Gentamicin
- Amikacin
- Digoxin
- Carbamazepine
- Theophylline
- Lithium
- Phenobarbitone
- Netilmicin
- Vancomycin
- Phenytoin
- Valproic acid
- Ciclosporin
- Methotrexate
- Tacrolimus

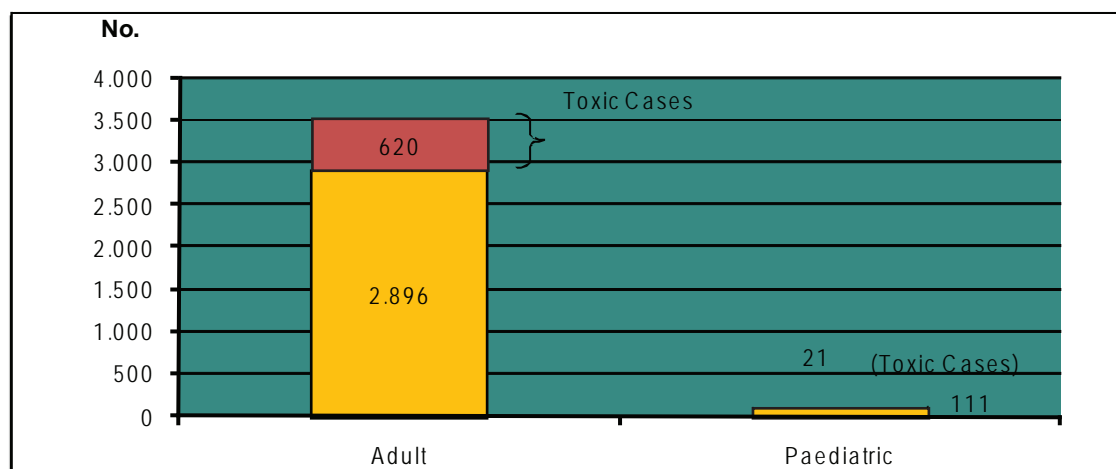
Apart from that, the pharmacy provides 24 hours call service for toxicology serum monitoring and consultation of Paracetamol (PCM) poisoning. Out of 3,648 requests for toxicological monitoring received in 2007, a total of 3,516 (96.4%) were for adult patients, whereas 132 (3.6%) were for paediatric patients (Figure 10). Out of 3,516 adult PCM poisoning cases, 620 were toxic cases, while for the paediatric cases, 21 out of 132 were toxic cases (Figure 11). Through this service, the use of N-acetylcysteine as an antidote for paracetamol poisoning had been optimized.

**FIGURE 10**  
**Number of Paracetamol Poisoning Cases (Adult and Paediatric) in 2007**



Source: Pharmaceutical Services Division, MOH

**FIGURE 11**  
**Number of Toxic Cases in Paracetamol Toxicology Serum Monitoring, 2007**

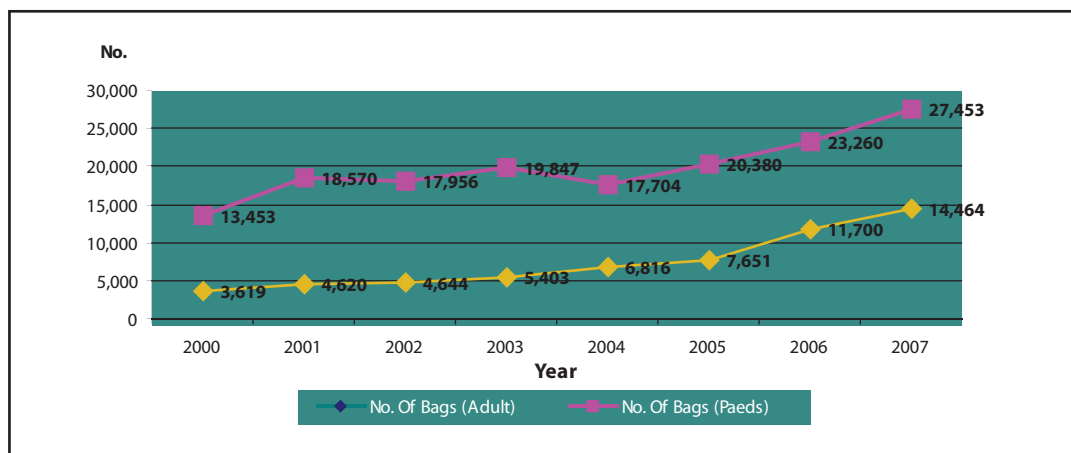


Source: Pharmaceutical Services Division, MOH

### **Total Parenteral Nutrition (TPN) Service**

The goal of TPN service was to provide optimal nutrition support to critically ill patients. By the end of 2007, there were 17 MoH hospitals providing total parenteral nutrition (TPN) service. The TPN pharmacist provides consultation on individualised parenteral nutrition requirements as well as ensures safe ready-to-use preparations for the patients (Figure 12).

**FIGURE 12**  
**Number of TPN Bags Prepared , 2000-2007**



Source : Pharmaceutical Services Division, MoH

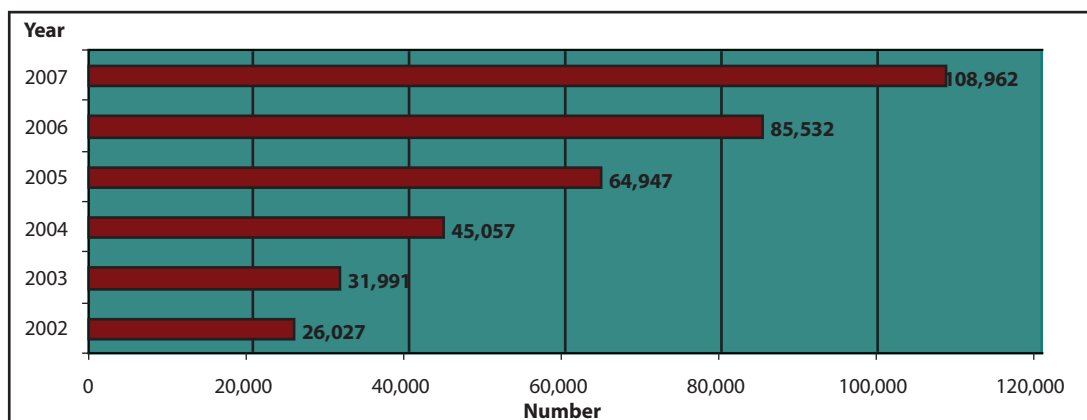
#### IV Admixture Service

Currently, 17 hospitals with clean room facilities provide IV Admixture service enabling the supply of 65,117 ready to use preparations for 30,944 cases from January to December 2007. This service will be further enhanced in the future.

#### Oncology Pharmacy Service

Oncology pharmacists play a significant role in cancer patient treatment by dispensing and reconstituting cytotoxic drugs. A total of 21 hospital pharmacies in the country dispense cytotoxic drugs to cancer patients. However, as at the end of 2007, only 16 hospitals provided pharmacy cytotoxic drug reconstitution services.

**FIGURE 13**  
**Number of Cytotoxic Drugs Reconstituted , 2002- 2007**



Source : Pharmaceutical Services Division, MoH

## Nuclear Pharmacy

Five hospitals have been identified to provide nuclear pharmacy services namely Pulau Pinang, Kuala Lumpur, Putrajaya, Sultanah Aminah and Umum Sarawak Hospital. Pharmacists from Putrajaya Hospital were involved in the quality control and preparation of radiopharmaceutical Fluoro-Deoxy-Glucose (FDG) for nuclear medicine use.

## Integrated Drug Dispensing System (IDDS)

The Integrated Drug Dispensing System (IDDS) was initiated on 1 June 2003 after the implementation of a 6 month pilot project from December 2001 to May 2002. The aim of IDDS was to provide an option and facilitate patients, particularly follow-up cases, to collect their medication from health facilities nearest to their homes. This is of special benefit to patients who stayed in remote areas. The number of patients collecting their medications through IDDS had increased by 16.4% in 2007 as compared to 2006. Category A drugs constitute 60% of total prescription cost supplied through the IDDS. Statistics on IDDS transaction is as shown in Table 14.

**TABLE 14**  
**Transactions for Integrated Drug Dispensing System (IDDS), 2005-2007**

	2005			2006			2007		
	Intra State	Intra State	Total	Intra State	Intra State	Total	Intra State	Intra State	Total
Total No.Of Prescriptions	28,705	11,474	40,179	37,670	14,092	51,762	44,502	15,752	60,254
Total No.Of Category A Drugs	25,914	12,868	38,782	30,936	12,419	43,355	42,047	13,618	55,665
Total No.Of Category B & C Drugs	50,845	23,561	74,406	56,590	29,654	86,244	89,172	36,232	125,404
Total Cost.Of Category A Drugs (RM)	1,278,718	556,931	1,835,649	1,052,304	607,772	1,660,076	2,252,495	1,017,571	3,270,066
Total Cost.Of Category B & C Drugs (RM)	427,909	203,443	631,352	517,092	277,249	794,341	855,308	407,111	1,262,419
Total Cost For Drug (RM)	1,706,627	760,374	2,467,001	1,569,396	885,022	2,454,418	3,107,803	1,424,682	4,532,485

Source : Pharmaceutical Services Division, MoH

## Medicines Price Monitoring

The Medicines Price Monitoring Unit initiated its first survey in 2006 and the bulletin of My Medprice was published to report variations in price of selected medicines from different premises as shown in Table 15. My Medprice First Edition was also available for viewing at [www.pharmacy.gov.my](http://www.pharmacy.gov.my). In 2007, price data was collected 2 times at 6 monthly intervals; each over a duration of 2 weeks (June and December). The list of medicines selected for monitoring will be expanded over time according to needs. The Second Edition of My Medprice will be published soon to include more data sets in follow-up from 2006. Analysis on the two sets of data collected in the year 2007 will be published in the Third Edition of My Medprice bulletin by the end of 2008. A medicines price database system will be established to facilitate data entry, analysis and reporting.

**TABLE 15**  
**Data Collections for Medicines Price Monitoring Survey, 2007**

	West Malaysia	East Malaysia
Ministry of Health Hospitals	22	22
Private Pharmacies	20	20
Private Hospitals	5	2
University Hospitals	3	-

Source: Pharmaceutical Services Division, MoH

## Training

In 2007, a total of 61 training courses were conducted by PSD. Statistics on the progress of budget and expenditure (within Malaysia) is shown in Table 16. A total of 11 courses or attachments had been held in countries such as the United States of America, Australia, Canada, Hungary, Taiwan and United Kingdom. There were 14 pharmacists (Grade U41, U44 and U48) involved in these overseas training activities for the year 2007.

**TABLE 16**  
**Training (Within Malaysia) Budget and Expenditure Progress, 2006-2007**

Year	Total Allocation (RM)	Number of Courses / Training	Training (Within Malaysia) Progress				
			No. of Officers (Management & Professional Group)	No. of Officers (Support Group)	Total number of officers	Expenditure (RM)	%
2006	451,450.00	37	609	139	748	451,362.50	99.98
2007	734,865.00	61	962	309	1,271	698,573.22	95.06

Source: Pharmaceutical Services Division, MoH

## Pharmacy Board Of Malaysia

The pharmacy Board of Malaysia was responsible for the registration of pharmacists and body corporate. The types of registrations were:

- i. Full Registration of Pharmacists
- ii. Provisional Registration of Pharmacist
- iii. Temporary Registration of Pharmacist
- iv. Registration of Body Corporate

The registration activities carried out in 2007 is shown in Table 17 and 18.

**TABLE 17**  
**Number of Registration Issued by Category, 2007**

Category	Number
Full Registration (FRP)	525
Provisional Registration (PRP)	614
Temporary Registration	9
Registration of Body Corporate	98

Source: Pharmaceutical Services Division, MoH

**TABLE 18**  
**Number Of Annual Certificates Issued, 2007**

Type	Number
Pharmacists	4,422
Body Corporate	414

Source: Pharmaceutical Services Division, MoH

## National Medicines Policy

The National Medicines Policy (DUNAS) presents the framework of strategies and commitments of the government and all stakeholders in both public and private sectors to a common medium and long term goals for the national pharmaceutical sector. It comprises four main components namely Quality, Safety and Efficacy of Medicines, Availability of Medicines, Affordability of Medicines and Quality Use of Medicines. Four other supporting components were Human Resources Development, Research and Development, Technical Co-operation and Management of the National Medicines Policy. In 2007, the monitoring of DUNAS indicators was implemented on background, structural and process indicators. The background indicators are intended to provide data on demography, economy, health and pharmaceutical status. The structural indicators provide qualitative information to assess the

pharmaceutical system's capacity to achieve the policy objectives. The process indicators provide quantitative information on the processes by which the policy was implemented. The outcome indicators measure the results achieved and the changes that can be attributed to the implementation of the national medicines policy.

### **Quality Use of Medicines**

In 2007, the fourth DUNAS component, i.e. Quality Use of Medicines was given attention, as there was no unit set up formally to manage this component wholly. A project committee for the Comprehensive National Project on Quality Use of Medicine - Consumers (QUM-C) was established to implement this component. It was a three-year project (2006–2008) jointly organised by the Ministry of Health (MoH), Malaysia and Federation of Malaysian Consumers Associations (FOMCA). Other parties contributing to this project include the Malaysian Pharmaceutical Society (MPS) and local universities. This project was comprised of the "Know Your Medicine Campaign" and the "National Survey on the Use of Medications by Malaysian Consumers". A total of RM400,000 was allocated for this project in 2007. The objective of this project was to create awareness, increase knowledge and provide education to consumers on the rational use of medicines.

#### **"Know Your Medicine" Campaign**

The "Know Your Medicine" Campaign was launched at the national level in Melaka on 29 June 2007. The campaign was also launched in Negeri Sembilan and Kelantan in 2007 while the remaining states will launch the campaign in 2008.

#### **A National Survey on the Use of Medications by Malaysian Consumers**

This survey was jointly conducted with University of Sciences, Malaysia. A meeting to discuss on the data collection for the survey, method and division of urban and rural areas for each state was carried out on 26 October 2007 involving 46 Pharmacy Officers including Pharmacy Assistants from all states. The first phase of the survey was conducted from November 2007 to January 2008. Subsequently, the second phase will be undertaken after the campaign was launched in all states, to enable comparison on the level of public awareness and knowledge before and after the "Know Your Medicine" Campaign.

#### **The "Know Your Medicine" Portal**

The official website for the "Know Your Medicine" campaign i.e. [www.knowyourmedicine.gov.my](http://www.knowyourmedicine.gov.my) was launched in 2007. The portal contains articles of interest to consumers as well as pictures of all campaign kits used in the project. Activities scheduled for the campaign was also continuously updated in the portal. The website has been translated from English to Bahasa Malaysia (BM) version. The BM version will be uploaded in early 2008.

## Examples of campaign kits:



## “National Medicines Use Survey”

The National Medicines Use Survey (NMUS) was a research project jointly sponsored by the Pharmaceutical Services Division and Clinical Research Centre (CRC), Ministry of Health Malaysia and was initiated in 2005. In September 2006, the Pharmacy Programme, MoH undertook the role of primary sponsor for the NMUS and CRC remained as an important collaborating unit providing research and statistical support. NMUS will continue to be an ongoing activity to track the utilisation of medicines in the country that was expected to change with time. From NMUS, Malaysian Statistics of Medicines (MSOM) 2005 was published and the data collection for MSOM 2006 had been initiated beginning November 2007.

## New Service of Pharmacy Programme

### Medication Safety

The Medication Safety Unit of Pharmaceutical Services was established in 2007 with the main objective to collect data on medication errors and disseminate information on how to avoid them. Besides being the coordinator for the Medication Safety Technical Advisory Committee (MedSTAC) and the Patient Safety Committee, Pharmacy Programme was also involved in other committees pertaining to patient safety such as the Continuous Professional Development and Consumer Education Technical Advisory Committee and providing feedbacks to the Patient Safety Council of Malaysia (PSCoM). In future, this unit will established “Medication Error Reporting” at national level.

## WAY FORWARD

In the years ahead, the Pharmacy Regulatory Division (National Pharmaceutical Control Bureau or NPBC) will be strengthened through a multi-tiered strategy of enhancement of quality control aspects among the manufacturers of traditional products, capacity building in specific fields such as biotechnology, inspection of clinical trial centres and licensing of manufacturing facilities of plasma and blood products. NPCB will continue to prepare for the registration of active pharmaceutical ingredients. When implemented, it will be the sixth phase, respectively of the overall product registration package. With the web-based system, known as QUEST, an acronym for Quality, Efficacy and Safety, companies are able to submit their applications from any part of the world at any time of the day. The use of QUEST has proven to be beneficial to the NPCB as well as to the local industry as it has streamlined the registration process and reduced bureaucracy. In tandem with its efforts for continuous improvement, the work process of upgrading QUEST 2 to QUEST 3 was currently in progress. In terms of quality control, NPCB will continue its efforts towards further upgrading the laboratory quality management system to achieve the ISO 17025 accreditation by 2008.

Enforcement activities such as inspection and licensing which involved importation, distribution, usage of control substance and diversion control of industrial chemical for illegal activities will be strengthened. Pharmacy legislation will be strengthened to ensure penalties imposed on offenders commensurate with type of offence. The Enforcement Division will strive to educate the public on dangers of consuming unregistered products with long term strategies to reduce or eliminate public demand for such products. A strategic plan will be formulated to provide for effective pharmacy enforcement against offenders.

The Pharmacy Development and Practice Division will upscale Consumer Education Programmes to increase awareness and improve public knowledge on quality use of medicines and pharmaceutical products. Greater involvement of the media and better utilisation of information and communication technology would be looked into as strategies of improving public education on pharmaceutical-related matters. Consumers will also be taught to be wary of adulterated and fake products in the market to avoid the risk of adverse effects. The Pharmacy Programme was planning to set up a "National Pharmacy Call Centre" to expand its scope of Drug Information Services.

Additional posts and human resource development will enabled the Pharmaceutical Services Division to initiate new services in tandem with current global practice. The expansion of clinical pharmacy services for example, had strengthened the role of pharmacists as members of the multidisciplinary healthcare team delivering care to patients. With such rapid expansion of human resource, there was an obvious need for prompt system and infrastructure changes to result in maximum productivity and service excellence. Upgrading of facilities and infrastructure of hospital pharmacies throughout the country for provision of comprehensive centralised aseptic services as formulated under the 9th Malaysian Plan for Pharmaceutical Services, pose as one important strategy towards enhancing delivery of pharmacy services to patients and ensuring safety in medicine use.

In line with such changes, steps will also be taken to strengthen system and working operations through development of standard operating procedures and guidelines as well as capacity building with due focus to be given on establishing specialised pharmacy practice to further improve quality of pharmaceutical care. All these approaches were the result of long term strategic planning to achieve sustainable excellence in pharmacy practice.

Drug procurement and supply systems will also be strengthened and integrating economic evaluation in managing the formulary will be a strategy towards rational prescribing and ensuring patient access to medications that will improve their health outcome and quality of life.

## **CONCLUSION**

The growing number of pharmacists in the government sector was made possible by the implementation of the compulsory service, thus strengthening the Pharmacy Programme. As a result of this policy, new services can be introduced while at the same time improving the standard and quality of existing services. These combined efforts are necessary to ensure that the Pharmaceutical Services of MoH maintains its focus to ensure that pharmaceutical products in the market are of quality, safety and efficacy, used in a rational manner and are accessible and affordable to the Malaysian population.

# TELEHEALTH



## **TELEHEALTH**

### **INTRODUCTION**

Telehealth Division reported directly to the Director General of Health but gets its funding through the Medical Programme. Based on new priorities set by Ministry of Health, Telehealth projects include Tele-consultation, Health Online, Continuing Professional Development, and development of Call Centre (subject to 9th Malaysian Plan Mid Term Review in early 2008).

### **ACTIVITIES AND ACHIEVEMENTS**

#### **TeleConsultation (TC)**

In 2007, implementation of the reactivated Teleconsultation project continued besides getting feedback to improve the Teleconsultation application, relocation of workstations to potential active sites, giving training, and migration from ISDN to leased line. A negative trend in utilization in the first half of the year was reversed through renewed contacts and better communications with the users particularly with the service/network leadership. However, the positive trend in utilization was limited by, among others, hardware obsolescences. Active sites were identified and given support. There were 1,569 and 2,102 cumulative cases and transactions respectively transmitted using the Teleconsultation System between June 2006 and December 2007 ( as compared to the utilization between March 2001 and December 2002 of 1,066 cases). The most active disciplines were Neurosurgery (595 cases) and Radiology (453 cases), which accounting for about 67% of the total cases.

A strategic review and evaluation of Teleconsultation implementation in Ministry of Health was done through review of past assessments (2004-2006) and audit reports. A concept paper "Beyond The Teleconsultation Project: Establishing Teleconsultation Work Culture" was presented in the Telehealth Steering Committee meeting in July 2007. The paper emphasizes on focus and alignment of Teleconsultation services during implementation.

Teleconsultation Strategic Evaluation Committee was established and had two initial meetings. The committee, comprises of officers from the Medical Development, Family Health Development, Information & Communication Technology and Telehealth Division, is to review the evaluation of services provided by Teleconsultation and to propose strategic directions to the National Telehealth Steering Committee.

A study on the reactivation of Teleconsultation Services was done in six (6) selected hospitals namely Kuala Lumpur Hospital, Tengku Ampuan Rahimah Hospital, Ipoh Hospital, Sri Manjung Hospital, Grik Hospital and Pulau Pinang Hospital in August to September 2007. Subsequently, a workshop: "Strategic Coordination of Teleconsultation Project" was held on 29 - 31 October 2007, with the objectives of focusing on service network among Teleconsultation leaderships and users, identifying Teleconsultation services and system networks/sites with real needs, and implementation issues and strategies. A survey of the participants' opinion on Teleconsultation Services was also done during the workshop. The preliminary report was tabled at the National Telehealth Steering Committee meeting on 23 November 2007.

In line with the aims to increase Teleconsultation services utilization, expansion and innovation, a proposal paper for enhancing and procuring a new system for the period of 2008 - 2010 was approved during the meeting. This include implementation of preliminary strategies such as migration from the dedicated Teleconsultation Virtual Private Network to the shared Ministry of Health, Virtual Private Network and continued operational support and maintenance, implementation of enhanced Teleconsultation System, facilitation of non-Telehealth Teleconsultation practices and the development and integration with other Telehealth systems such as (Total) Hospital Information System, *Sistem Pengurusan Pesakit*, Tele-Primary Care by other programs to further tap the potential and opportunities for Teleconsultation as a mainstream activity.

## Health Online

Health Online provides a platform for the dissemination of health information and education for the public through the internet. The Portal has been operational since November 2005 and was officially launched during the World Health Day Celebration on 25 April 2006 by Y.A.Bhg. Datin Seri Rosmah Mansor.

The portal is supported by an Editorial Board and several Content Groups. A panel of specialists provides advice through e-mail. The Health Online Portal provides services which include Health Topics, Health News/Articles, Health Service Directory, Health Events, Health Alert, Discussion Forum, Advisory Services and Polls/Surveys.

In 2007, 83 additional topics have been hosted for a total of 583 topics. Portal hits have increased to 380,000. The portal has also been accessed through linkages from other health related sites. Awareness campaigns have been conducted through the media and expositions. In addition, health staffs have been conducting face-to-face session with members of the public at hospitals and clinics.

Advisory Services (Ask the Expert) has improved with the appointment of 242 specialists from various disciplines in the 'Ask The Expert' panel of advisors.

## **Continuing Professional Development (CPD)**

Online CPD Services is a programme to assist the MoH staffs to have equal access and opportunity to update CPD activities and materials via the Virtual Library and Modular Distance Learning programs. The Online CPD Monitoring project also known as 'myCPD' will allow MoH healthcare providers (HCP) to plan, record and track their CPD activities and hence acquire credit points. Online Continuous Professional Development (CPD) Services comprises of Online CPD Monitoring, Virtual Library and Modular Distance Learning.

The Online CPD Monitoring includes CPD logbook, CPD credit points, calendar of events and Competency Assessment. The vendor has been appointed on 16 December 2006 and the system development has been completed. The system that will cater all categories of healthcare providers will go live by February 2008. The Virtual Library was providing access to local and commercial knowledge database and Libraries network linkage within Ministry of Health (MoH) and the vendor has been appointed on 7 November 2007. For Modular Distance Learning (MDL) topics of selected medical and health related subjects will be accessible online through an interactive sessions of learning and acquisition of credit points. The Medical Program Division will study the mechanism for accreditation of online training activities by the respective professional bodies.

## **Call Centre**

MoH National Health Call Centre Technical Committee has been set up and comprised of 8 main service owners in Ministry of Health. MoH National Health Call Centre is now known as 'MyHealth Careline'. This will help the public to differentiate it from other call centre(s) dealing with emergency, complaint, etc.

A paper on 'Business Requirement Framework' on MoH National Health Call Centre has been presented to both MoH National Health Call Centre Technical Committee and MoH Telehealth Steering Committee. The implementation of MoH National Health Call Centre under the 9th Malaysian Plan will be determined in early 2008 during the 9th Malaysian Plan Mid Term Review which subject to availability of funds and priorities of Ministry of Health.

## **CONCLUSION**

Despite the various challenges, the Telehealth Division has forged ahead with the implementation of the various projects. Teleconsultation services are being expanded. Health Online content has been increased to meet the current demand. Efforts were undertaken in improving the response time of 'Ask The Expert' services. The Online Monitoring of CPD system has been developed and tested and will commence services in 2008.



# NURSING



## NURSING

### INTRODUCTION

The Nursing Division, Ministry of Health is headed by the Director of Nursing, who is also the registrar of Nursing Board. Administratively Nursing Division oversees all Nursing Services, where Regulatory activities is regulated by Nursing Board and Midwifery Board. The Division is further divided into five key sub-units of Quality Service; Examination and Curriculum; Nursing Registration; Research and Development; and Continuous Professional Development.

For the year 2007, the Nursing activities were further strengthened with the introduction of National Nursing Audit to audit nursing procedures; Excellent Nurses Award (*Anugerah Zamrud*), *Mentor – Mentee Program* (Internship) and the establishment of the Cooperative Society for Nurses

### ACTIVITIES AND ACHIEVEMENTS

#### Registration of All Categories of Nurses

Graduates from the various categories of nursing activities including General Nursing, Assistant Nurses, Community Nurses (Midwifery Div. III), Public Health Nurses, Midwifery Division I were registered with the Nursing Board Malaysia or Midwifery Board Malaysia. There were 8,638 new registered nurses in 2007 (Table 1).

**TABLE 1**  
**Number of New Registered Nurses by Category, 2006 - 2007**

Categories of Nurses	2006	2007
Staff Nurse	3,459	6,074
Assistant Nurse	265	238
Community Nurse (Midwifery Part III)	1,483	1,484
Public Health Nurse	120	121
Midwifery Part I	709	709
Mental Health Nurse	12	12
<b>Total</b>	<b>6,048</b>	<b>8,638</b>

Source: Nursing Division, MoH

## Issuance of Annual Practicing Certificate (APC)

The APC with yearly renewal was issued to different categories of nurses practicing in the public as well as private sector. The total number of APC issued in the year 2007 were 67,731 (Table 2), reflecting the total number of active and practicing nurses in the country.

**TABLE 2**  
**Issuance of Annual Practice Certificate by Category of Nurses, 2006 - 2007**

Category	2006	2007
Staff Nurse	42,836	47,429
Assistant Nurse	5,076	4,907
Community Nurse (Midwifery Part III)	11,753	15,395
<b>Total</b>	<b>59,665</b>	<b>67,731</b>

Source: Nursing Division, MoH

## Nursing Examinations

Activities involved in nursing examinations includes setting of questions, preparation of question papers, marking answer papers, announcing examination results and issuing training certificates. In 2007, the Division conducted examinations for the Community Nurses 2 ½ years training Programme and Midwifery Division I Programme. Table 3 shows comparison of the final examination result for Community Nurses and Midwifery Part I for the year 2006 and 2007.

**TABLE 3**  
**Comparison Results for the Final Examination of Community Nurse and Midwifery Part I, 2006 and 2007**

Examination	Result	2006	2007
Community Nurse	No. of Candidates	1,412	1,361
	Passed (%)	98.6	98.7
	Failed (%)	1.4	1.3
Midwifery Part I	No. of Candidates	832	852
	Passed (%)	94.1	80.6
	Failed (%)	5.9	19.4

Source: Nursing Division, MoH

Table 4 shows comparison of the final examination result for Basic Diploma Programme and Assistant Nurse for the year 2006 and 2007.

**TABLE 4**  
**Comparison Results for the Final Examination of Basic Diploma Program and Assistant Nurse (IPTS), 2006 and 2007**

Examination	Result	2006	2007
Basic Diploma Program	No. of Candidates	3,648	4,085
	Passed (%)	95	97.5
	Failed (%)	5	2.5
Assistant Nurse (IPTS)	No. of Candidates	109	87
	Passed (%)	100	100
	Failed (%)	0	0

Source: Nursing Division, MoH

### Approval and Accreditation of Nursing Curriculum

The Nursing Board was also responsible for accreditation and approval of the curriculum for all Nursing Programme. Supervision, monitoring and evaluation of all Nursing Colleges and Institutes of Higher Education in the public and private sectors (IPTA and IPTS) as well as all designated health or hospital facilities used for the training of nurses were carried out to ensure quality nursing services.

### Issuance of Temporary Practicing Certificates (TPC)

Foreign nurses working in Malaysia were required to apply for registration and renewal of temporary practicing certificates. A total of 1,199 TPC were issued to nurses from 15 countries of which 639 were new and 560 were for renewals (Table 5). The total had increased by 47.5% as compared to 813 issued in 2006.

**TABLE 5**  
**Number of Temporary Practicing Certificates (TPC) Issued by Country, 2007**

Country	Total
India	963
Myanmar	79
Filipina	69
Australia	1
Irish	2
Indonesia	70
Singapore	2
Vietnam	2
USA	1
Netherlands	1
Britain	1
Amerika	3
Taiwan	3
Zimbabwe	1
Iran	1
<b>Total</b>	<b>1,199</b>

Source: Nursing Division, MoH

### Registration of Nursing Services

The Division was also responsible for the verification of registration, reproduction of transcripts for the purpose of pursuing higher education and reproduction of badges and certificates to replace lost or damaged badges and certificates. In 2007, activities related to reproduction of transcripts, verification of registration and replacement of badges had increased, while retention of name reduced to 1,585 (7%) as compared to the year 2006 (Table 6).

**TABLE 6**  
**Number of Related Activities to Registration of Nursing Services, 2006 and 2007**

No.	Activities	2006	2007
1	Confirmation of Transcripts	252	351
2	Verification of Registration	229	327
3	Replacements of Badges	105	151
4	Statement of Registration	85	80
5	Retention of Name	1,704	1,585

Source: Nursing Division, MoH

The Board also contributed towards nursing education with the objective to improve the skills and competencies of nurses. National or international seminars, conferences and workshops were planned and coordinated together with the cooperation of the public and private agencies locally and abroad to ensure the excellence and quality in the development of nursing in Malaysia.

## **WAY FORWARD**

The on-line Continuous Professional Development (eCPD) will be implemented in 2008. The Nursing Division had been appointed as a Programme Coordinator by Ministry of Health to prepare the Continuing Professional Development and Nursing Guidelines for career development of nurses in IPTS and IPTA. Nursing Practice Guidelines for all procedures that consist of 25 disciplines will be launched in the year 2008 in line with the Division's mission to become a Division that portrays professionalism and excellence in the services.

## **CONCLUSION**

In the year 2007, Nursing Division had successfully formed Cooperative Society for the nurses who help social welfare of the nurses. National Nursing Audit continuously monitors nursing standard and Nurse Excellent Award. These achievements help to motivate and upgrade nursing profession in the nation.



# **CORPORATE POLICY AND HEALTH INDUSTRY**



## **CORPORATE POLICY AND HEALTH INDUSTRY**

### **INTRODUCTION**

The Corporate Policy and Health Industry Division assisted the top management to formulate policies related to the health sector. The Division was also the secretariat that support matters related to the Cabinet; coordinated issues related to trade in health; acted as a focal point of the Ministry in international relations issues; and in promoting the local healthcare industry. This Division was also the designated focal point for World Health Organisation (WHO) for the country.

The Division carries out its activities via three Sections namely Corporate Policy and Secretariat Section; International Relations Section; and Health Industry Section.

### **ACTIVITIES AND ACHIEVEMENTS**

#### **Cabinet Related Matters**

For the year 2007, this Division evaluated and processed 27 Cabinet Notes and 37 Memorandums from the Ministry of Health (MoH) for presentation in the Cabinet Meetings. This Division also monitored, provided inputs and facilitated the preparation of 78 official comments on Memorandums submitted by other ministries and 188 official feedbacks on decisions taken by the Cabinet throughout the year 2007.

#### **High Level Meetings within MoH**

This Division was also the secretariat for the following meetings in 2007. The meetings were 33 Post-cabinet Meetings, 20 Morning Prayers, 2 Secretary General's Meeting with State Health Directors; and 2 Annual Work Plan Meetings for the Management Programme.

#### **Policy Studies and Evaluation**

In the year 2007, the Division conducted two short studies which were, "A Study on the Issue of Unpaid Medical Bills by Foreign Patients in MoH Hospitals" and, "A Study on the Feasibility of RM1 Fee Collection in MoH Health Facilities".

#### **Courses and Seminar**

The Division conducted two Introductory Health Economics Courses to introduce the concept of health economics to the administrative officers. A total of 46 MoH administrative officers including hospital administrators participated in both courses. Apart from the course which is conducted routinely, this Division also conducted two workshops on the implementation of Gender Budgeting from 26 – 28 February 2007 and 2 – 4 December 2007 involving a total of 63 MoH officers and a seminar entitled Emotional Excellence for a Healthy Lifestyle" on 26 October 2007 for senior MoH officers.

## **World Health Organisation (WHO)**

Throughout 2007, this Division coordinated 8 WHO sponsored study visits to Malaysia, placements of 20 foreign WHO Consultants and 18 WHO fellows in various institutions in Malaysia. Additionally, this Division also coordinated and processed applications from 134 participants and 21 temporary advisors comprising Malaysian professionals to attend 84 meetings/workshops/study visits overseas under WHO sponsorship.

The Division also coordinated the participation of the Malaysian delegation led by the Minister of Health to the following WHO events:-

- (i) The Pre-World Health Assembly for Commonwealth's Minister of Health Meeting in Geneva, Switzerland on 13 May 2007;
- (ii) The World Health Assembly in Geneva, Switzerland from 14 – 18 May 2007; and
- (iii) WHO Western Pacific Regional Committee Meeting in Jeju Island, the Republic of Korea from 10 – 14 September 2007.

In 2007, when WHO decided to set-up a Global Service Centre (GSC) to consolidate the processing of administrative transactions worldwide in a single centre, Kuala Lumpur was among the 4 choice locations worldwide. This Division led the negotiations between WHO officials and Malaysian officials which comprises among others, officials from Ministry of Foreign Affairs, Ministry of Finance and the Attorney General's Chambers. After a series of negotiations, WHO choose Cyberjaya as the location for GSC. The host country agreement was signed on 12 December 2007. The GSC is expected to fully operational in 2009 and will employ up to 240 Malaysians in various capacities.

## **International Relations in Health**

Throughout 2007, this Division coordinated the Minister of Health's working visits to India, Indonesia and Iran as an effort to strengthen bilateral relations in health between the countries. The objectives of these visits vary from country to country such as cooperation in traditional and complementary medicines, inspecting foreign workers medical check-up facilities and cooperation in medical research and pharmaceutical manufacturing facilities.

This Division was also the secretariat for the 4th Malaysia-Thailand Health Conference which was held from 26 – 28 September 2007 in Kuching, Sarawak. Various areas of cooperation were discussed during the health conference namely disease surveillance and control, research in medicine and health, traditional medicine and biotechnology related to herbal medicine and Global Information Hub on Integrated Medicine (GLOBinMED), health tourism development, drug enforcement and regulatory control, food safety control, human resource development for healthcare provision and study on burdens of disease and injury.

This Division also represented MoH in Joint Commission Meetings (JCM) and Joint Trade Commission (JTC) Meetings between Malaysia and several countries such as India, Laos, Iran, Thailand, Syria, Uzbekistan and South Africa either as a member of the Malaysian delegate or through preparation of inputs or talking points related to health sector.

This Division is also the focal point for the delivery of technical expertise and assistance to foreign countries through study visits and training attachments. A total of 801 foreign visitors from 24 countries have visited MoH in 2007 either through study visits or training attachments in various institutions and Divisions under MoH.

### **Trade in Health**

This Division is responsible for coordinating trade in health related issues. Throughout 2007, this Division worked closely with the Medical Practice Division, Pharmaceutical Division, Oral Health Division and the Ministry of International Trade and Industry (MITI) in providing MoH's input for Malaysia's position on issues related to the health sector such as liberalisation of the health services sector and intellectual property rights in bilateral trade meetings between Malaysia and Australia, New Zealand, Pakistan, United States of America, Chile and Syria respectively. Additionally, officers from this Division represented the Ministry in several rounds of negotiations for the Malaysia-United States Free Trade Agreement, Malaysia - Australia Free Trade Agreement and Malaysia-Pakistan Closer Economic Partnership Agreement.

At the multilateral level, this Division coordinates for MoH, health sector related issues which were discussed at length in ASEAN and World Trade Organisation (WTO) level. This Division together with Medical Practice Division also represented MoH at the Services Negotiations in WTO, Geneva 16-27 April 2007.

### **Inter-governmental Working Group (IGWG) Meeting on Public Health, Innovation and Intellectual Property**

Officers from the Corporate Policy and Health Industry Division, National Pharmaceutical Control Bureau and Institute of Medical Research represented Malaysia at the Inter-governmental Working Group (IGWG) Meeting on Public Health, Innovation and Intellectual Property in Geneva, Switzerland from 5 - 10 December 2007. The meeting was the continuation of the first meeting held in the year 2006. The IGWG was given mandate by the 59th World Health Assembly in May 2006 to prepare a Plan of Action and Global Strategy to address the problem on the accessibility of drugs in developing world. As preparation prior to the meeting in Geneva, a consultation meeting among WHO member states from the Western Pacific Region were held in Manila, Philippines from 5 - 7 September 2007. The consultation meeting was co-chaired by an officer from this Division and the Director of Philippines' Bureau of Food and Drugs.

## Health Industry Promotion

This Division is also tasked to work closely with other Government Agencies such as MITI, Ministry of Tourism, Malaysia External Trade Development Corporation (MATRADE), Malaysia Industrial Development Authority (MIDA) and industry associations to promote and develop the local health industry.

In 2007, this Division was involved in the following activities to promote the local health industry:

(i) Malaysia Healthcare – Seminar & Exhibition 2007

The exhibition was held in Surabaya, Indonesia from 30 November – 1 December 2007. As the organizer, this Division collaborated with Malaysian private hospitals, pharmaceutical companies and medical devices companies to promote healthcare services and products in an integrated manner.

(ii) Malaysia Showcase, Hanoi 2007

The Embassy of Malaysia in Vietnam and Tourism Malaysia jointly organised the Malaysia showcase in Hanoi, Vietnam from 24 – 26 August 2007 in conjunction with the 50th Anniversary of the Declaration of Independence and Visit Malaysia Year 2007. This Division participated in the showcase in order to market health tourism products/services offered by Malaysian hospitals.

(iii) Medica 2007

The 39th World Forum for Medicine International Trade Fair with Congress (Medica 2007) was held in Dusseldorf, Germany from 14 – 17 November 2007. The world's largest medical devices and supplies trade show with over 4,000 exhibitors held every year in November in this German city is an opportunity for Malaysia to showcase its medical and health related products. This Division coordinated the participation of the MoH delegation to the trade show and manned Malaysia's exhibition booth. A total of 1,500 information kits were successfully distributed to the visitors. The Malaysian delegation also exhibited medical grade PVC devices, sutures and other rubber based medical devices.

### **Official Visit to Samitivej Hospital (Sukhumvit) and Bumrungrad International Hospitals in Bangkok, Thailand**

This Division also coordinated the visit of the MoH delegation comprised of senior MoH officers to Samitivej Hospital (Sukhumvit) and Bumrungrad International to gain knowledge and share experience on the Joint Commission International (JCI) accreditation. The visit was held from 13 – 15 December 2007.

### **CONCLUSION**

Throughout the year 2007, the activities of the Corporate Policy and Health Industry Division were carried out as planned. This Division will continue to intensify its various activities in the coming years despite manpower constraints to achieve objectives set out in the 9th Malaysia Plan and the 3rd Industrial Master Plan.



# HEALTH LEGISLATION



## **HEALTH LEGISLATION**

### **INTRODUCTION**

The volume and scope of work done by the Legal Advisor's Office is firmly dependant on the exigencies of the Ministry of Health. As such, it deals with a wide array of legal issues ranging from planning, vetting and drafting all legal documents, such as contracts, legislations, be it principal Acts of Parliament or subsidiary legislations as well as conducting litigation related to the Ministry of Health on behalf of the Government. In all cases, its work is premised on the notion that well informed advice is undoubtedly essential to the implementation of good legislation. In this respect, the Legal Advisor's Office plays a prominent role in the prosperous implementation of various new policies introduced into law.

### **ACTIVITIES AND ACHIEVEMENTS**

One of the highlights of 2007 was the coming into force of the Malaysian Health Promotion Board Act 2006 [Act 651]. The establishment of the Ministry's first ever statutory body indeed materialized with the enforcement of Act 651 on 1 April 2007.

The much anticipated Pathology Laboratory Act 2007 [Act 674] was also enacted. Act 674 is intended to protect the public as it ensures that the public gets uncompromising and quality-assured laboratory testing to enable medical practitioners to make a legitimate diagnosis. The Act is also necessary to have greater control on the pathology laboratory services in Malaysia and to ensure that only qualified medical practitioners are given the license or approval to supervise medical laboratory testing facilities.

Apart from the above, several existing health legislations were also revised and amended to keep in line with the various new health policies introduced into law.

### **WAY FORWARD**

In this era of globalisation and fast pace of technology advancement, challenges and responsibilities faced by the Legal Advisor Office particularly and Ministry of Health generally will require more efforts and commitments. There are proposals of new primary and subsidiary legislations in the pipe line to ensure Ministry of Health achieved its paramount objective of delivering safe and quality healthcare to all Malaysians. The few important and priority new laws are Medical Devices Bill and the Fee (Medical) (Full Paying Patient) Order.

It is also the Ministry of Health's target to revise the Medical Act 1971 (Act 50) and most imminently to bring into force the Mental Health Act 2001 (Act 615). Besides that, all existing health or health related laws will continue to be updated and amended, if necessary.

## **CONCLUSION**

The Legal Advisor Office is dedicated and committed in helping the Ministry of Health to achieve its goal in delivering better healthcare to the nation. Challenges faced and achievement obtained in 2007 served as valuable experiences and satisfaction for the Office to move forward with great motivation.

# INTERNAL AUDIT



## INTERNAL AUDIT

### INTRODUCTION

In May 1980, the Internal Audit Division (IAD) of Ministry of Health (MoH) was established in accordance with Treasury Circular 2 of 1979 and further reinforced by Treasury Circular 9 of 2004. IAD was established administratively and reports directly to the Secretary General of MoH. The main role of the IAD is to assist MoH to achieve its objectives through systematic and continuous evaluation ensuring effectiveness of internal control processes and good governance.

### ACTIVITIES AND ACHIEVEMENTS

In 2007, IAD successfully carried out financial audits, performance audits and special audits. In addition, officers from IAD were also invited by other MoH Divisions to give lectures or advisory services on financial management issues and audit observations as shown in Table 1.

**TABLE 1**  
**IAD Targets and Achievements in 2007**

Programs/Activities	Target	Achievements
Financial Audit	50 RC	53 RC
Performance Audit	8 topics (45 RC)	5 topics (40 RC)
Special Audit	8 cases	12 cases

Note: RC – Responsibility Centres

Source: Internal Audit Division, MoH

### Financial Audit

Financial audit includes the review of internal controls and compliance to government laws, regulations and directives on financial management. It covers 4 aspects of office management, revenue, expenditure and assets of MoH. In 2007, IAD had carried out financial audits on 53 Responsibility Centres (RC) throughout the country.

## **Performance Audit**

In order to ensure that MoH utilized its limited resources economically, efficiently and effectively, IAD also carried out performance audits on MoH Programs, activities and projects. Through this audit, IAD was able to identify weaknesses or short-comings on the management and operation of MoH programs/activities/projects and suggest practical proposals to overcome the issues and challenges, in order to ensure quality service delivery to all stakeholders. In 2007, IAD had carried out 5 performance audits involving 40 RC.

## **Special Audit and Investigation**

Special audits or investigations were carried out based on reports or instructions from the Secretary General. In 2007, IAD had carried out 12 special audits or investigations.

## **Lectures and Advisory Services**

IAD officers were also invited by various MoH Divisions to give lectures and advisory services on financial management issues or audit observations. A total of 22 lectures and advisory services were carried out by IAD officers in 2007.

## **WAY FORWARD**

IAD is committed in helping MoH to enhance its service delivery system to its client in an economic, efficient and effective manner. Hence, IAD has to carry out proactive risk analysis on the financial management and programs or activities of MoH, in line with the aspiration and the needs of the MoH stakeholders. The way forward of IAD is managing change in the government operating mode from manual to computers. Therefore getting involve in the System Development Life-Cycle, doing Performance Audit into the ICT systems and reviewing the internal controls of the system in MoH is necessary.

## **CONCLUSION**

IAD of MoH had successfully carried out its programs or activities as planned. With this commitment and full cooperation, IAD is confident that MoH could enhance further the financial and programs/activities/projects management. MoH must seriously take actions to rectify or remedy the issues and weaknesses reported by IAD to avoid this recurring in future.

## IMPORTANT EVENTS IN 2007



## IMPORTANT EVENTS IN 2007

### 9 January

Y.A.B. Dato' Seri Abdullah Haji Ahmad Badawi, the Prime Minister of Malaysia launched the Ground Breaking of the National Cancer Institute in Putrajaya. The National Cancer Institute will bring under one roof the different approaches in cancer prevention through education, treatment, rehabilitation and research. This is the government's commitment to curb the rising number of cancer deaths.

### 9 February

Y.Bhg. Dato' Sri Dr. Hj. Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia officiated *Jasamu Dikenang* 2007 Ceremony in appreciation of Ministry's staffs who retired from service in 2006 at the Multipurpose Hall, Ministry of Health Malaysia.

### 21 March

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia officiated the Health Ministry Media Awards Night 2007 at Sheraton Subang Hotel, Selangor.

### 2 May

Y. Bhg. Datuk Dr. Hj. Mohd Ismail Merican, Director-General of Health Malaysia officiated the Health Ministry's Specialist Conference 2007 at Allson Klana Hotel, Seremban, Negeri Sembilan.

### 3 May

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the National Thalassaemia Day 2007 at Dataran Ranau, Sabah.

### 30 May – 1 June

Y.Bhg. Dato' Sri Dr. Hj. Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia officiated the Malaysian National Health Policy (MNHP) Meeting at Sunway Lagoon Resort Hotel, Selangor.

### 8 – 11 June

Y.Bhg. Dato' Lee Kah Choon, Parliamentary Secretary, Ministry of Health Malaysia officiated the first National PROSTAR Convention and Colloquium at University Putra Malaysia.

## **12 – 15 June**

Y.A.B Dato' Seri Abdullah Haji Ahmad Badawi, Prime Minister of Malaysia officiated the first Kuala Lumpur-OIC Health Ministerial Conference at Sunway Lagoon Resort, Subang Jaya. The conference, themed "Health: The Impetus Towards Islamic Solidarity" produced resolutions that focused on vaccine-preventable diseases and vaccines production among member countries. Health Ministers and representatives from each of the 57 OIC countries attended the four day conference.

## **22 June**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the National Health Day 2007 Celebration at Shah Alam, Selangor.

## **26 June**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia officiated the Ministry's 2006 Excellence Service Award Ceremony at the Complex E Auditorium, Putrajaya.

## **29 June**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the first Know Your Medicines Campaign at Dataran Pahlawan, Melaka.

## **17 – 19 July**

Malaysia hosted the 6th International Conference on Traditional and Complementary Medicine (INTRACOM) and 3rd International Congress on Traditional Medicine and Materia Medica (ICTMMM) at Putra World Trade Centre, Kuala Lumpur. The event was officiated by Y. B. Datuk Seri Dr. Chua Soi Lek, Minister of Health, Malaysia representing the Honourable Prime Minister of Malaysia.

## **22 July – 19 August**

Y.Bhg. Dato' Dr. Hj. Ramlee Bin Hj. Rahmat, Deputy Director-General of Health (Public Health) launched the Inter-Country Workshop On The Transfer Of Training Technology at Pearl International Hotel, Kuala Lumpur. The workshop was attended by 20 participants from Cambodia, China, Indonesia, Laos PDR, Malaysia, Philippines, Thailand and Vietnam.

## **23 – 27 July**

Y.B. Datuk Dr. Hj Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated the 13th ASEAN Consultative Committee for Standards and Quality (ACCSQ) Pharmaceutical Product Working Group (PPWG) Meeting in Kuala Lumpur.

## **23 August**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the Health Ministry Malaysia's 50 Years Independence Celebration at Auditorium Complex E, Putrajaya.

## **2 September**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the National World Heart Day 2007 at Technological University of Malaysia (UTM), Johor. The theme for this year was "Healthy Families, Healthy Communities" and slogan "Team Up for Healthy Hearts".

## **2 – 4 September**

Y.B. Datuk Dr. Hj. Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated MoH National Level Tilawah Al-Quran Competition 2007 at Sultan Abdul Halim Mua'adzham Shah Hall, Isaniah University College, Kedah.

## **26 – 28 September**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia attended the 4th Malaysia-Thailand Health Conference in Kuching, Sarawak. The Conference was held as a follow up to the 3rd Malaysia -Thailand Health Conference that was held in Phuket, Thailand in 2003 and has been the second such bilateral meeting on health between both nations that has been attended by the Ministers reflecting the cooperation at the highest levels. This Conference served as a framework for the implementation of bilateral cooperation on health matters for the mutual benefit of both nations.

## **26 October**

Y.A.B. Dato' Seri Abdullah Haji Ahmad Badawi, Prime Minister of Malaysia officiated the opening ceremony of Kepala Batas Hospital and the Traditional and Complementary Medicine Unit, of the hospital. The hospital has been identified as one of the integrated hospitals that will offer acupunctures and malay traditional massages for post-stroke treatment and chronic pain as well as adjunct treatment with herbs for cancer.

## **1 November**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia officiated MoH *Hari Raya Aidilfitri* Celebration 2007 at Dataran Bendera, Complex E, Putrajaya.

## **20 November**

Y.Bhg. Dato' Lee Kah Choon, Parliamentary Secretary, Ministry of Health Malaysia launched the first Quit Smoking Infoline at Tanglin Clinic, Kuala Lumpur.

## **22 November**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the National Mental Health Day 2007 at Swiss Inn Hotel, Sungai Petani, Kedah.

## **2 December**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia represented the Deputy Prime Minister to officiate the National AIDS Conference 2007 themed “Keep The Promise, Uniting In Action” at The Legend Hotel, Kuala Lumpur.

## **5 December**

Y.B. Datuk Dr. Hj. Abdul Latiff Ahmad, Deputy Minister of Health Malaysia officiated MoH Annual Conference on Management, Quality Day, Annual Dinner and *Malam Mesra Kenangan* 2007 at The Legend Hotel, Kuala Lumpur.

## **10 December**

Y.B. Datuk Seri Dr. Chua Soi Lek, Minister of Health Malaysia launched the first Guidelines on Labeling of Nutrition Information for Fast Food” at the Multipurpose Hall, Ministry of Health Malaysia. The guideline served as a reference to the fast food industries, advertising agencies and broadcasting bodies in advertising and labeling nutrition information on fast food.

## **12 December**

Ministry of Health Malaysia and World Health Organization signed an agreement for the Establishment of World Health Organization Global Service Centre (WHO GSC) in Cyberjaya.



MINISTRY OF HEALTH MALAYSIA

ISSN 1511-1512



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