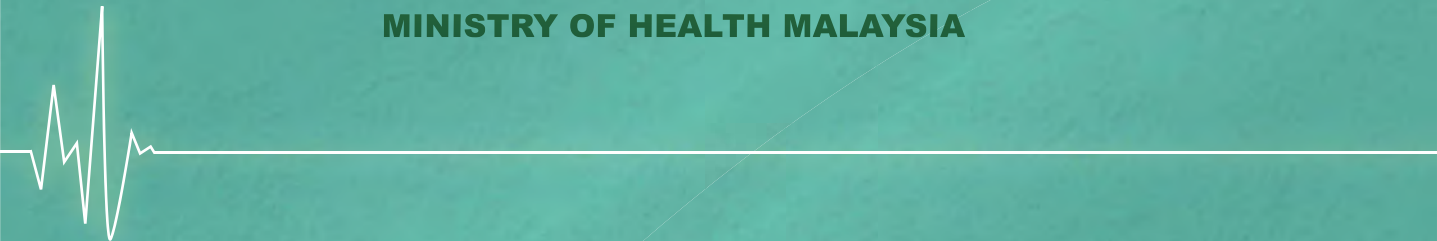




# Annual Report 2009

MINISTRY OF HEALTH MALAYSIA





# Contents

Annual Report **MINISTRY OF HEALTH MALAYSIA** 2009

<i>Editorial Board</i> _____	iv
<i>Organisation Chart Of The Ministry Of Health</i> _____	v
<i>Vision And Mission</i> _____	vi

## Chapter

<b>1</b>	Health Status	7
<b>2</b>	Management Programme	17
<b>3</b>	Public Health Programme	57
<b>4</b>	Medical Programme	117
<b>5</b>	Research and Technical Support Programme	187
<b>6</b>	Oral Health Programme	231
<b>7</b>	Pharmacy	251
<b>8</b>	Nursing	303
<b>9</b>	Health Legislation	315
<b>10</b>	Internal Audit	317
<b>11</b>	Policy And International Relation	321
<b>12</b>	Important Events	329

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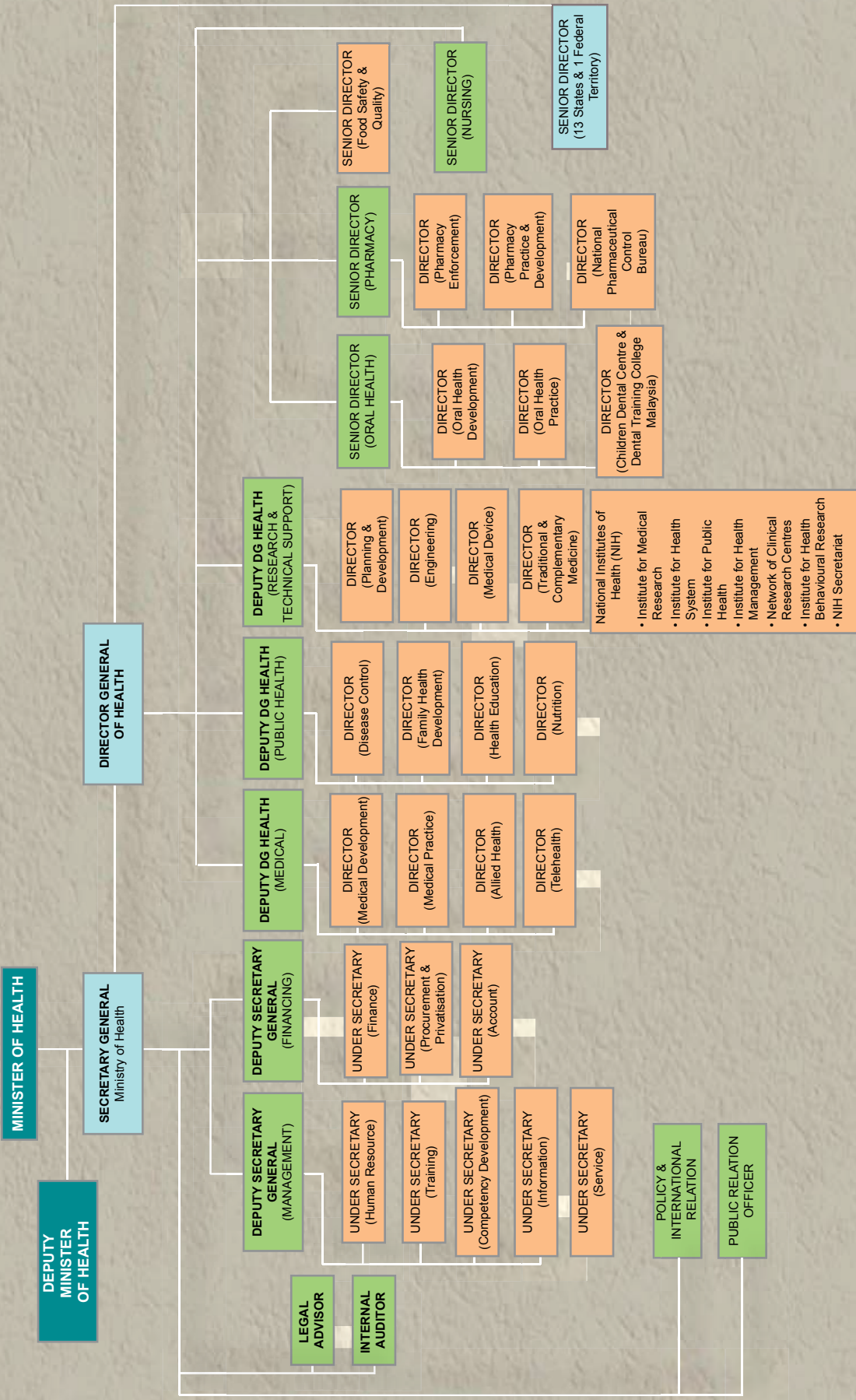
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# ORGANIZATION CHART MINISTRY OF HEALTH, MALAYSIA



## Vision

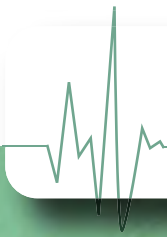
*A nation working together for better health.*



## Mission

The mission of the Ministry of Health is to lead and work in partnership:

- to facilitate and support the people to:
  - attain fully their potential in health
  - appreciate health as a valuable asset
  - take individual responsibility and positive action for their health
- to ensure a high quality health system that is:
  - customer centred
  - equitable
  - affordable
  - efficient
  - technologically appropriate
  - environmentally adaptable
  - innovative
- with emphasis on:
  - professionalism, caring and teamwork value
  - respect for human dignity
  - community participation



# 1

## Health Status

## INTRODUCTION

Malaysia is a vibrant and dynamic country enjoying continued economic growth and political stability since its independence 52 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 2009 was 28.31 million with an average annual population growth rate of 2.1 per 100 populations. The total population in 2009 increased by 0.58 million as compared to 27.73 million recorded in 2008. The geographical distribution of population showed that Selangor had the highest population of 5.17 million, while Federal Territory of Labuan recorded the lowest population of 0.09 million (Table 1). However, Kelantan and Terengganu recorded the highest average annual population growth rate of 2.4 per 100 populations, followed by Sabah and Johor, while Federal Territories Kuala Lumpur and Labuan recorded the lowest annual growth rate of 1.6 each. In 2009, 63.7% out of the total population lived in urban area, while 36.3% lived in rural area (Table 2).

Overall, the population in Malaysia is relatively young, with 41.1% of the total population were below 20 years of age, and only 7.2 % of the population aged 60 years and above (Table 2). In 2009, the economically-productive population which consists of population aged 15 to 64 years was 18.0 million or 63.6% of the total population, while the economically dependent i.e age below 15 years, and 65 years and above, was 10.3 million or 36.4% of the total population.



**TABLE 1.**  
**POPULATION AND AVERAGE ANNUAL POPULATION GROWTH RATE BY STATE,**  
**MALAYSIA, 2007- 2009**

State	Population (Thousand)			Average Annual Population Growth Rate (%)	
	2007	2008	2009	2007/2008	2008/2009
Perlis	231.9	236.2	240.7	1.8	1.9
Kedah	1,918.7	1,958.1	2,000.0	2.0	2.1
Pulau Pinang	1,518.5	1,546.8	1,577.3	1.8	2.0
Perak	2,314.6	2,351.3	2,393.3	1.6	1.8
Selangor*	4,961.6	5,071.1	5,179.6	2.2	2.1
FT Kuala Lumpur	1,604.4	1,629.4	1,655.1	1.5	1.6
Negeri Sembilan	978.2	995.6	1,013.9	1.8	1.8
Melaka	738.8	753.5	769.3	2.0	2.1
Johor	3,204.9	3,312.4	3,385.2	2.2	2.2
Pahang	1,483.6	1,513.1	1,543.3	2.0	2.0
Terengganu	1,067.9	1,094.3	1,121.1	2.4	2.4
Kelantan	1,560.5	1,595.0	1,634.2	2.2	2.4
Sabah	3,063.6	3,131.6	3,201.0	2.2	2.2
FT Labuan	86.3	87.6	89.0	1.5	1.6
Sarawak	2,404.2	2,452.8	2,503.6	2.0	2.0
<b>Malaysia</b>	<b>27,173.6</b>	<b>27,728.7</b>	<b>28,306.7</b>	<b>2.0</b>	<b>2.1</b>

Note:

1. Population estimates based on the Population and Housing Census of Malaysia 2000, adjusted for under enumeration.

2. The added total may differ due to rounding.

\* includes FT Putrajaya

Source: Department of Statistics, Malaysia

**TABLE 2.**  
**STATISTICS RELATED TO POPULATION, 2008 – 2009**

Population	2008		2009	
	Number (Thousands)	% of Total Population	Number (Thousands)	% of Total Population
Male	14,114.30	50.9	14,407.20	50.9
Female	13,614.40	49.1	13,899.40	49.1
Youth (below 20 years)	11,477.30	41.4	11,637.3	41.1
Elderly (60 years and above)	1,932.60	7.0	2,025.9	7.2
Economically - productive (age 15-64 years)	17,620.30	63.5	18,005.70	63.6
Economically - dependent (age below 15 & above 64 years)	10,108.50	36.5	10,300.90	36.4
Urban	17,615.50	63.5	18,021.5	63.7
Rural	10,113.20	36.5	10,285.2	36.3

Note:

1. Population estimates based on the Population and Housing Census of Malaysia 2000, adjusted for under enumeration.
2. The added total may differ due to rounding.

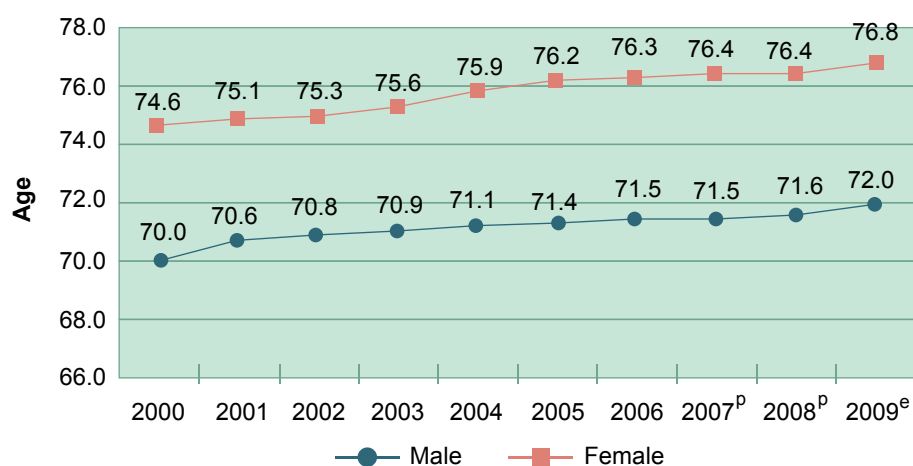
Source: Department of Statistics, Malaysia

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.

### 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 estimated life expectancy at birth in 2009 has increased to 72.0 years for male and 76.8 years for female as compared to 70.0 years for male and 74.6 years for female recorded in 2000 (Figure 1).

**FIGURE 1.**  
**LIFE EXPECTANCY AT BIRTH (IN YEARS) BY GENDER, MALAYSIA, 2000 - 2009**



Note: p = Preliminary figures, e = estimated figures

Source: Department of Statistics, Malaysia

## Mortality

Mortality data provides a 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 41 years (1968-2009), the mortality rates in Malaysia had been decreasing. In 2009, the estimated crude death rate per 1,000 population had decreased to 4.5 as compared to 7.2 recorded in 1968.

The trend of maternal mortality ratio (MMR), infant mortality rate (IMR) and neonatal mortality rate (NMR) in Malaysia are shown in Table 3. 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 decreasing trend from 1.5 per 1,000 live births in 1969 to 0.2 in 1989. Even though there was a slight increase in the MMR to 0.4 per 1,000 live births in 1999, the rate has stabilized for the past 10 years, i.e. from 1999 to 2009. This 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.

Infant mortality rate per 1,000 live births had improved from 41.4 in 1969 to 6.5 in 2009. Besides that, the trending of neonatal mortality rate per 1,000 live births for the same period shows a decreasing trend when compared to 21.8 in 1969.

**TABLE 3.**  
**INFANT MORTALITY RATE, NEONATAL MORTALITY RATE AND MATERNAL MORTALITY RATE, MALAYSIA, 1969 TO 2009**

	1969	1979	1989	1999	2008 <sup>p</sup>	2009 <sup>e</sup>
<b>IMR</b>	41.4	25.1	13.4	9.3	6.4	6.5
<b>NMR</b>	21.8	14.9	8.6	5.5	4.0	N/A
<b>MMR</b>	1.5	0.6	0.2	0.4	0.3	N/A

*Note: e = estimated figures, NA = not available*

*Source: Department of Statistics, Malaysia*

Another indicator which showed an improvement was the under five mortality rate's decreasing trend as compared to 8.7 in 2003 (Table 4). Intensive immunization efforts and other related programmed carried out by both the public and private sectors contributed to these improvement.

Similarly, the toddler mortality rate also showed a declining trend from 0.5 per 1,000 population aged 1 to 4 years in 2003 to 0.4 in 2008. 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 7.4 in 2008 from 6.8 recorded in 2003. The stillbirth rate also showed an increase from 4.2 per 1,000 births in 2003 to 4.6 in 2006, however it dropped to an estimate of 4.2 in 2009.

**TABLE 4.**  
**MORTALITY RATES IN MALAYSIA, 2003 - 2008**

Indicator	2003	2004	2005	2006	2007	2008 <sup>p</sup>	2009 <sup>e</sup>
Crude Death Rate (per 1,000 population)	4.5	4.5	4.5	4.5	4.5	4.7	4.5
Maternal Mortality Rate (per 100,000 live births)	28.5	27.2	27.9	27.5	28.0	28.9	N/A
Infant Mortality Rate (per 1,000 live births)	6.6	6.5	6.6	6.2	6.2	6.4	6.5
Neonatal Mortality Rate (per 1,000 live births)	3.2	3.7	3.9	3.7	3.8	4.0	N/A
Under Five Mortality Rate (per 1,000 live births)	8.7	8.5	8.5	7.9	7.9	8.1	N/A
Toddler Mortality Rate (per 1,000 population aged 1-4 years)	0.5	0.4	0.5	0.4	0.4	0.4	N/A
Stillbirth Rate (per 1,000 births)	4.2	4.2	4.4	4.6	4.4	4.4	4.2
Perinatal Mortality Rate (per 1,000 births)	6.8	6.8	7.2	7.3	7.2	7.4	N/A

Note : P = Preliminary figures e : estimated figures N/A : not available

Source: Department of Statistics, Malaysia

## 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 2000-2009, the number of admissions in Ministry of Health (MoH) Hospitals had increased 37.6% to 2,139,906 in 2009 from that of 1,555,133 in 2000. The 10 principal causes of hospitalization in the MoH Hospitals for 2009 are shown in Table 5. In 2009, Normal Delivery (13.16%) was the top leading cause of admissions in MoH hospitals followed by Complication of Pregnancy, Childbirth and the Puerperium (13.10%).

**TABLE 5.**  
**10 PRINCIPAL CAUSES OF HOSPITALIZATION IN MINISTRY OF HEALTH HOSPITAL, 2009**

Principal Causes		No. of Admissions	Percentage to total admissions
1.	Normal Delivery	281,611	13.16
2.	Complication of Pregnancy, Childbirth and Puerperium	280,408	13.10
3.	Diseases of The Respiratory System	200,718	9.38
4.	Accident	171,735	8.03
5.	Certain Conditions Originating in the Perinatal Period	149,994	7.01
6.	Diseases of The Circulatory System	147,843	6.91
7.	Diseases of The Digestive System	110,690	5.17
8.	Ill - Defined Conditions	74,957	3.50
9.	Diseases of the Urinary System	73,258	3.42
10.	Malignant Neoplasms	64,578	3.02
<b>Total Admissions</b>		<b>2,139,906</b>	<b>100</b>

Source: Health Informatics Centre, MoH

Similarly, the number of deaths (for all causes) in MoH Hospitals for the period of 2000-2009 increased 58.6% from 30,319 in 2000 to 48,091 in 2009. As for the ten top causes of death in government hospitals, Heart Diseases and Diseases of Pulmonary Circulation was the top cause of death recorded in 2009 (16.09%), followed by Septicaemia (13.82%) and Malignant Neoplasms (10.85%). The ten principal causes of deaths in the MoH Hospitals for 2009 are shown in Table 6.

**TABLE 6.**  
**10 PRINCIPAL CAUSES OF DEATH IN MINISTRY OF HEALTH HOSPITAL, 2009**

Principal Causes		No. of Admissions	Percentage to total deaths
1.	Heart Diseases and Diseases of Pulmonary Circulation	7,738	16.09
2.	Septicaemia	6,648	13.82
3.	Malignant Neoplasms	5,220	10.85
4.	Pneumonia	4,994	10.38
5.	Cerebrovascular Diseases	4,052	8.43
6.	Diseases of The Digestive System	2,393	4.98
7.	Accident	2,332	4.85
8.	Certain Conditions Originating in the Perinatal period	1,836	3.82
9.	Nephritis, Nephrotic Syndrome and Nephrosis	1,724	3.58
10.	Chronic Lower Respiratory Diseases	978	2.03
<b>Total Deaths (All Causes)</b>		<b>48,091</b>	<b>100</b>

Source: Health Informatics Centre, MoH

### Health Facilities and Facility Utilisation

As for Health Facilities, there were 808 Health Clinics, 1,920 Community Clinics and 90 Maternal and Child Clinics in 2009. There were 130 government MoH hospitals and 6 Institutions with bed complementary of 33,083 and 4,974 beds respectively. Overall Bed Occupancy Rate (BOR) for MoH hospitals and Institutions in 2009 was 65.45% (Table 7).

**TABLE 7.**  
**HEALTH FACILITIES BY TYPE, TOTAL BED COMPLEMENTS AND BED OCCUPANCY RATE,**  
**2005-2009**

Facility	2005	2006	2007	2008	2009
Number of MoH Hospitals	122	128	130	130	130
Number of Special Medical Institutions	6	6	6	6	6
Total Beds Complement <sup>1</sup>	34,761	35,739	37,149	38,004	38,057
Bed Occupancy Rate (%) <sup>1</sup>	66.93	65.07	64.23	65.46	65.45
Number of Health Clinics	809	807	806	802	808
Number of Community Clinics	1,919	1,919	1,927	1,927	1,920
Number of Maternal and Child Clinics	89	88	97	95	90

*Note: 1 refers to beds complement and BOR in MoH Hospitals and Special Medical Institutions*

*Source: Health Informatics Centre, MoH*





# 2

## Management Programme

## **INTRODUCTION**

The Management Programme consists of two Sections; Management and Finance. The Management section comprises of five Divisions, namely Human Resource, Training Management, Competency Development, Management Services and Information Management. The Finance Section has three Divisions; Finance, Accounts, and Procurement and Privatization. The main objective of this programme is to facilitate and support the achievement of the MoH policies and objectives by enhancing other programmes through an efficient and effective service system, human resource management, information management, competency development, training and career advancement and financial management.

## **ACTIVITIES AND ACHIEVEMENTS**

### **HUMAN RESOURCE**

The Human Resource Division (HRD) of Ministry of Health is responsible for human resource management in the health sector. The HRD's function is to ensure that MoH encompasses of a well structured organization and optimum manpower utilization. All the activities conducted were aimed to strengthen the workforce and enhance their commitment level in order to achieve an efficient and excellent services delivery system.

#### **Posts and Personnel**

As of 31st December 2009, 173,611 (82.2%) of 211,118 posts in the MoH had been filled at which 27,261 (15.7%) were from the Management and Professional Group, 91,191 (52.5%) were from the Paramedic and Auxiliary Group and the remaining 55,159 (31.8%) were from the Common User and Support Group.

#### **Establishment**

In 2009, 49 activities have been implemented which includes reorganization of structure and function of MoH. Among the activities that were successfully executed were as follows:

- i. Establishment of post for Dental Specialist Officer in 2009
- ii. Restructuring of Disease Control Division
- iii. Restructuring of Family Health Development Division
- iv. Strengthening of Human Resource Division
- v. Strengthening of Malaysian Medical Council
- vi. A study on the career pathway of Public Health Specialist

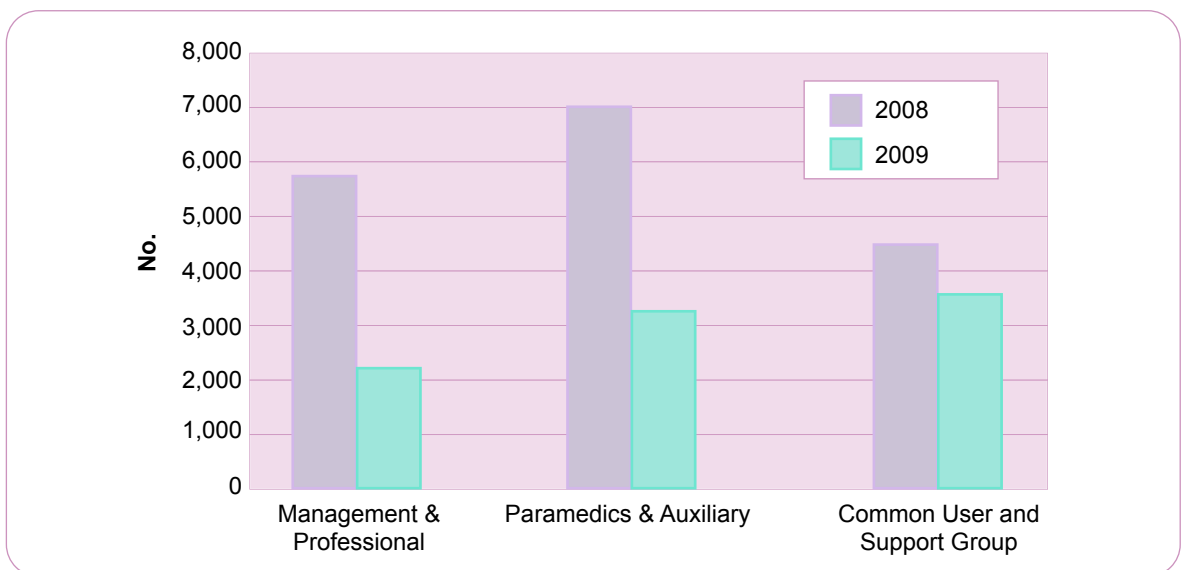
- vii. Strengthening of Sabah Heart Center at Queen Elizabeth Hospital
- viii. Establishment of Audit Unit in State Health Department
- ix. Upgrading the post of State Health Director and Deputy State Health Director
- x. Strengthening of the Administration Unit in the Health Clinic Level 2 and 3
- xi. Strengthening of Medical Devices Control Division
- xii. Strengthening of National Institute of Health Organization (NIH)
- xiii. Strengthening of the Medical Assistant Board
- xiv. Establishment of post for Physicians in 2009
- xv. Establishment of post for Science Officer (Special Grade)
- xvi. Establishment of post for Research Officer (Special Grade)
- xvii. Establishment of post for Dental Specialist
- xviii. Establishment of post for Medical Laboratory Technologist Grade U29 in Sabah and Sarawak (trade off)
- xix. Upgrading the post of Accountant Grade W48 to Grade W52, Accounts Division, MoH
- xx. Establishment of post for Hostel Assistant Manager, Grade N27 in the training institutions of MoH
- xxi. Conversion from Temporary post to Permanent posts in the HRMIS Unit, Human Resource Division
- xxii. The establishment of HRMIS Unit in State Health Departments and institutions
- xxiii. The establishment of flexi-post for Medical Officer Grade UD41/44
- xxiv. The establishment of Asset Management Unit
- xxv. Deployment and coordination of posts established through ABM 2009
- xxvi. Establishment of post through ABM 2010

**TABLE 1.**  
**COMPARISON OF POSTS ESTABLISHED THROUGH ABM, 2008 - 2009**

Groups	Grade	2008	2009
Management & Professional	Appointment	2,739	389
	Promotion	3,006	1,810
	<b>Total</b>	<b>5,745</b>	<b>2,199</b>
Paramedics & Auxiliary	Appointment	5,626	0
	Promotion	1,399	3,446
	<b>Total</b>	<b>7,025</b>	<b>3,446</b>
Common User and Support	Appointment	3,383	2,828
	Promotion	1,103	795
	<b>Total</b>	<b>4,486</b>	<b>3,623</b>
<b>Overall Total</b>	Appointment	11,748	3,217
	Promotion	5,508	6,051
	<b>Total</b>	<b>17,256</b>	<b>9,268</b>

Source: Human Resources Division, MoH

**FIGURE 1.**  
**COMPARISON CHART ON NEW POSTS ESTABLISHED THROUGH ABM, 2008 - 2009**



Source: Human Resources Division, MoH

In 2009, the Ministry of Finance (MoF) has approved the establishment of new posts through Estimated Operating Budget (*Anggaran Belanja Mengurus*, ABM). A total of 9,268 from various schemes of services and grades of posts were created. There is a reduction of 7,988 posts (46.3% decrease compared to 17,256 new posts created in 2008).

Of all the additional positions established under the ABM 2009, a total of 3,217 positions (34.7%) were the grade of appointment positions, while 6,051 (65.3%) positions were categorized under promotion's grade. The establishment of promotion's grade posts was aimed to provide opportunities for career advancement in line with government's intention to develop and empower human capital as outlined in the Ninth Malaysia Plan (9MP).

### **Scheme and Remuneration Review**

Several initiatives and remunerations have been introduced and reviewed in order to attract and retain health human resource in the public sector. These initiatives and remunerations are as follows:

- i. Upgrading the Cook Service Scheme from Grades N1, N4 to Grades N17, N22 and N26
- ii. Establishment of Food Preparation Officer Service Scheme
- iii. Improving the Assistance Nurse Service Scheme to Community Nurse Service Scheme
- iv. Extending the incentive for Treating the Mental Disorder, Tuberculosis and Lepers Patient for Community Nurse
- v. Special Allowance According To Location and Level of Hardship to MoH employees who work in the rural areas
- vi. Increase Allowance for Specialist.
- vii. Incentives for Hospital Administration and Qualified Public Health Officers.

**TABLE 2.**  
**ACHIEVEMENTS FOR SERVICES RELATED MATTERS, 2008 - 2009**

No.	Service Matter	JUSA / Special Grade		Management and Professional Group		Support Group	
		2008	2009	2008	2009	2008	2009
1.	Confirmation of Appointment	-	-	2,193	3,076	9,694	10,916
2.	Confirmation of Services	-	-	1,846	3,517	10,281	10,416
3.	Extension of Probation Period	-	-	63	75	222	223
4.	Conferment of Pensionable Status	-	-	451	951	7,103	11,166
5.	Adjustment of Salary	-	-	353	262	279	386
6.	Leave	17	16	119	157	397	574
7.	Amendment of Name	1	1	11	8	86	112
8.	Secondment	3	-	27	7	-	-
9.	Permanent Transfer to other agencies	129	221	11	6	3,880	4,841
10.	Optional Retirement	12	8	41	45	239	394
11.	Resignation	51	65	453	432	115	190
12.	Release with Permission	5	22	134	191	390	707
13.	Re-option for pension scheme following Service Circular 19/2008 (New Activity)	-	-	-	1856	-	-
14.	Posting	511	1,290	8,845	12,469	7,925	9,673
	<b>Total</b>	<b>729</b>	<b>1,623</b>	<b>14,547</b>	<b>23,052</b>	<b>40,611</b>	<b>49,598</b>

Source: Human Resources Division, MoH

### Services Related Matters

The comparisons of achievements for 2008 and 2009 regarding services related matters for the Management & Professional Group and Supporting Staff were as shown in Table 2.

## Contract Employment

Overall achievements for contract employment and service matter for the top management, specialist medical officer and dental officers for the year 2008 and 2009 were 88.8% and 86.8% respectively. The performance comparisons in accordance with the main activities for both years are as shown in Table 3.

**TABLE 3.**  
**ACHIEVEMENT FOR CONTRACT EMPLOYMENT AND SERVICE-RELATED MATTERS,**  
**2008 - 2009**

No.	Service Matter	JUSA / Special Grade and Management and Professional Group		Support Group	
		2008	2009	2008	2009
1.	New Contract Appointment	205	175	170	172
2.	Contract Appointment After Retirement	34	4	690	770
3.	Contract Renewal	232	165	-	-
4.	Contract Termination	2	7	-	-
5.	Other Service Matters: (Resignation, Transfer, Adjustment / Setting of First Drawn, Salary, Leave)	141	60	-	-
<b>Total</b>		<b>614</b>	<b>411</b>	<b>860</b>	<b>942</b>

Source: Human Resources Division, MoH

## Promotion

In 2009, 192 acting exercises were carried out involving 4,609 officers and 105 promotion exercises involving 2,237 officers from the Management and Professional Group. Overall, there is an increase of 62.5% in acting exercises and an increase of 12.4% in promotion exercises. These exercises also recorded an increase of 24.3% and 25.1% regarding the number of officers involved in acting and promotion exercises.

For the Support Group, achievement in 2009 has shown an increase in the number of officers that have been approved in acting and promotion. A total of 44 acting exercises were done with the total of 2,810 officers approved for the acting while a total of 97 promotion exercises were done with the total of 8,045 officers approved for the promotion.

**TABLE 4**  
**TOTAL OF ACTING AND PROMOTION EXERCISES BY CATEGORY, 2008 - 2009**

Exercise	Special Grade		Management and Professional Group		Support Group	
	2008	2009	2008	2009	2008	2009
Acting	221	231	3,487	4,609	2,798	3,346
Promotion	162	235	1,675	2,237	4,947	12,874
<b>Total</b>	<b>383</b>	<b>466</b>	<b>5,162</b>	<b>6,846</b>	<b>7,745</b>	<b>16,220</b>

Source: Human Resources Division, MoH

Among the positions involved were Physiotherapist, Occupational Therapist, Assistant Pharmacist, Assistant Environmental Health Officer, Dental Nurse, Staff Nurse, Administrative Assistant (Clerical/Operational), Administrative Assistant (Finance), Assistant Medical Officer and more. Overall, there is an increase of 15.9% (total approved acting) and 62.6% (total approved promotion) for 2009 as compared to achievements in 2008. Year comparisons achievements can be seen in Table 4.

The details for acting and promotion exercises for 2008 and 2009 according to schemes of services are further provided in Table 5 and Table 6.

**TABLE 5.**  
**OVERALL ACHIEVEMENT FOR ACTING EXERCISES ACCORDING TO SCHEMES OF SERVICES, 2008 - 2009**

Exercise	2008	2009	Achievement (%)
Special Grade	221	231	104.5
Medical Officer	3789	2113	55.77
Dentist	244	470	192.62
Pharmacist	239	416	174.06
Other Schemes	357	550	154.06
<b>Total</b>	<b>4850</b>	<b>3780</b>	<b>77.94</b>

Source: Human Resources Division, MoH



**TABLE 6.**  
**OVERALL ACHIEVEMENT FOR PROMOTION EXERCISES ACCORDING TO SCHEMES OF SERVICES, 2008 - 2009**

Exercise	2008	2009	Achievement (%)
Special Grade	162	235	145.06
Medical Officer	1768	10788	610.18
Dentist	63	291	461.90
Pharmacist	192	140	72.92
Other Schemes	196	354	180.61
<b>Total</b>	<b>2381</b>	<b>11808</b>	<b>495.63</b>

Source: Human Resources Division, MoH

### **Disciplinary Action and Integrity**

The Value Auditing Management System (*Sistem Pengurusan Audit Nilai*, SPAN) was implemented in order to measure the effectiveness of preventive actions that were executed in the Ministry. Apart from this, continuous efforts were carried out in developing the Integrity Reporting Management System (*Sistem Pengurusan Pelaporan Integriti*, SPPI) after taking into consideration the weaknesses that were identified through the preliminary usage of the system before extending the system in other State Health Departments (JKN) and institutions.

As compared to 2008, there has been an increase in the number of preventive activities where 29 activities have been conducted which includes Disciplinary Management Conference for Chairman and Member of Disciplinary Board, Disciplinary Management Workshop and talks focusing on integrity. The main aim of all these activities is to further enhance the level of integrity and discipline among the employees of MoH.

The increase in activities signified the commitment of MoH to ensure all relevant parties who are involved in disciplinary management, acquires the knowledge and skills in managing the delinquencies and disciplinary cases. Other preventive actions that were carried out include processing of asset declaration, government land applications, outside employment applications and others.

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

Throughout the year 2009, there were eight activities that have been executed compared to 2008 namely training and education; monitoring of HRMIS data updates; application roll-out; in-house ICT courses; HRD sub portal updates; inspection, helpdesk, and meetings.

**TABLE 7.  
COMPARISON OF THE ACTIVITIES OF HRMIS, 2008 - 2009**

No.	Category	2008	2009
<b>A</b>	<b>TRAINING AND EDUCATION</b>		
1.	a) Leave Sub module (Annual Leave) i. JKN, IPK and PDN ii. Institute	100% - -	- 100% 100%
	b) Leave Sub module (others) at IPKKM	-	100%
	c) Psychology and Counseling Sub module - IPKKM	60%	100%
	d) Asset Declaration Sub module - JKN/Institute	100%	-
	e) Separation Module at IPKKM - Compulsory Retirement	-	75%
<b>B</b>	<b>MONITORING OF HRMIS DATA UPDATES</b>		
	a) Generating Reports	100%	100%
<b>C</b>	<b>APPLICATION ROLL - OUT</b>		
	a) Leave Sub module (Annual Leave) i. JKN, IPK and PDN ii. Institute	100% - -	- 100% 50%
	b) Leave Sub module (others) at IPKKM	-	50%
	c) Psychology and Counseling Sub module - IPKKM	100%	-
	d) Asset Declaration Sub module - JKN/Institute	25%	100%
	e) Separation Module at IPKKM - Compulsory Retirement	-	100%
<b>D</b>	<b>IN-HOUSE ICT COURSES</b>		
	a) ICT Courses	100%	100%
<b>E</b>	<b>HRD SUBPORTAL UPDATES</b>		
	a) Minor Updates	100%	100%
	b) Major Updates	100%	100%
<b>F</b>	<b>INSPECTION</b>		
	a) Strengthening of HRMIS Implementation	-	100%
<b>G</b>	<b>HELPDESK</b>		
	a) To solve logs/complaints at Unit level within 1-2 working days	-	100%
	b) To extend logs/complaints regarding system error to the Public Service Department (PSD) within 7 working days	-	100%
<b>H</b>	<b>MEETINGS</b>		
	a) <i>Jawatankuasa Pemandu HRMIS</i>	-	100%
	b) <i>Jawatankuasa Pelaksana HRMIS</i>	-	100%
	c) <i>Pasukan Teras HRMIS</i>	100%	100%
	d) <i>Pasukan Jaguh</i>	-	-

Source: Human Resources Division, MoH

## Improvements and Innovation

MOH 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 in this Ministry include:

- i. Implementation of Special Promotion (KUP) exercises that have been implemented. This special promotion had provide more opportunities for officers who have served for 15 years and more to be promoted;
- ii. Collaboration with Public Service Commission (PSC) and Public Service Department (PSD) to expedite the recruitment process of Medical Officer. The duration of the process has been shortened to less than a month;
- iii. Enhancements of the workflow of the recruitment process and several improvements have been added to Online Recruitment System (*Sistem Pengambilan Atas Talian* (SPAT)).
- iv. Uplift the disciplinary and integrity level of the Ministry employees through preventive and punitive actions such as development of Organization Integrity Plan which was based on the National Integrity Plan as a tool to enhance the integrity level of individuals;
- v. Distribution of simplified HRMIS training kits and manuals; and
- vi. Coordination of HRMIS Helpdesk.

## TRAINING MANAGEMENT

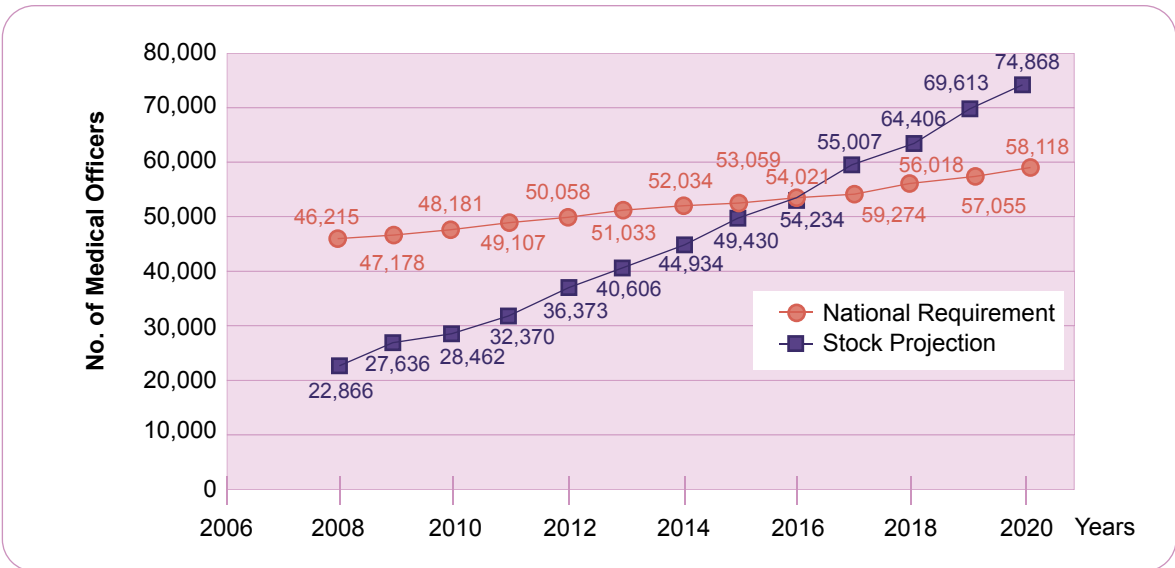
The core activity of the Training Management Division (TMD) is to develop human capital of the Ministry so as to produce an effective and efficient health delivery system. This Division is fully aware and takes cognizant of the changes and dynamism of the ever increasing expectations of the public at large in seeking first class health services. Hence, towards achieving this aim, its activities are facilitated through the various management training programmes that are designed to produce a work force that is knowledgeable, competent, disciplined, and imbued with strong work ethics, values and commitment to excellence. In short, the focus of the TMD is to increase opportunities for quality training and education with a view to strengthen its human resource base.

### Manpower Planning

Upon reviewing the projection for the demand and supply of Medical Doctors, Dentists, Pharmacists and the Allied Health Science Personnel (AHSP) indicated that any increase in the supply of Medical Doctors, Dentists, Pharmacists and the AHSP in the current years would still be inadequate in meeting the needs of the nation. However, it is observed that the gap between the demand and supply of these categories of health care personnel was steadily reduced through the expanded training capacity of the training institutions/

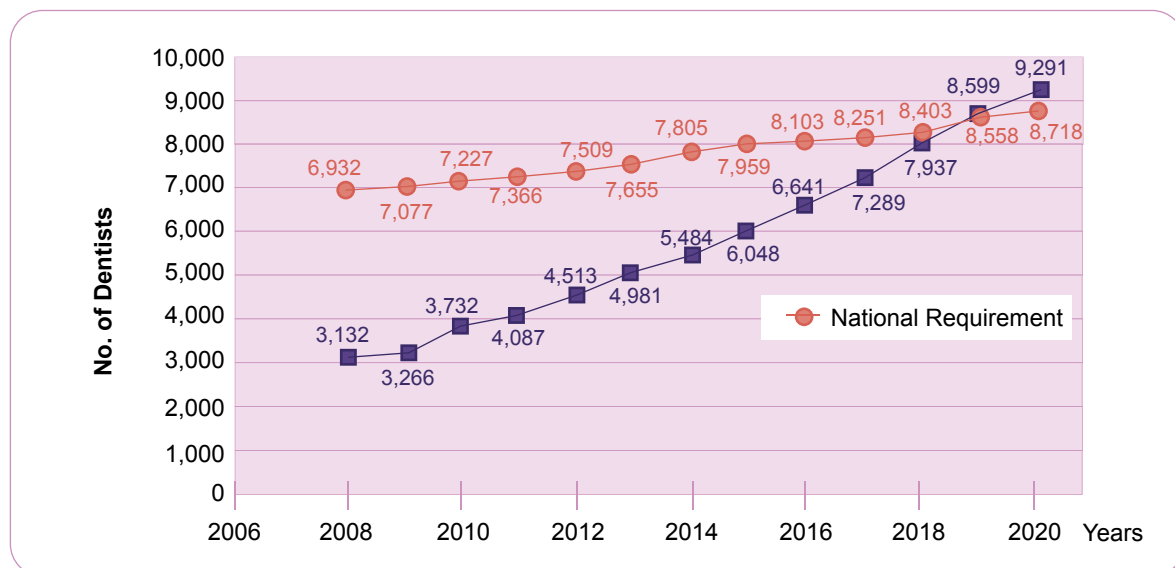
institutions of higher learning over the years. Figure 2, Figure 3, Figure 4 and Figure 5 depicts the current and projected national requirement and supply of Medical Doctors, Dentists, Pharmacists and the AHSP respectively.

**FIGURE 2.**  
**CURRENT AND PROJECTED REQUIREMENT AND STOCK OF MEDICAL DOCTORS TO POPULATION ON THE RATIO OF 1:600**



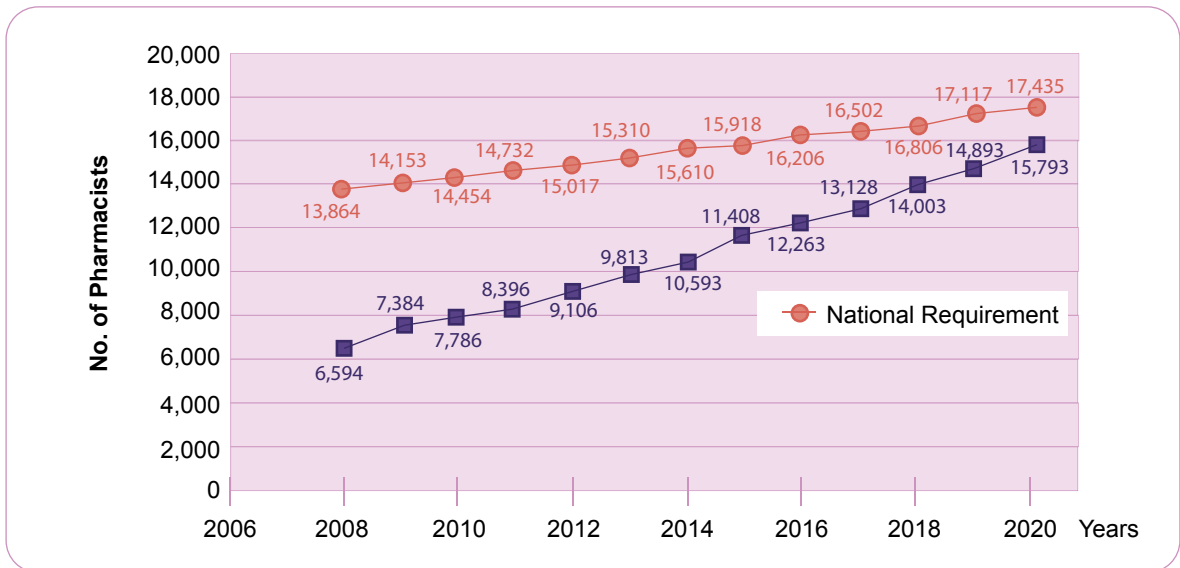
Source: Department of Statistic Malaysia (DOSM) and Malaysian Medical Council (MMC)

**FIGURE 3.**  
**CURRENT AND PROJECTED REQUIREMENT AND STOCK OF DENTIST TO POPULATION ON THE RATIO OF 1:4000**



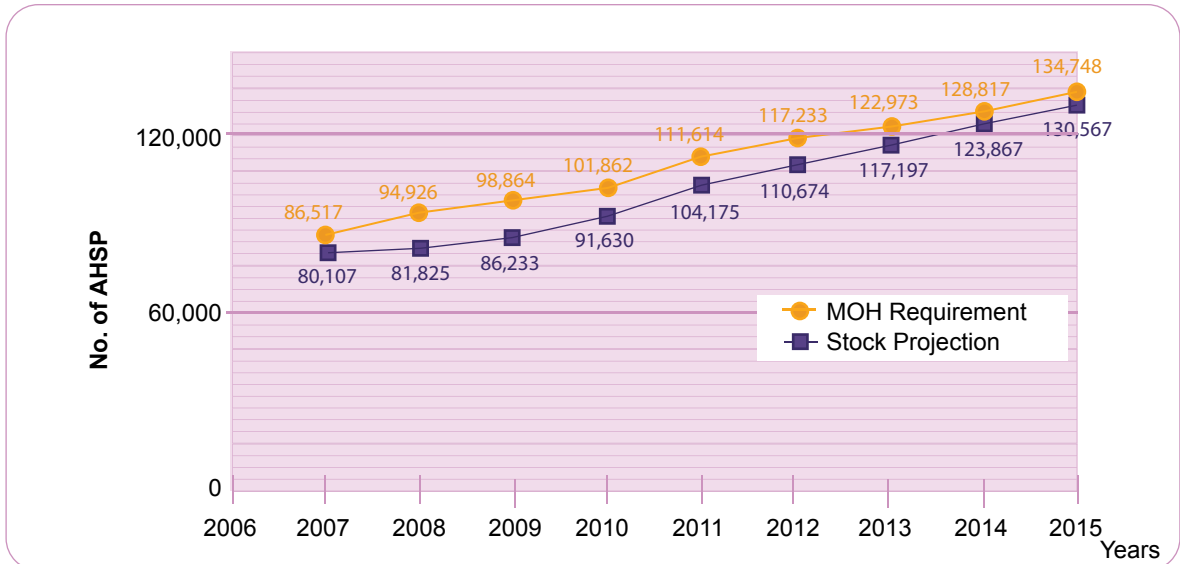
Source: Department of Statistic Malaysia (DOSM) and Malaysian Dental Council (MDC)

**FIGURE 4.**  
**CURRENT AND PROJECTED REQUIREMENT AND STOCK OF PHARMACISTS TO POPULATION ON THE RATIO OF 1:2000**



Source: Department of Statistic Malaysia (DOSM) and Pharmaceutical Services Division, MoH

**FIGURE 5.**  
**CURRENT AND PROJECTED REQUIREMENT AND STOCK OF AHSP FOR MoH**



Source: Department of Statistic Malaysia (DOSM) and Training Management Division, MoH

## Training Programmes

Training is a continuing investment to produce trained and competent manpower in the various health care fields. In ensuring the health care personnel of the Ministry of Health (MoH) acquire the necessary skills and knowledge, TMD made itself available in offering a diverse range of training programmes throughout the year encompassing Basic Training, Post Basic Training, Masters level Training for Medical Officers/ Dental Officers/ Pharmacists, Sub-specialty Training for Medical Officers, Doctoral programmes, Short-term In-service Courses, and In-service Conversion Courses.

There has been an increase in the intake of participants for various categories of training/ courses offered, with the exception of the specialist training in the year 2009, as compared to the year 2008. For the year 2009, the intakes for training according to the different categories are as shown in Table 8.

**TABLE 8.**  
**INTAKE OF TRAINEES BY TYPES OF TRAINING, 2008 - 2009**

No.	Types of Training	2008	2009
1.	Basic Training in MOH Training Colleges	7,464	8,306
2.	Basic Training through 'Outsourcing Program'	834	1,961
3.	Post Basic Training	2,545	2,563
4.	Specialist Training (Medical Officers)	557	583
5.	Sub-Specialist Training (Medical Officers)	93	80
6.	Master / Doctorial Programmes	89	103
7.	Short Term In-service courses (Overseas)	470	461
8.	In-Services Conversion courses	226	230

Source: Training Management Division, MoH

- **Basic Training**

In 2009, 8,306 trainees were enrolled for Basic courses offered at MOH Allied Health Science Colleges (AHSC) and 1,961 were enrolled through the outsourcing programmes initiated with selected private colleges. The number of trainees enrolled for Basic Training at the Allied Health Science Colleges (AHSC) in 2009 increased by 23.7% as compared to only 8,298 in the year 2008. This reflects the government's commitment in ensuring an efficient health care delivery system being provided at its various facilities to cater to the demands of the public. The breakdown of the number of trainees enrolled into the Basic

training programmes according to disciplines conducted at AHSC as well as for the outsourcing programmes for the year 2009 is depicted in Table 9.

**TABLE 9.**  
**INTAKE OF TRAINEES FOR BASIC TRAINING, 2009**

No.	Discipline	2009
1.	Nurse	3,985
2.	Community Nurse	2,012
3.	Medical Assistant	1,012
4.	Pharmacy Assistant	454
5.	Assistant Environmental Health Officer	590
6.	Medical Laboratory Technologist	612
7.	Radiographer	360
8.	Dental Nurse	69
9.	Dental Technician	63
10.	Occupational Therapist	105
11.	Physiotherapist	237
12.	Dental Surgery Assistant	329
13.	Public Health Assistant	439
	<b>Total</b>	<b>10,267</b>

Source: Training Management Division, MoH

- **Post Basic Training**

In the year 2009, a total of 2,563 AHSP attended Post-Basic training programmes in 33 different disciplines at the various AHSC, which is shown in Table 10. The number of AHSP attending Post-Basic training programmes in 2009 has increased compared to 2008. Furthermore, three new Post Basic disciplines were offered in 2009 thus offering the participants a much wider choice. The most popular and demand Post Basic Training programme is Midwifery which registered an enrolment of 779 participants followed by Emergency Care at 192 and Renal Nursing at 163.

**TABLE 10.**  
**INTAKE OF TRAINEES FOR POST BASIC TRAINING, 2008 - 2009**

No.	Discipline	2008	2009	No.	Discipline	2008	2009
1.	Midwifery	833	779	23.	Anaesthesiology	7	10
2.	Emergency Care	178	192	24.	Diabetic Management	91	91
3.	Public Health Nursing	91	132	25.	Sports Medicine	11	10
4.	Environmental Health	7	-	26.	Hemostasis	12	-
5.	Laboratory Management	28	29	27.	Occupational Health and Safety	-	-
6.	Health Personnel Management	69	47	28.	Pediatric Dental Care	-	-
7.	Primary Healthcare	37	27	29.	Forensic	8	14
8.	Tranfusion Medicine	30	-	30.	Otorhinolaryngology Treatment	14	14
9.	Gerontology	21	7	31.	Microbiology	-	29
10.	Coronary Care	82	85	32.	Food Safety and Cleanliness	-	-
11.	Neonatal Nursing	75	67	33.	Orthodontic Treatment	22	-
12.	Ophthalmic Nursing	35	34	34.	Infection Control	49	56
13.	Oncology Nursing	42	29	35.	Perianaesthesia Care	55	58
14.	Orthopaedic Nursing	83	63	36.	Periodontic Care	-	19
15.	Paediatric Care	90	97	37.	Oral Surgery	-	-
16.	Perioperative Care	147	126	38.	Neuroscience Care	30	24
17.	Psychiatric Nursing	42	65	39.	Rehabilitative Nursing	15	27
18.	Intensive Care	149	146	40.	Musculoskeletal	-	-
19.	Renal Nursing	147	163	41.	Chemical Pathology	-	32
20.	Legal and Prosecution	7	8	42.	Gastrointestinal Endoscopy	-	42
21.	Cytology	15	20	<b>Total</b>		<b>2,545</b>	<b>2,563</b>
22.	Computerized Tomography	23	21				

Source: Training Management Division, MoH

- **Masters Degree Programme for Medical Officers and Sub-speciality Training**

In 2009, Public Service Department (PSD) has delegate the authority to approve 'Paid study Leave' to MoH for long-term courses such as Masters Degree and Doctorate Degree. This delegation has given MoH an advantage to shorten the processing time for long-term courses and therefore enhancing the efficiency. A total of 583 Medical Officers were offered Federal Government Scholarship (FGS) to undergo Masters in Medicine degree in various fields of specialization for 2009, which is highlighted in Table 11. The number of Medical Officers offered scholarships increased by 4.7% in 2009.



**TABLE 11.**  
**INTAKE OF MEDICAL OFFICERS FOR MASTERS PROGRAMMES, 2008 - 2009**

No.	Discipline	2008	2009
1.	Obstetrics & Gynaecology	40	36
2.	Anaesthesiology	70	74
3.	Paediatric	34	31
4.	Internal Medicine	51	42
5.	Psychiatry	25	21
6.	Radiology	36	37
7.	General Surgery	41	44
8.	Ophthalmology	31	34
9.	Orthopaedic	37	42
10.	Otorhinolaryngology	19	20
11.	Pathology	41	32
12.	Family Medicine	36	45
13.	Public Health	23	42
14.	Sport Medicine	2	3
15.	Rehabilitation Medicine	9	10
16.	Emergency Medicine	34	39
17.	Neurosurgery	6	4
18.	Plastic Surgery	3	4
19.	Clinical Oncology	4	5
20.	Paediatric Surgery	4	4
21.	Transfusion Medicine	7	9
22.	Nuclear Medicine	4	5
<b>Total</b>		<b>557</b>	<b>583</b>

Source: Training Management Division, MoH

In 2009, 80 Medical Specialists received FGS to undergo sub-specialty training in various medical fields, as shown in Table 12.

**TABLE 12.**  
**INTAKE OF MEDICAL SPECIALISTS FOR SUB-SPECIALTY TRAINING, 2008 - 2009**

No.	Discipline	2008	2009
1.	Medicine	24	19
2.	Surgery	12	17
3.	Paediatric	10	11
4.	Obstetric & Gynaecology	7	5
5.	Anaesthesiology	9	10
6.	Orthopaedic	10	8
7.	Otorhinolaryngology	1	2
8.	Ophthalmology	6	2
9.	Psychiatry	3	2
10.	Pathology	6	4
11.	Radiology	3	-
12.	Family Medicine	1	-
13.	Radiotherapy	-	-
14.	Forensic Medicine	1	-
15.	Palliative Medicine	-	-
16.	Health Management	-	-
<b>Total</b>		<b>93</b>	<b>80</b>

Source: Training Management Division, MoH

- **Masters and Doctorate Programmes**

In 2009, 103 MoH officers from different health services were offered FGS to pursue postgraduate studies both at Masters (92 officers) and at Doctorate level (11 officers) in disciplines related to health sector. The number of scholarships offered in 2009 registered an increase of 15.7% as compared to 2008 due to higher allocation. In addition, the bulk of the available scholarships were offered to Pharmacists (41 officers) and Dental Officers (30 officers).

- **Short Term In-Service Courses**

MoH personnel were encouraged to apply and attend short term in-service courses that are financed from the development budget of the 9MP. In 2009, 609 personnel attended short term in-service course overseas as compared to 470 in 2008, an increase of 30%. This was made possible with an allocation of RM 19.04 million allocated in 2009.

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

In 2009, the Division initiated in-service conversion course for the career advancement of 230 Community Nurses to Nurses.

### **Management of Examinations**

For management of examination in 2009, TMD has strengthened the management of basic and post basic examination for all diplomas and certificates courses conducted in AHSC. Throughout the year, new examination questions were developed and reviewed to strengthen the pool of questions in the 'Q-Bank system' for basic and post basic examinations.

### **Development of Curricula**

In 2009, TMD has made efforts to strengthen radiography and radiotherapy curricula. In tandem with the development of radiography and radiotherapy field, two new curricula were developed to meet the needs and requirement of the post basic concern:

- Mammography Advance Diploma
- Radiation Therapy Planning Advance Diploma

TMD also developed a training kit for Diploma in Radiography and Radiotherapy.

### **Tutor Development**

In order to provide quality training, the tutors themselves must be well trained and well equipped with current medical knowledge. Therefore, RM 6.2 million was allocated in 2009 for conducting various programmes such as Internal Attachment Programme, Overseas Attachment Programme, Degree Programme for Tutors, and Short Courses. These programmes were meant to expose tutors to the various health facilities locally or overseas with the objective to improve their knowledge and skills in the various available disciplines.

## **INFORMATION MANAGEMENT**

MoH constantly improved the capacity and effectiveness of ICT facilities to support the service delivery system. In 2009, the Ministry focuses on expansion of the ICT network (MOH\*Net), the expansion of application system, the provision of ICT facilities and improvements to the Portal of the Ministry of Health.

## **Expansion of ICT Network MOH\*Net**

Ministry of Health has facilities throughout the country which need to interact and share information among each other. As a result, ICT networks are very important to the Ministry. Therefore ICT Network MOH\*Net has been expanded to 350 locations nationwide including State Health Department (JKN), Hospital, District Health Office and other facilities. The expansion of ICT Network MOH\*Net will never end before all facilities are connected to the MOH\*Net.

## **Expansion of Applications**

The growth of health facilities linked to the ICT network MOH\*Net would not be significant if the application system is limited. Thus, in 2009, in addition to ICT network MOH\*Net expansion, the Ministry has rolled out the application system expansion.

For the hospital's application system, the Ministry has three categories; namely Hospital Information System (HIS), Patient Management System (SPP) and the Inpatient Management System (SPPD). The HIS and SPP system was expanded in 2009, except for the SPPD which will gradually be replaced by SPP. In 2009, the HIS expansion was initiated to three hospitals; which are Hospital Sultanah Nur Zahirah (HSNZ) in Kuala Terengganu, Hospital Sultan Haji Ahmad Shah (HOSHAS) in Temerloh, and Hospital Bintulu in Sarawak. The SPP system (eKL version) was expanded to Hospital Kajang, Hospital Kuala Lumpur (HKL) and Hospital Tengku Ampuan Rahimah (HTAR), Klang.

There were three clinical application systems, namely Tele Primary Care (TPC), Clinical Information System (CIS) and Oral Health Clinical Information System (OHCIS). In 2009, TPC (eKL version) was in the process of expanding to 19 clinics and 10 hospitals. For applications in the dental clinic, the OHCIS was being developed for use in 11 clinics and 4 health facilities in the head quarter is being developed and will be completed in 2010. There were no expansion projects for the CIS system planned for 2009.

Continuous implementation of ICT facilities provision increases the number of employees receiving computer facilities in carrying out their daily tasks. In 2009, the Ministry bought 1,200 units of desktop computers at the cost of RM3.4 million for staff use. Procurement of computers for staff had to be made in phases based on the limited financial allocation received each year.

Information regarding health and health services are provided by Ministry for the public through the MoH Portal. To attract more visitors to surf the Portal, the Ministry has improved the content and layout presentation of the portal from time to time. With continuous improvement, the Portal was ranked the twelfth of 1,192 portals by the Malaysian Development Corporation (MDeC), one rank increase compared to the previous year. More than 3.3 million people have visited the MoH Portal in 2009.

## **Creativity and Innovation**

The Performance Assessment Financial Management System (S3PK) was initially developed in response to a request by the Internal Audit Unit, to help agencies to make a self assessment on their financial management performance. This system was then nominated in two award categories by the Malaysian Administrative Modernization and Management Planning Unit (MAMPU), which are Quality Award for ICT (AKICT), and Case Study Award of the Open Source Competency Centre.

## **MANAGEMENT SERVICES**

The main objective of the Management Services Division (MSD) is to provide efficient and effective support and advisory services in management to ensure all activities within the MoH Headquarters are implemented professionally towards enhancing the health services delivery system. The MSD is also responsible to ensure that the required services and facilities are provided to enable each Division within the Headquarters to excel in their functions. MSD comprises of two main branches which comprised of several units:

- A. General Management Branch
  - i. Psychology Counseling Services Unit;
  - ii. Administration Unit;
  - iii. Human Resource Unit;
  - iv. Quality and Protocol Management Unit; and
  - v. Information Resources Unit.
  
- B. Finance and Asset Management Branch
  - i. Finance Unit; and
  - ii. Asset Management Unit.

## **Personnel Management**

The MSD is responsible in managing all service related matters for the 3,940 employees within the HQ. These employees come from various fields as summarized in Table 13.

**TABLE 13.**  
**VARIOUS CATEGORIES OF MOH HEADQUARTERS EMPLOYEES, 2008 - 2009**

No.	Category	No. of Employees	
		2008	2009
i.	Administration	3	3
ii.	Top Management	95	46
iii.	Professional & Management	866	1,195
iv.	Support	1,574	1,775
v.	Part-time	372	316
vi.	Training Pool	639	552
vii.	Temporary Addition	81	40
viii.	Pool	9	13
<b>Total</b>		<b>3,639</b>	<b>3,940</b>

*Source: Management Services Division, MoH*

The core activities of this Unit include the preparation and recording of change reports, to process Appointment Confirmation Date, confirmation of service and issuance of certification to that effect. The performance of each activity is shown in Table 14.

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. One of these committees is the Human Resource Development Panel, which convenes periodically to discuss various issues such as the annual salary increment and selection of the Excellent Service Awards recipients. The activities of the said panel for the year 2009 have been summarized in Table 15.

**TABLE 14.**  
**PERFORMANCES BASED ON ACTIVITIES IN PERSONNEL MANAGEMENT, 2009**

No.	Activity	Performance
1.	To prepare and record change reports	5,508 reports
2.	To record service-related matters	8,796 records
3.	To process the following: i. Appointment Confirmation Date ii. Certification for confirmation of service and confirmation of service iii. Conferment of pension status	Total of 623 personnel
4.	To process compulsory / optional / derivative retirement	17 - Compulsory 4 - Optional 1 - Derivative
5.	To process and certify loan application for computer, housing and vehicle.	43 - Computer 56 - Housing 3 - Vehicle
6.	To process and certify loan application for winter clothing / ceremonial attire allowance.	45 - Winter Clothings 64 - Ceremonial Attire
7.	To process promotion and 'acting' related matters	802 applications
8.	Letter to certify and confirm entitlement for medical benefits	202 letters
9.	Covering Allowance Certification	289 applications
10.	Disciplinary issues	24 cases
11.	Conducting service related courses	23 courses

Source: Management Services Division, MoH

**TABLE 15.**  
**SUMMARY OF ACTIVITIES FOR HUMAN RESOURCES DEVELOPMENT PANEL, 2009**

No.	Activity	Performance
1.	Convened once to discuss and certify normal salary movement for employees who have submitted their Annual Performance Appraisal Forms.	Total of 2,938 personnel. The meeting was held on 9 April 2009.
2.	Convened once to select recipients of the Excellent Service Awards	218 selected from a pool of 4,436
3.	Convened four times to consider and award the annual salary increment.	Total of 207 personnel

*Source: Management Services Division, MoH*

The MSD is also the Secretariat for the 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 2009, the MBJ convened 4 times which is the stipulated minimum number of required 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 System (HRMIS). MoH was selected as one of the pioneer agencies to launch the said system. The MSD was made responsible to ensure that the HRMIS was launched and effectively used to service 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. In 2009, the achievement for employee personal data entry is summarized in Table 16.

**TABLE 16.**  
**HRMIS PROFILE UPDATING STATUS IN MoH HQ, AS OF 31 DECEMBER 2009**

Type of Data	Status	
	Number	Percentage (%)
Personal	3,213	84.84
Family	2,448	64.64

*Source: Management Services Division, MoH*



## Finance Management

The MSD manages all finance-related matters for employees in the HQ. These include payment of salaries, allowances, rewards and bonuses. It is also in charge of the HQs' Management Program whereby a total of RM 722.57 million has been allocated for its operations. The performance-based expenditure till December 2009 including Accounts Payable is 100.2% (Table 17 and Table 18).

**TABLE 17.**  
**TOTAL ALLOCATION BY ACTIVITY TILL DECEMBER 2009**

Department	Allocation (RM)	Percentage (%)
HQ Management	133,757,498.00	18.51
Human Resources	10,804,482.00	1.50
Finance	260,677,980.00	36.08
Training	267,272,155.00	36.99
Information Technology	44,728,908.00	6.19
Competency Development	5,328,000.00	0.74
<b>Total</b>	<b>722,569,023.00</b>	<b>100.00</b>

Source: Management Services Division, MoH

**TABLE 18.**  
**ALLOCATION ACHIEVEMENT BASED ON TOTAL EXPENDITURE BY ACTIVITY, 2009**

Department	Expenditure (RM)	%	Balance (RM)	%
HQ Management	132,755,369.80	99.25	1,002,128.20	0.75
Human Resources	10,910,734.22	100.98	106,252.22	-0.98
Finance	258,385,509.96	99.12	2,292,470.04	0.88
Training	271,607,219.17	101.62	4,335,064.17	-1.62
Information Technology	45,047,647.50	100.71	318,739.50	-0.71
Competency Development	5,236,412.52	98.28	91,587.48	1.72
<b>Total</b>	<b>723,942,893.17</b>	<b>100.19</b>	<b>1,373,870.17</b>	<b>-0.19</b>

Source: Management Services Division, MoH

As the 'Responsibility Centre' which is better known as PTJ 1, the MSD also has the role in receiving and distributing the allocation warrant for all the other PTJs under it. In 2009, a total of 442 warrants were received while 695 sub-warrants were distributed.

The MSD is also the secretariat to the PTJ 1 Accounts and Finance Management Committee (JPKA) and Government Property and Asset Management Committee (JKPAK). The committees had met four times as per scheduled to monitor the accounts and financial practices and asset management of 15 PTJ 2 and 32 PTJ 3 under its jurisdiction.

The other responsibilities of this unit include accounting and revenue collection for the HQ. A total of RM 13.95 million as revenue was collected in 2009. In addition, it 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 and effectively. In 2009, two such courses had been conducted, namely, The Payment Management Course and The Collection of Revenue Course.

### **Administration Management**

The MSD is in charge of administration matters in the HQ. These include general administration, vehicles management, reports of punch card, security services and filing and correspondence management. The activities and performance pertaining to this unit for 2009 are as in Table 19.

**TABLE 19.  
SUMMARY OF ADMINISTRATIVE ACTIVITIES**

No.	Activities	Achievements
1.	Compiling Punch Card Reports	- 12 Reports compiled.
2.	SPANCO car rentals	- 170 official cars for JUSA/Special Grade; - 10 official department vehicles; - 26 official vehicles replacement; and - 12 replacements of leased official vehicles, which lease had expired.
3.	Security <ul style="list-style-type: none"> <li>• Appointment of Security Services Company for HQ</li> <li>• Security Tags/Pas Issuance.</li> </ul>	- Appointment was made and the said companies were monitored accordingly. - 931 passes were issued.
4.	Monthly Assembly	- 10 Assemblies were held.
5.	Filing Management	File Registration: - Personal: 17,370 files; - Open: 243 files; - Classified: 992 files; and - Application for expired file termination = 75,691 files.
6.	Correspondence Management	- 265,943 letters have been received, sorted and distributed. - Letters sent through postal service: Domestic Mail: 104,277; Registered Mail: 11,759; Air Mail = 61; Express Mail = 15,663; Parcel = 1,748; and Courier = 1,712.

Source: Management Services Division, MoH

### **Asset Management**

The Asset Management Unit is responsible for managing matters which are related to assets, rental of premises, maintenance and procurement. The performance for each activity for 2009 is as in Table 20.

**TABLE 20.  
SUMMARY OF ASSET MANAGEMENT ACTIVITIES**

No.	Activities	Achievements
1.	Building Maintenance <ul style="list-style-type: none"> <li>• Putrajaya Office Complex.</li> <li>• Cenderasari Office Building               <ul style="list-style-type: none"> <li>- Cleaning Services</li> <li>- Security Services</li> <li>- Renovation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 6 Maintenance Meetings were held.</li> <li>- Maintenance Company appointed.</li> <li>- Maintenance Company appointed.</li> <li>- In the process of appointing the Contractor by JKR.</li> </ul>
2.	Premises and Space Rental	<ul style="list-style-type: none"> <li>- 178 office space rental applications were processed.</li> <li>- 63 residential rental applications were processed.</li> <li>- 71 premises rental applications were processed.</li> </ul>
3.	Registration of Asset at MSD	<ul style="list-style-type: none"> <li>- Inventory : 224 units</li> <li>- Asset : 81 units</li> </ul>

Source: Management Services Division, MoH

### Quality and Protocol Management

MSD is also responsible in managing services related to Quality, Protocol and General Coordination in the HQ. These include Quality and Productivity Committee Meeting, parliament matters, event management, personal or official overseas bound trips applications (duration of less than 14 days), selection of medical representatives for the Hajj Season, and acted as coordinators for uniforms procurement, the Hospital Board of Visitors and the launch of *Islam Hadhari*. The achievement for each activity in 2009 is as in Table 21.

**TABLE 21.  
SUMMARY OF QUALITY AND PROTOCOL ACTIVITIES**

No.	Activities	Achievements
1.	Parliament (Both House of Representatives and The Senate)	<ul style="list-style-type: none"> <li>- Compiled questions and answers for both houses. 357 questions for all three sittings of the House of Representatives and 102 questions for all three sittings of the House of The Senate.</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. Yang Di-Pertuan Agong.</li> <li>- Coordinated answers for impromptu motions.</li> </ul>
2.	Quality & Productivity Committee Meeting	- Convened three times.
3.	Personal or Official Overseas Bound Trips Applications (duration < 14 days)	Personal Trips – 3,246 applications were processed. Official Trips – 1,250 applications were processed.
4.	Selection of Medical Representatives for the Hajj Season	256 Medical Representatives were selected.

*Source: Management Services Division, MoH*

In 2009, there were nine main functions organized by this division. Some of them were Dinner with Former Minister of Health, Appreciation Ceremony for Former MoH Officers (Grade 54 and below), Excellent Services Awards Function, Talks on The Holy Prophet Birthday 1429H/ 2008M, MoH Quranic Recitation Competition, Independence Month Celebration, The Feast of Aidilfitri and Deepavali, Opening Ceremony of Management Conference, Quality Day and MOH Annual Dinner.

MSD also coordinated the Naming / Official Opening ceremonies of Hospitals, events organized by other Divisions and formal visits by external parties to the Ministry. In 2009, three opening ceremonies were held by several divisions from numerous State Departments of Health, which are:

- i. Pahang Health Department. – The Ground Breaking ceremony of Hospital Bera (5 February 2009);
- ii. Pahang Health Department. – The Ground Breaking ceremony of Hospital Rompin (18 May 2009); and
- iii. Wilayah Persekutuan Health Department. – Formal visit of Sri Paduka Baginda Raja Permaisuri Agung to Putrajaya Hospital (7 June 2009).

MSD is also in charge of coordinating the launch of *Islam Hadhari*. Throughout the year of 2009, three courses were conducted. These courses are *Tahsin Bacaan Al-Quran* Course, The Islamic Human Development Course and The Training of Master of Ceremony and Prayer Recital Course. In addition, 23 talks on inculcating Islamic values among MOH staff members were conducted.

### Information Resources Management

The Library in the MOH HQ 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 2009 is shown in Table 22.

**TABLE 22.**  
**SUMMARY OF INFORMATION RESOURCES ACTIVITIES**

No.	Activities	Achievements
1.	Library Management	<p>Purchase of 778 books, 44 magazines / journals and 1 database.</p> <p>Customer services provided includes:</p> <ul style="list-style-type: none"> <li>i. References and referrals – 154 requests;</li> <li>ii. Collections borrowed – 1,250 books; and</li> <li>iii. Borrowers – 801 people.</li> </ul>

Source: Management Services Division, MoH

### Psychology Counseling Services

MSD plans, provides direction, develops and coordinates counseling activities such as the Employees Assistant Program for the Ministry of Health HQ. Cases are managed together in collaboration with the Human Resource Division. MSD also conducted counseling sessions to all personnel's in MOH HQ. In 2009, the Counseling Psychology Unit handled 215 individual and group counseling sessions.

### Improvisation and Innovation

On 22nd to 23rd October 2009, an Audit Surveillance was conducted at this Division and MSD managed to maintain the MS: ISO 9001:2008 certification obtained on 6 November 2008 for its eight core activities, namely:

- i. Complaints on building maintenance for minor problems;
- ii. Motor vehicle maintenance;
- iii. Service records;

- iv. Mailings;
- v. Approval for official application to go abroad;
- vi. Counselling service;
- vii. Bills payment; and
- viii. Library services.

As an effort to share knowledge amongst officers of the division, knowledge sharing sessions were conducted regularly. In these sessions, officers were encouraged to present knowledge they had gained from courses that they attended or books that they have read. Feedback from officers indicated these sessions to be beneficial.

## COMPETENCY DEVELOPMENT DIVISION

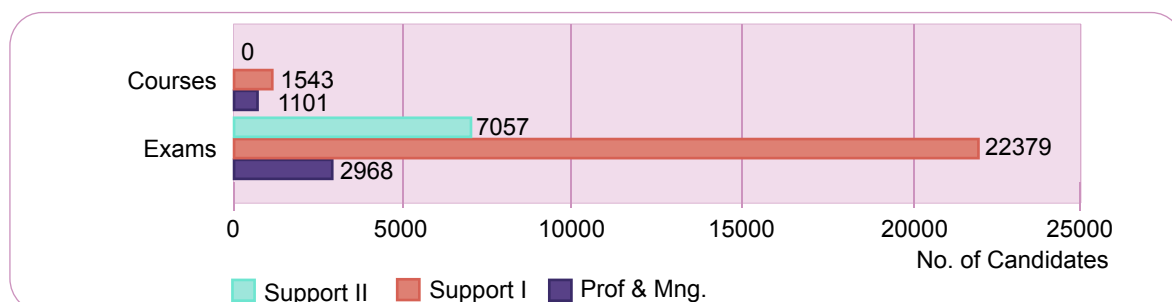
The Competency Development Division (CDD) is responsible for the management and implementation of the competency level assessments for the close services schemes in MOH. This division conducts the preparation of exam syllabus, competency courses and coordinates the implementation of PTK-CPD.

This Division also carries out evaluations and improvements on the competency level assessment (CLA), and made evaluations and proposed suggestions on the status of courses and eligibilities of the purpose of full or part exemptions from the assessment. In addition, this division is entrusted with the responsibility to provide inputs regarding competency assessment results to the Human Resource Division, for the purpose of staff promotions as well as their career advancements.

### Competency Level Assessment (CLA)

Through the Service Circular Letter No. 19 Year 2008, some modification in the competency assessment was introduced. 2009 had been the transition year for implementation of the new Competency Level Assessment (CLA) method in MoH. Throughout the year, 12 examinations which involved 32,404 candidates of 105 schemes of services, and 37 courses which involved 2,644 candidates of 21 schemes of services had been implemented at various examination centres and assessment centres (Figure 6).

**FIGURE 6.**  
**NUMBER OF CANDIDATES FOR CLA EXAMINATIONS AND COURSES, 2009**



Source: Competency Development Division, MoH

- **PTK-CPD**

In 2009, the Continuing Professional Development (CPD) Unit processed the accumulated CPD points of 13,012 healthcare personnel comprised of Medical Officers, Dental Officers and Pharmacists. The CPD Points collected were used for the Functional Component of the *Penilaian Tahap Kecekapan* (PTK) or Competency Level Assessment (CLA). Out of that number, 9006 personnel were Medical Officers, 1246 were Dentists and the remaining 2760 were Pharmacists. The results achieved were very promising as 10,288 healthcare personnel achieved the Level IV (excellent) 1896 achieved Level III (Good), 541 achieved Level II (Fair) and 287 achieved Level I (Poor).

- **Accreditation for Personnel with Masters in Medicine and Masters in Dentistry.**

In 2009, the Division issued 811 accreditations for officers who passed the Part I of Masters Programme in Medicine and Dentistry, which is equivalent to the Level I and 621 accreditations standard of competency, or level III for those who has completed their Masters Program in the same disciplines.

## FINANCE

### Budget Management

In 2009, a total of RM14.42 billion was allocated to MoH which consists of RM11.86 billion for the Operational Budget and RM2.56 billion for the Development Budget.

**TABLE 23.**  
**ALLOCATION AND EXPENDITURE OF OPERATING BUDGET IN 2009**

Programme	Allocation (RM million)	Expenditure (RM million)
Management	1,046,196,605	1,045,514,308
Public Health	2,292,571,433	2,369,037,540
Medical	7,615,685,906	7,854,700,339
Research & Technical Support	147,218,867	146,567,326
Oral Health	445,091,189	443,978,629
Pharmaceutical Services	101,906,067	101,626,503
<i>Lembaga Promosi Kesihatan</i>	10,610,000	10,610,000
New-Policy	47,852,455	46,723,857
One-Off	156,037,388	154,329,885
<b>Total</b>	<b>11,863,169,910</b>	<b>12,173,088,387</b>

Source: Finance Division, MoH



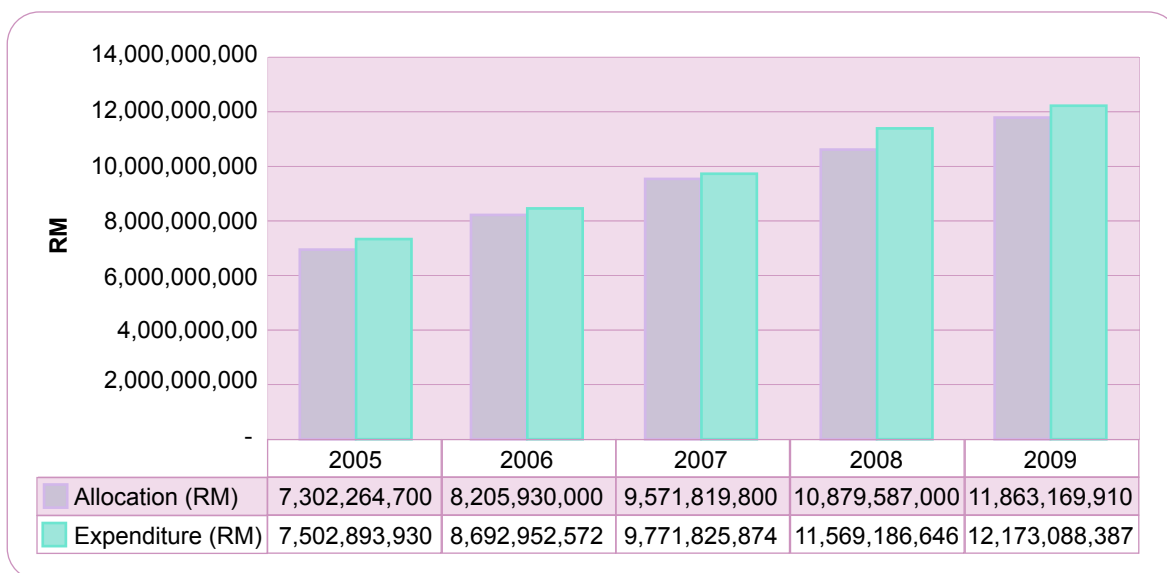
- **Performance of Operating Expenditure for 2009**

The Operating Budget allocation for 2009 was RM11.86 billion which is an increase of RM 0.99 billion as compared to RM 10.87 billion allocated for 2008. However, the total expenditure for the year 2009 was RM 12.17 billion, which was 2.61% higher than the sum allocated. The over-expenditure was due to payments such as *Bayaran Khas Kewangan*, arrears due to promotion for Medical Officers in Grade UD41 to Grade UD44, as well as filling up vacant posts which amounted to RM 293,281,787.00 and also the expenditure for procurement of Services and Supply such as drug and hospital support service. Table 23 shows the allocation and expenditure of the Operating Budget in 2009.

- **Overall Performance of Operating Budget From 2005-2009**

For the past five years (2005-2009), the Operating Budget allocation for MOH has increased from RM7.30 billion in 2005 to RM11.86 billion in 2009. Meanwhile, the expenditure for operating budget recorded an increase from RM7.50 billion in 2005 to RM12.17 billion for 2009. Figure 7 shows the overall performance of Operating Budget from 2005-2009.

**FIGURE 7.**  
**OVERALL PERFORMANCE OF OPERATING BUDGET FROM 2005 - 2009**



Source: Finance Division, MoH

- **Performance of Development Expenditure for 2009**

The total expenditure of the Development Budget was RM2.540 billion or 98.95% of the total budgeted allocation of RM2.567 billion. Expenditure performance of the Development Budget is expected to increase in 2010 which mark the end of the Ninth Malaysia Plan. Table 24 shows the development expenditure according to project details.

**TABLE 24.**  
**DEVELOPMENT ALLOCATION AND EXPENDITURE BY PROJECT DETAILS, 2009**

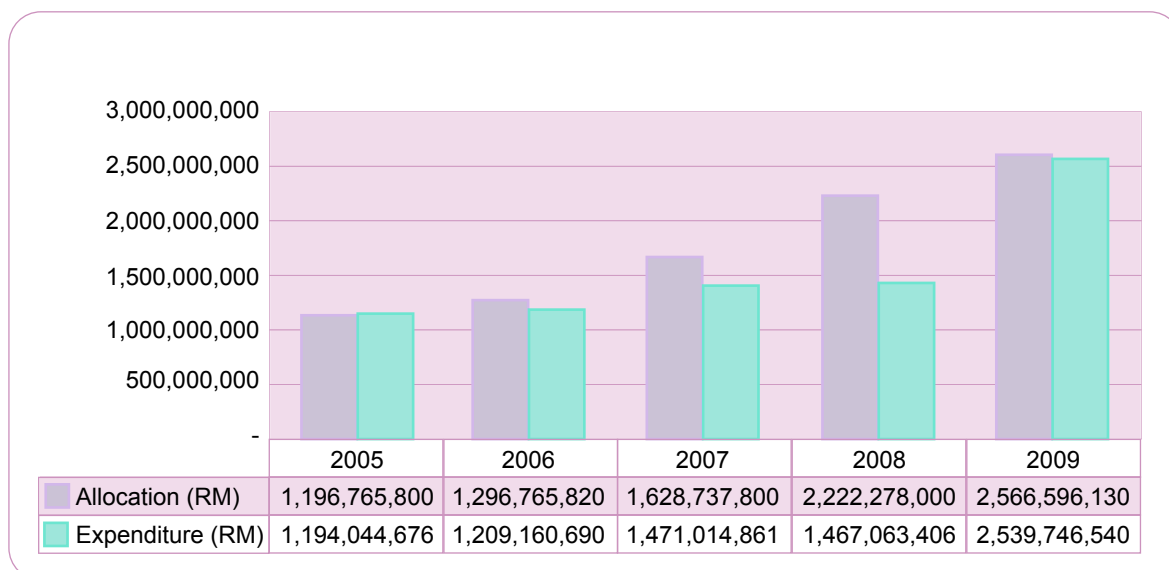
Project Detail	Title	Allocation (RM million)	Expenditure (RM million)	Percentage (%)
• 00101	• Construction of New Colleges	159,685,062	159,717,081	100.02
• 00102	• Upgrading of Training Projects	36,556,222	30,297,878	82.88
• 00103	• Hostels for Pre-Service Trainees	5,370,010	4,868,478	90.66
• 00104	• Outsourcing	11,500,000	10,855,880	94.40
• 00105	• In-Service Training	76,420,407	76,155,615	99.65
00100	Training	289,531,701	281,894,932	97.36
• 00201	• Rural Health Services	343,819,695	340,589,133	99.06
• 00202	• BAKAS	18,607,000	18,729,055	100.66
• 00203	• Urban Health Services	234,696,929	234,095,253	99.74
• 00204	• Mobile Clinics	12,648,500	12,104,000	95.70
00200	Public Health	609,772,124	605,517,441	99.30
00300	Hospital Facilities	743,456,380	740,549,429	99.61
00400	New Hospitals	344,808,043	343,819,638	99.71
00500	Research and Development	33,415,110	32,836,546	98.27
00600	Restructure, Upgrade and Repair	50,660,826	50,500,273	99.68
00700	Land Procurement and Maintenance	5,732,950	5,723,718	99.84
00800	ICT Facilities	87,103,877	84,484,284	96.99
00900	Staff Facilities	118,018,932	117,062,879	99.19
01000	Health Promotion	6,600,000	5,518,466	83.61
01100	Equipments and Values	277,496,187	271,838,934	97.96
<b>Total</b>		<b>2,566,596,130</b>	<b>2,539,746,540</b>	<b>98.95</b>

Source: Finance Division, MoH

• **Overall Performance of Development Budget From 2005-2009**

Figure 8 shows the overall performance of the Development Budget allocation and expenditure from 2005 until 2009. In general, the development expenditure for MoH for the past five years has been less than the allocation provided, with the exception in 2005 whereby MoH had managed to spend 99.77% of the budget allocated.

**FIGURE 8.**  
**OVERALL PERFORMANCE OF DEVELOPMENT BUDGET, 2005 - 2009**



Source: Finance Division, MoH

## Revenue Management

### • Revenue Collections

The total revenue collection for MoH in 2009 was RM 284,738,320.75 of which RM 213,622,392.15 was collected from the charges of health services in hospitals and clinics while RM 71,115,928.60 or 24.98% was collected from other revenues such as fines, rentals, sales, etc. The breakdown of the revenue classifications are shown in Table 25.

**TABLE 25.**  
**TOTAL REVENUE COLLECTION OF MOH, 2009**

Code	Revenue Classification	Amount (RM)
60000	Tax Revenue	-
71000	Licences, Registration Fees and Permits	6,831,555.59
72000	Services and Services of Goods	231,099,623.96
73000	Receipts from Sales of Goods	2,923,242.60
74000	Rentals	13,143,697.03
75000	Interest and Returns of Investment	94,350.47
76000	Fines and Penalties	7,365,137.42
80000	Non-Revenue Receipts	21,599,878.98
90000	Revenues from Federal Territory	1,680,834.70
	<b>Total</b>	<b>284,738,320.75</b>

Source: Finance Division, MoH

- **Outstanding Revenue**

Total outstanding revenue collection in 2009 increased by 8.9% to RM31.39 million from RM28.81 million in 2007. Out of these, a total of RM 26.77 million of the outstanding revenue was due from charges of health services under the Fees (Medical) Order 1982, while RM4.62 million was due from other revenues such as fines, rentals, sales, etc.

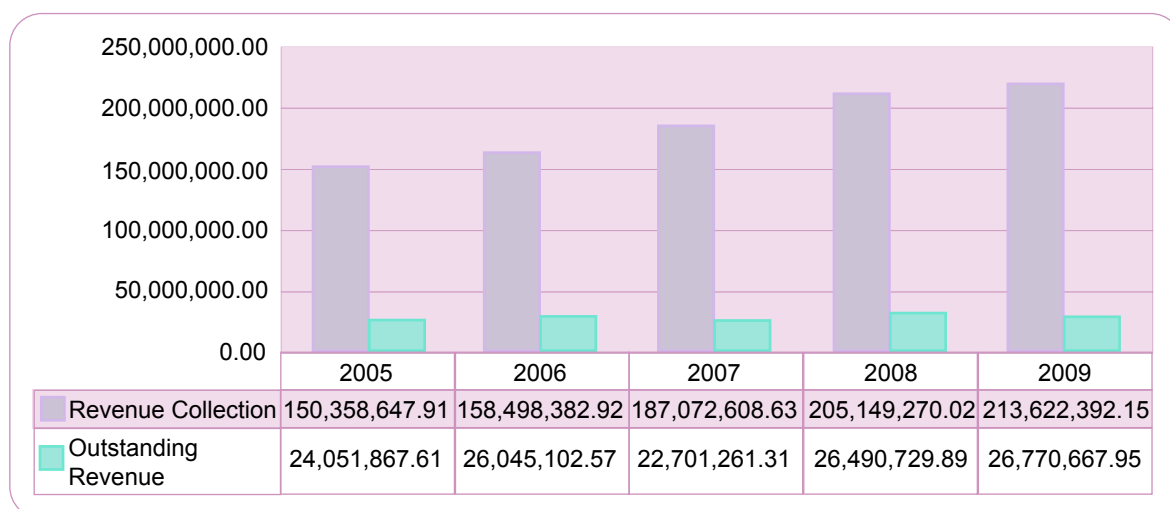
- **Collection and Outstanding Revenue For Health Services Under The Fees (Medical) Order 1982 For 2009**

The total revenue collection for health services under the Fees (Medical) Order 1982 for the year 2009 was RM 213,622,392.15 of which RM 155,044,593.16 was contributed by Malaysians as both in-patient and out-patient, and Full Paying Patients for services provided by clinics/hospitals, while RM 58,577,798.99 was contributed by non-Malaysian patients.

In 2009, a total of RM 26.77 million of the outstanding revenue was due from charges of health services under the Fees (Medical) Order 1982. A total of RM 12.78 million and RM 13.99 million of the outstanding revenue was due from Malaysian and non-Malaysian patients respectively.

The total revenue collected under the Fees (Medical) Order 1982 from 2005 to 2009 showed an average increment of RM 15.82 million or 25%. The revenue collected in 2009 increased by RM 8.47 million as compared to RM 205.15 million collected in 2008 (Figure 9). Meanwhile, outstanding revenue collection for health services under the Fees (Medical) Order 1982 for the year 2009 increased by 1.06% or RM0.28 million as compared in 2007.

**FIGURE 9.**  
**COLLECTION AND OUTSTANDING REVENUE UNDER THE FEES (MEDICAL) ORDER 1982, 2005 – 2009**



Source: Finance Division, MoH

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

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

There are three types of financial assistance offered by the Ministry of Health Malaysia (MoH) to Non-Governmental Organizations (NGO) which are:

#### 1. *Health Related Programs Fund*

In 2009, a sum of RM 12,153,795.00 was allocated by MoH to NGOs in the form of financial aid to support health-related programs and activities such as counseling sessions, awareness campaigns, treatment and other related activities to patients. This allocation was given to Malaysian Hospice Council, The Heart Foundation of Malaysia, National Diabetes Institute (NADI), the Malaysian Association for the Prevention of Tuberculosis (MAPTB) and others. The total allocation in 2009 increased by 10.7% as compared to RM 10,980,645.00 allocated in 2008. MoH also provided funds amounting to RM4.0 million to the Malaysian AIDS Council (MAC) in 2009 to carry out AIDS education and awareness activities.

#### 2. *Capital Grant Fund*

This grant was given to new dialysis centers with a maximum of 10 dialysis machines. In 2009, a sum of RM 6,450,000.00 was allocated to NGOs in the form of capital grant. This amount represented an increment of 99.30% as compared to RM 3,236,359.00 allocated in 2008.

#### 3. *Haemodialysis Subsidy Fund*

This fund was created in order to help poor patients who are undergoing dialysis due to chronic kidney failure in NGO Haemodialysis Centers with a subsidy of RM50.00 for each treatment. In 2009, MoH had allocated a sum of RM 23,192,150.00 to NGOs as subsidy payments for haemodialysis treatment.

## WAY FORWARD

### Health Manpower

Various initiatives will be implemented to further improve the quality of service delivery system in HRD. These initiatives are as follows:

- i. Ensure continuous effort in strengthening the organisation structure based on the need to produce effective work force that is well planned and efficient in order to achieve the optimum utilisation of human resources.
- ii. Continuously reviewing and improving the service scheme and allowances to ensure MoH personnel enjoy a competitive and attractive allowance in the respective services scheme.

- iii. Implementation of continuous improvisations and promotion of innovation to enhance management quality, service delivery and work process.

### **Training Management**

Human Resource Development is the framework to assist personnel to broaden and enrich their personal and organizational skills, knowledge, and abilities which includes inter alia employee training. Therefore, the TMD is fully aware of the need to continuously pursue systematic training of human resources in MoH as this is crucial in supporting the development and expansion of an efficient, effective and reliable delivery system that is ever vigilant in responding to the dynamic changes in health care needs and demands. In achieving human resources development initiatives, the following strategies are being taken :

- i. To ensure continuous improvement in the planning and development of MoH training programmes. This involves the development of appropriate health manpower training plans with a view to equip all levels and categories of personnel with the required level of competencies;
- ii. To continuously ensure that the teaching, learning and examination quality of MoH AHSC are of acceptable international standard. This would include collaboration with both the relevant government agencies and the private sector to ensure consistency with national needs, aspirations and the infusion of new medical developments; and
- iii. To embrace ICT where possible with a view to further improve both the teaching and learning methodologies.

### **Information Management**

In 2010, MoH will upgrade the existing ICT network MOH\*Net of 350 locations to improve network performance. The Ministry will also continue to expand the application system in the Hospital, Health Clinic, Dental Clinic and to strengthen the application at the pharmacy department. In addition to the above efforts, Ministry will further strengthen the governance of ICT which will be implemented continuously in the future.

### **Service Management**

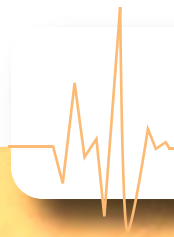
As a Division that provides support services, it is our aspiration to shorten and simplify all work processes and to deliver excellent services for all the various divisions within the MoH's HQ. The MSD strives to carry out its responsibilities and tasks effectively and efficiently so that maximum customer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

## **Competency Development**

The CDD is looking forward to continue implementing CLA through Continuous Based Training (CBT), Assessment Centre (AC) and Continuous Professional Development (CPD). The implementation of PTK-CPD will be enhanced and extended to various schemes of paramedics and allied health. The Division will also conduct training of trainers (TOT) for CLA assessors to guide and train them professionally for the purpose of developing the requisite skills and knowledge to become a well trained assessor.







# 3

## Public Health Programme

## INTRODUCTION

The Public Health Programme is headed by the Deputy Director-General of Health (Public Health), who is directly responsible to the Director-General of Health. The Programme comprised of five Divisions and one Section; namely the Disease Control Division, the Family Health Development Division, the Food Safety and Quality Division, the Health Education Division, the Nutrition Division and the Public Health Development Section.

Public Health goes beyond medical care and recognizes the social aspects of health problems and lifestyles. It 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 and family as well as the individual.

The Public Health Programme has made significant contributions in upgrading the health status of Malaysia. Programs and activities were inclusive of various strategies planned, implemented, monitored and evaluated by the various divisions in Public Health Programme.

The main objective of the Disease Control Division (DCD) 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 pose a threat to public health. The other objectives are as listed below.

- i. To encourage a healthy lifestyle; a healthy, safe and hygienic work environment and workplace; suitable preventive measures; immediate detection and treatment; continuous monitoring and suitable rehabilitation services.
- ii. 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 disease control sub-activities which are the Communicable Disease Section, the Disease Surveillance Section, the Vector Borne Disease Control Section, the AIDS/STI Section, the National Public Health Laboratory and the Non-Communicable Disease Section, which incorporated the Occupational and Environmental Health Section. All activities are implemented at the Ministry, State and District levels.

The Family Health Development Division (FHDD) 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 two sections in the Division namely Family Health Section and Primary Healthcare Section.

The main objective of the Food Safety and Quality Division (FSQD) is to protect the public against health hazard and fraud in the preparation, sale and use of food. The Division has been implementing actively 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 handlers 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.

Meanwhile, the main objective of Health Education Division (HED) is to manage health education and promotion programs as well as to conduct training and behavioural research. The health education and promotions activities include healthy lifestyle 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.

The Nutrition Division, formally known as the Nutrition Section under FHDD was restructured as a Division on August 13th, 2008 by the Policy and Planning Committee, Ministry of Health (*Jawatankuasa Dasar dan Perancangan, Kementerian Kesihatan Malaysia*) for the purpose of providing more comprehensive services to the nation. Nutrition activities were divided into Planning and Development, Promotion, Rehabilitation, and Surveillance. Activities were carried out in accordance with those of other health services, both, at the national level as well as at health facilities in each state. Inter-agency cooperation and integration of nutrition activities into other Programmes have contributed to the strengthening of these activities.

The Public Health Development Section was previously known as Quality and Standards Unit. Initially, the unit's function was to monitor quality of health care services in the Public Health Programme. As the scope was extended, the functions were also 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**

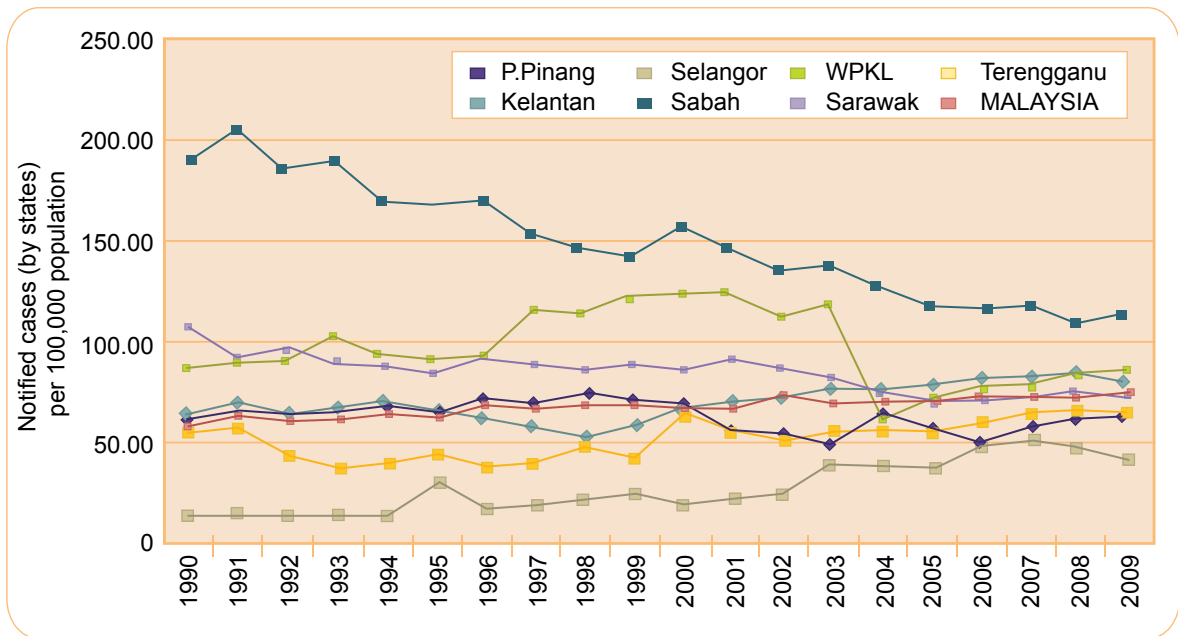
#### **Tuberculosis Prevention and Control Program**

Tuberculosis remains a significant health issue for Malaysia. As with most other developing countries in the past few years, Malaysia is reporting an increasing number of cases ranging from 1 per cent to 5 per cent annually. In 2009, 18,102 new cases (all forms) were registered through the surveillance system, reflecting a notification rate of 64 cases per 100,000 populations.

The number of tuberculosis cases is markedly higher in Sabah than in any other state, although there has been a significant reduction in the number of cases from 194.4 cases per 100,000 in 1990 to 107.8 cases per 10,000 in 2009. Selangor had the second-highest number of reported cases (2,342) in 2009 but remains among the states with the lowest notification rate per 100,000 populations. Its trend, however, has been on the increase since 2003.

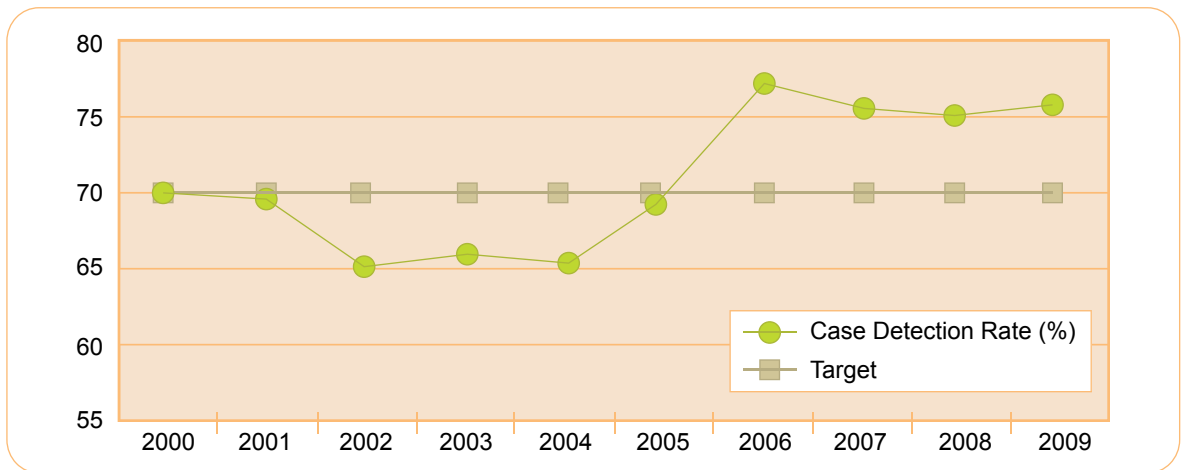
Overall, while Sabah and Sarawak have shown a decrease in notification rates, states in the Peninsular have seen a slight but gradual increase (Figure 1). In 2009, differences between states across the country were less marked than in earlier years, and six states had notification rates above the national rate of 63.9 per 100,000. These were Sabah, Kuala Lumpur, Kelantan, Sarawak, Terengganu and Pulau Pinang.

**FIGURE 1.**  
**NUMBER OF NOTIFIED TUBERCULOSIS (ALL FORMS), SELECTED STATES IN MALAYSIA**  
**(LOWEST AND HIGHEST, 1990-2009)**



Source: Private Medical Practice Control Section, MoH

**FIGURE 2.**  
**CASE DETECTION RATE (CDR) OF NEW TB CASES (SPUTUM SMEAR POSITIVE)**  
**MALAYSIA, 2000 – 2009**

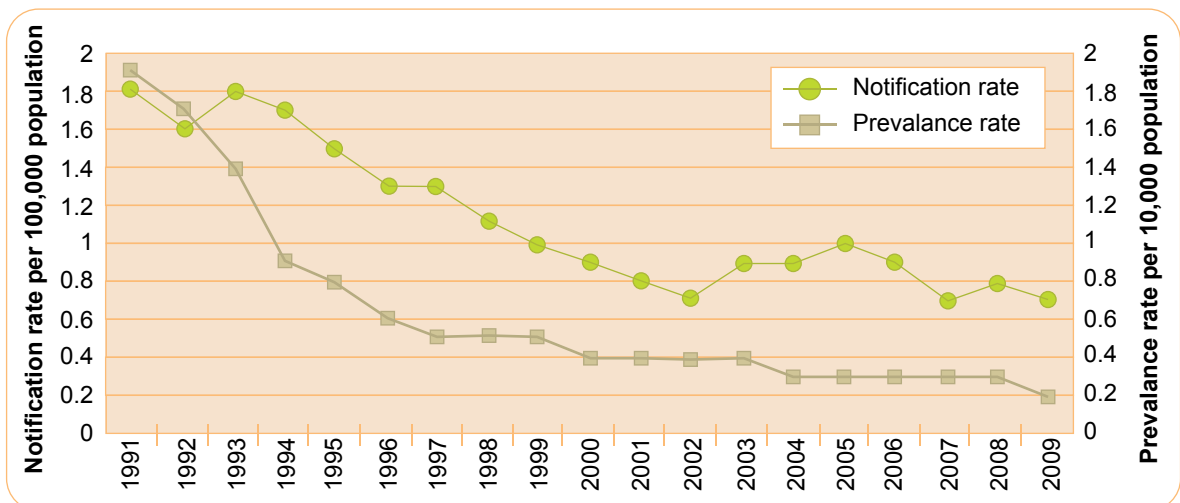


Source: Disease Control Division, MoH

### Leprosy Prevention and Control Program

In 2009, the prevalent of leprosy in Malaysia remained less than one case per every 10,000 population. Malaysia has attained the elimination target by WHO since 1994. 187 new cases were reported in 2009. 38% were detected from Sabah dan 12% were from Selangor. Multiple Drugs Therapy (MDT) will continue to be the main strategy in control programmes.

**FIGURE 3.**  
**NOTIFICATION RATE AND PREVALENCE RATE OF LEPROSY IN MALAYSIA, 1991 – 2009**



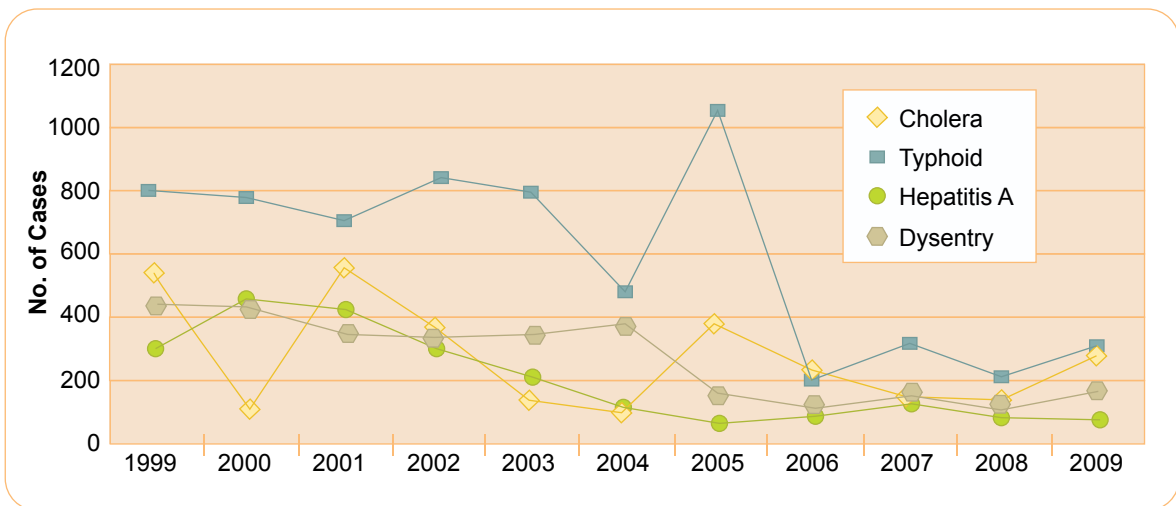
Source: Disease Control Division, MoH

### Food and Waterborne Diseases Program

In Malaysia, there are 5 food and waterborne diseases monitored through the notification system under the Prevention and Control of Infectious Diseases Act 1988 (Act 342) which consists of cholera, typhoid, food poisoning, Hepatitis A and dysentery.

The incidence of these diseases has shown a declining trend since the past 10 years. Over the same period from 1999 to 2009, the average incidence of cholera, typhoid, Hepatitis A and dysentery was less than 5 cases per 100,000 populations. In 2009, the incidences of these diseases were around 1 per 100,000 populations.

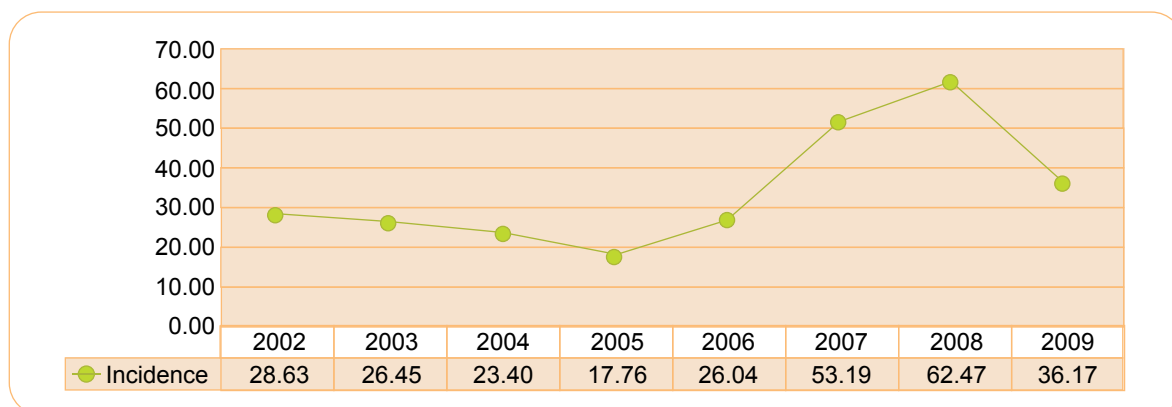
**FIGURE 4.**  
**TREND OF CHOLERA, TYPHOID / PARATYPHOID, HEPATITIS A AND DYSENTERY IN MALAYSIA, 1999 – 2009**



Source: Disease Control Division, MoH

In 2009, the incidence of food poisoning was 36.17 per 100,000 populations, which was lower than its incidence in 2008. The establishment of the Crisis Preparedness and Response Center (CPRC) since May 2007 had improved the registration as well as reporting system for infectious diseases outbreak or other public health crisis including food poisoning, so that more food poisoning episodes and cases were being registered.

**FIGURE 5.**  
**INCIDENCE OF FOOD POISONING IN MALAYSIA, 2002 – 2009**



Source: Disease Control Division, MoH

### Zoonotic Diseases Control Program

Plague, rabies and yellow fever are the notifiable zoonotic diseases under the Infectious Disease Prevention and Control Act 1988. In 2009, there was no case of plague, rabies and yellow fever reported. Zoonotic disease are monitored via admission to government hospitals (Hospital Information Management System, HIMS) as in Table 1. In 2009, there is also no avian influenza case among poultry or human being reported.

**TABLE 1.**  
**ZOONOTIC DISEASES ADMITTED IN THE GOVERNMENT HOSPITAL IN MALAYSIA, 2005 – 2009**

Disease	2005	2006	2007	2008	2009
Tularaemia	0	0	0	0	0
Anthrax	0	0	0	0	0
Brucellosis	0	0	0	0	0
Rat-bite fever	0	0	0	0	0
Leptospirosis	378	527	929	1263	1418
Listeriosis	0	0	0	0	0
Q fever	0	0	0	0	0
Toxoplasmosis	0	0	0	0	0
Echinococcosis	0	0	0	0	0
Taeniasis	0	0	0	0	0
Cysticercosis	0	0	0	0	0
Other zoonotic bacterial disease	309	286	451	394	705

Source: Disease Control Division, MoH

## VECTOR BORNE DISEASE CONTROL

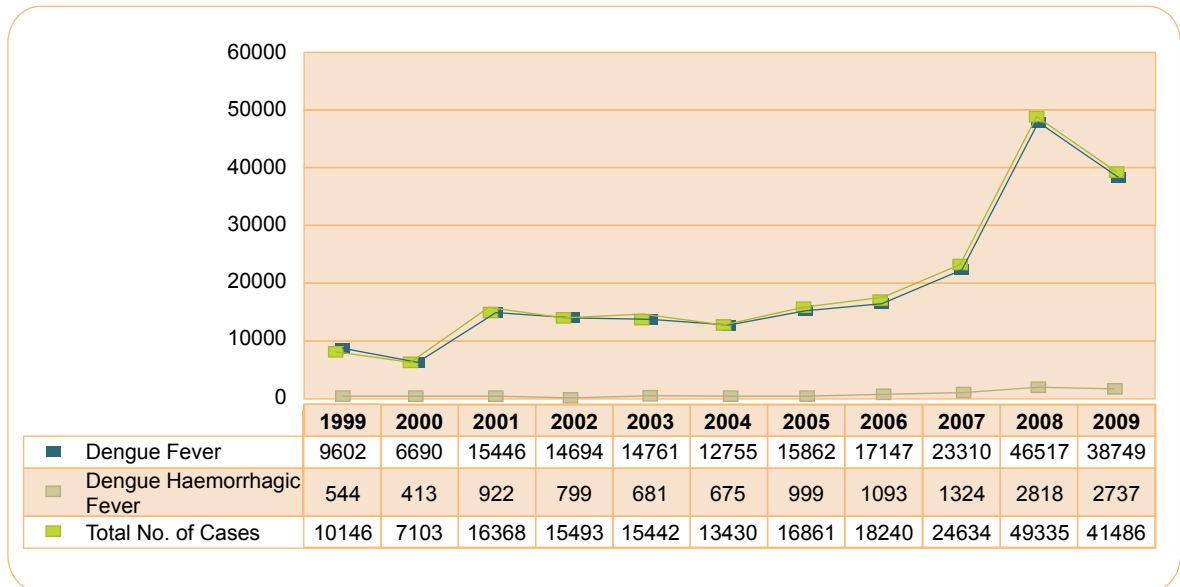
### Dengue Fever Control Program

Dengue fever is one of the significant public health problems in Malaysia. Dengue Hemorrhagic fever was first recognised in 1962 in an outbreak in Pulau Pinang, where 41 cases and 5 deaths were recorded. The reported Dengue cases have generally been increasing in the recent years (Figure 6). In 2009, 41486 cases and 88 deaths were reported. This was equivalent to approximately 147 cases per 100,000 populations. The Dengue Fever contributed 94% (38749 cases) of the total cases and 6% (2,737 cases) was Dengue Hemorrhagic Fever. States showing the highest Incidence Rate (IR) of all Dengue cases (per 100,000 populations) were Selangor (365), Federal Territory of Kuala Lumpur (217), Sarawak (179), Penang (155), Perak (114), and Negeri Sembilan (104). The other states have IR less than 100 cases per 100,000 populations. The case fatality rate in 2009 was 0.31% (Figure 7), a slight decrease compared to the previous year. In parallel with the number of reported dengue cases, Selangor contributed the highest number of deaths which were 46 cases, followed by Federal Territory of Kuala Lumpur with 8 deaths, Sarawak with 7 deaths, and Negeri Sembilan with 6 deaths. The other states reported less than 5 deaths. For the state of Perlis, Kedah and Terengganu, no dengue deaths were reported in 2009.

There were 3,792,777 premises inspected for mosquito breeding in 2009 with 59,290 of it found to be positive for Aedes breeding as compared to 3,629,952 premises inspected with 46,737 premises with positive Aedes breeding in 2008 (Table 2). The number of premises inspected and premises found positive with Aedes breeding increases by 27% and 20% respectively in 2009 compared to the previous year. There was a decrease of 0.12% in fogging activities in 2009 compared to 2008. This could be explained by the decrease of the number of reported cases in 2009 compared to 2008. There were 729,352 premises which were placed with Temephos in 2009 compared to 508,912 premises in 2008 which showed an increase of 43%. Results from the premise inspection activity in 2009 showed that the highest Aedes index was at Perlis with 4.53% as compared to the national Aedes index which was 1.56%.

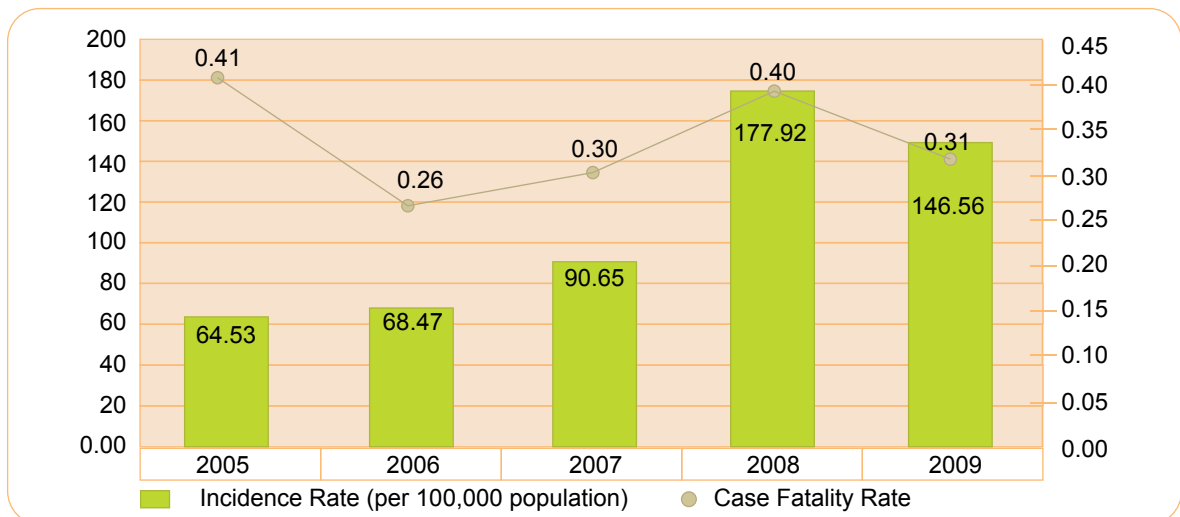


**FIGURE 6.**  
**TREND OF REPORTED DENGUE CASES IN MALAYSIA (1999 - 2009)**



Source: Disease Control Division, MoH

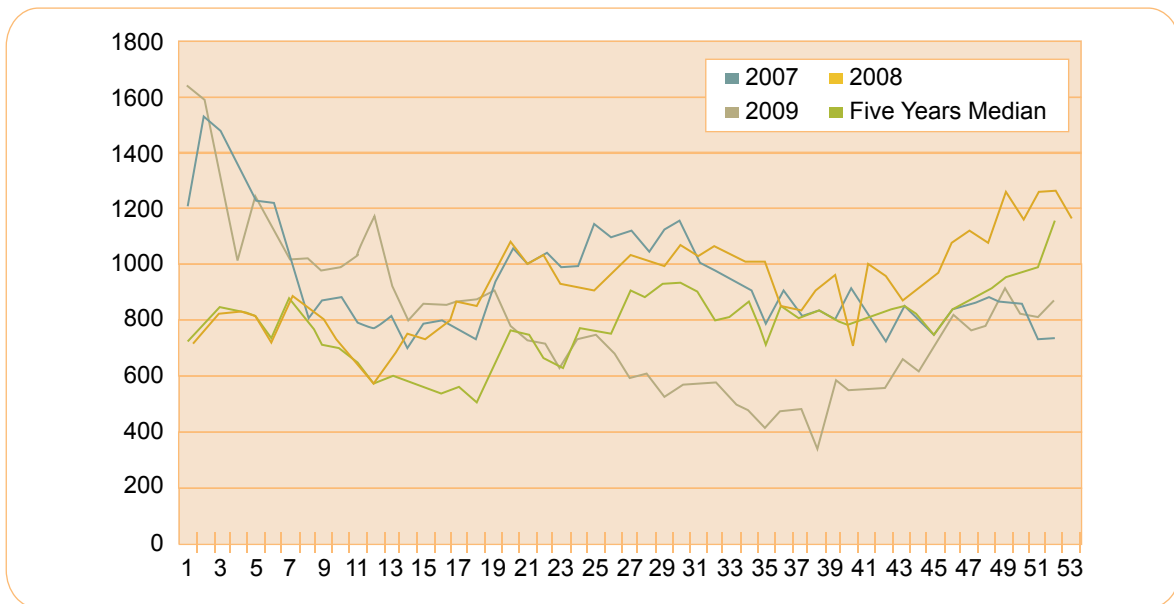
**FIGURE 7.**  
**INCIDENCE AND CASE FATALITY RATE OF ALL REPORTED DENGUE CASES\* IN MALAYSIA, 2005 – 2009**



Note: \* total of both Dengue Fever and Dengue Haemorrhagic Fever cases

Source: Disease Control Division, MoH

**FIGURE 8.**  
**TREND OF REPORTED DENGUE CASES IN MALAYSIA (2007-2009) AND THE FIVE YEARS**  
**MEDIAN (2004-2008) BY WEEK**



Source: Disease Control Division, MoH

**TABLE 2.**  
**DENGUE VECTOR CONTROL ACTIVITIES ACCORDING TO STATES IN MALAYSIA, 2008 - 2009**

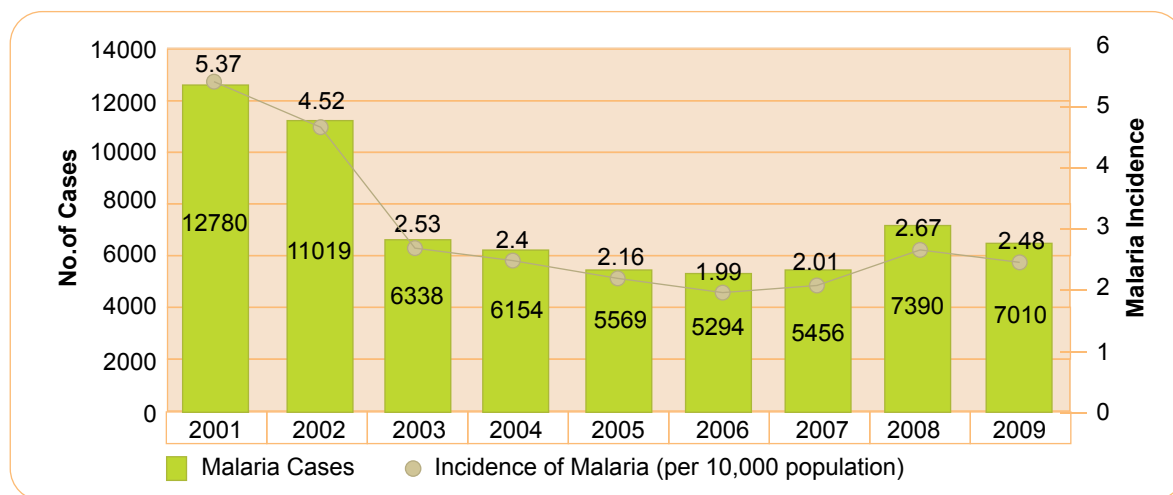
States	2008						2009						Breteau Index	Aedes Index (%)	No. Premises Fogged	No. Premises Placed with Temephos	No. Premises Fogged	Aedes Index (%)				
	No. of Premises Inspected	No. of Premises Inspected with Positive Breeding			No. of Premises Found with Positive Breeding			No. of Premises Placed with Temephos			No. of Premises Inspected with Positive Breeding								No. of Premises Found with Positive Breeding			
		A.egy	A.albod	Total	A.egy	A.albod	Total	No. of Premises Placed with Temephos	No. Premises Fogged	Aedes Index (%)	Breteau Index	No. of Premises Inspected	A.egy	A.albod	Total	No. of Premises Inspected with Positive Breeding	A.egy	A.albod	Total	No. Premises Placed with Temephos	No. Premises Fogged	Aedes Index (%)
Perlis	36,757	797	868	1,665	873	1,079	1,952	3,652	103,203	4.53	5.31	38,854	540	1,220	1,760	571	1,332	1,903	4,729	-	-	4.53
Kedah	143,471	234	2,269	2,503	217	2,755	2,972	31,180	248,870	1.74	2.07	156,042	176	3,126	3,302	196	4,166	4,362	47,551	344,578	344,578	2.12
Pulau Pinang	355,196	141	3,632	3,773	304	4,814	5,118	50,649	655,508	1.06	1.44	452,888	179	8,545	8,724	421	10,121	10,542	107,894	985,751	985,751	1.93
Perak	503,111	442	2,473	2,915	446	2,723	3,169	79,733	991,296	0.58	0.63	595,414	249	2,556	2,805	265	2,843	3,108	102,797	1,021,519	1,021,519	0.47
Selangor*	519,388	3,937	8,437	12,374	4,544	14,369	18,913	191,023	5,906,114	2.38	3.64	573,360	4,508	11,523	16,031	4,994	17,638	22,632	279,760	6,209,626	6,209,626	2.80
FT (KL)	90,543	307	4,373	4,680	285	6,939	7,224	34,833	11,109,195	5.19	8.01	141,533	607	9,517	10,124	629	11,350	11,979	20,509	7,073,237	7,073,237	7.15
N. Sembilan	164,727	889	2,513	3,402	911	2,719	3,630	10,798	991,113	2.07	2.20	171,709	975	2,314	3,289	1,004	2,410	3,414	12,601	1,091,886	1,091,886	1.92
Melaka	131,602	61	561	622	67	599	666	3,301	374,011	0.47	0.51	134,278	139	558	697	152	622	774	22,260	537,274	537,274	0.52
Johor	394,298	429	2,593	3,022	428	2,808	3,236	30,171	578,480	0.77	0.82	403,445	559	2,775	3,334	584	2,989	3,573	13,827	771,900	771,900	0.83
Pahang	460,575	3	6,684	6,687	3	6,684	6,687	43,965	883,808	1.45	1.45	397,015	205	4,994	5,199	215	5,068	5,283	87,325	585,613	585,613	1.31
Terengganu	171,480	47	971	1,018	47	1,014	1,061	4,001	378,331	0.59	0.61	174,709	35	760	795	38	837	875	3,066	232,474	232,474	0.46
Kelantan	298,463	117	1,937	2,054	128	2,108	2,236	3,962	767,339	0.69	0.75	261,920	91	1,324	1,415	95	1,364	1,459	4,335	1,166,439	1,166,439	0.54
Sabah	238,674	309	1,323	1,632	327	1,412	1,739	11,011	329,262	0.68	0.73	133,265	13	649	662	13	728	741	6,543	215,506	215,506	0.50
FT (Labuan)	18,524	0	8	8	0	8	8	334	16,344	0.04	0.04	11,584	0	7	7	0	9	9	475	3,500	3,500	0.06
Sarawak	103,143	27	355	382	183	1,486	1,669	10,299	88,554	0.37	1.61	146,961	77	1,069	1,146	128	1,598	1,726	15,660	151,733	151,733	0.78
<b>Total</b>	<b>3,625,952</b>	<b>7,740</b>	<b>38,997</b>	<b>46,737</b>	<b>8,763</b>	<b>51,517</b>	<b>60,280</b>	<b>509,912</b>	<b>23,421,428</b>	<b>1.29</b>	<b>1.66</b>	<b>3,792,777</b>	<b>8,353</b>	<b>50,837</b>	<b>59,290</b>	<b>9,305</b>	<b>63,075</b>	<b>72,380</b>	<b>729,352</b>	<b>20,485,987</b>	<b>20,485,987</b>	<b>1.56</b>

Note: \* includes FT Putrajaya  
Source: Disease Control Division, MoH

## Malaria Control Program

Malaria remains a public health problem in Malaysia, especially in Sabah, Sarawak and in the interior central regions of Peninsular Malaysia where Perak, Pahang and Kelantan share their borders. In 2009, the incidence rate of malaria in Malaysia was 2.48 per 10,000 populations compared to 2.67 per 10,000 populations in 2008 (Figure 9). The incidence rate of indigenous cases decreased from 1.7 per 10,000 populations in 2008 to 1.5 per 10,000 populations in 2009 (Figure 10).

**FIGURE 9.**  
**MALARIA CASES AND INCIDENCE RATE TRENDS IN MALAYSIA, 2001 – 2009**



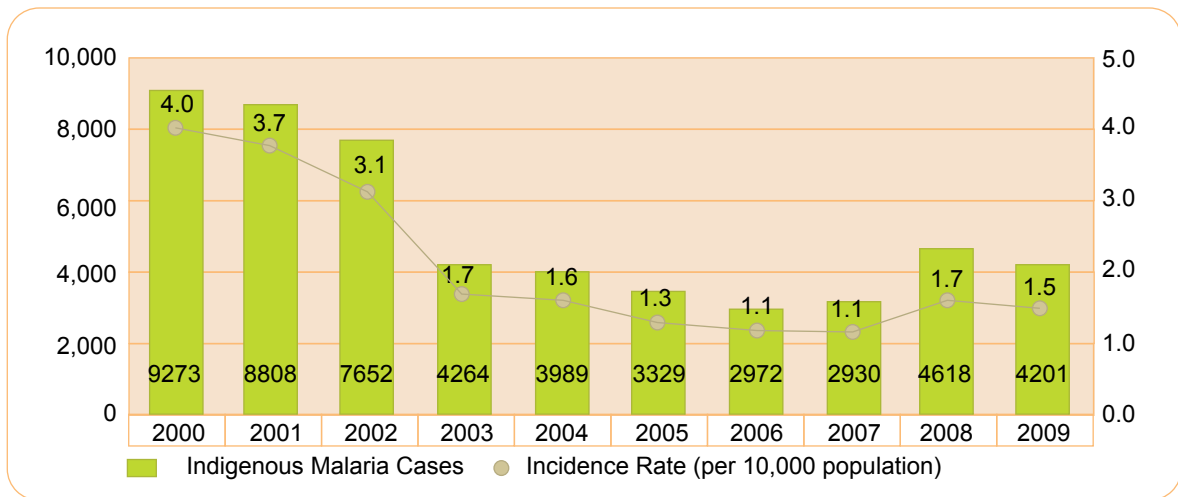
Source: Vector Borne Disease Section, MoH

Sabah had the highest incidence rate with 12.19 per 10,000 populations and followed by Sarawak with 7.28, Kelantan with 1.68, and Pahang with 1.14. The other states have malaria incidence rates of below 1 per 10,000 populations. Only five states showed an increase of malaria cases as compared to 2008, which were Federal Territory of Kuala Lumpur with 81.4% (27 cases in 2008 and 49 cases in 2009), Terengganu with 30.4% (23 cases in 2008 and 30 cases in 2009), Johor with 20.0% (90 cases in 2008 and 108 cases in 2009), Pahang with 14.2% (154 cases in 2008 and 176 cases in 2009), and Kelantan with 1.4% (272 cases in 2008 and 276 cases in 2009).

The mortality rate for Malaria remained more or less the same in 2009 (0.09 per 100,000 population) as compared to 2008 (0.11 per 100,000 population).

Sabah, including Federal Territory of Labuan had the highest number of malaria deaths in 2009 with 13, and followed by Sarawak with 8. There were 2 malaria deaths recorded in Selangor, and 1 each for Perak, Pahang, and Terengganu.

**FIGURE 10.**  
**INDIGENOUS MALARIA CASES AND INCIDENCE RATE TRENDS IN MALAYSIA, 2000 – 2009**



Source: Vector Borne Disease Section, MoH

Vector control activities are instituted in malarious areas (exceeding 1 case per 1,000 populations) and malaria prone areas (less than 1 case per 1,000 populations). The two main strategies of vector control implemented were indoor residual spraying (IRS) and use of insecticide treated nets (ITN). Regular residual spraying was carried out at six months intervals in five states in Malaysia. The strategy of using insecticide treated nets was to compensate the low coverage of residual spraying in areas due to houses having incomplete sprayable surfaces, high refusal of the population towards indoor residual spraying and as an additional vector control measure to stop malaria transmission in localities within malarious areas and outbreak localities in prone and free areas where malaria cases have been detected.

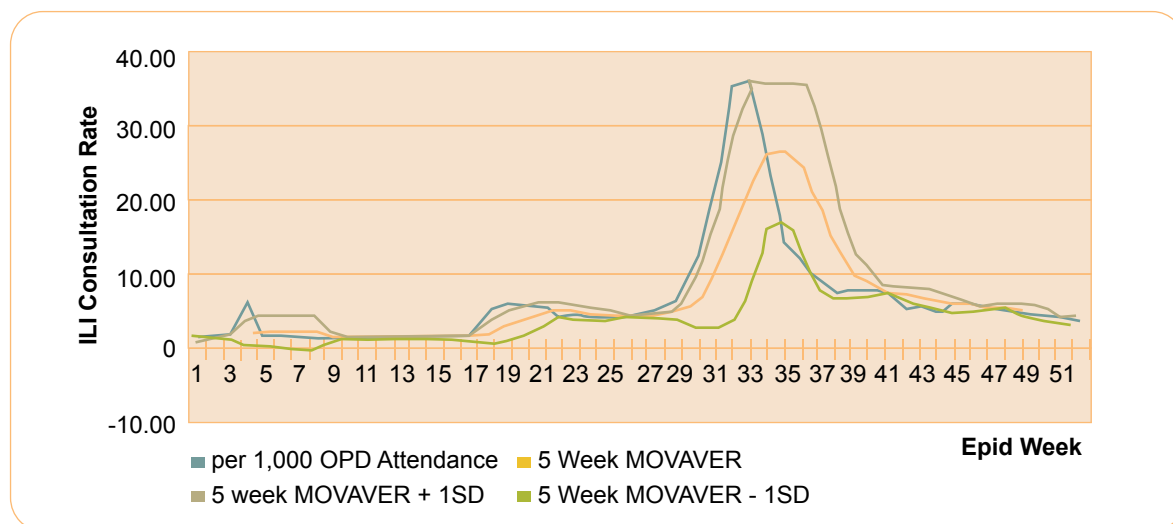
### **Influenza-like Illness (ILI) Surveillance Program**

There was a major ILI outbreak reported in the third quarter of 2008 (Figure 11). This outbreak occurred throughout the nation as a result of the global scare towards the H1N1 virus.

### **Filariasis Control Program**

The National Programme to Eliminate Lymphatic Filariasis in Malaysia was initiated in 2001. The target was to achieve filariasis elimination status by 2013. A yearly MDA (mass drug administration) using Diethylcarbamazine and Albendazole was started in 2004. The achievement of MDA from 2004 to 2008 was 84.3%, 88.5%, 91.3%, 93.2%, and 94.1% respectively.

**FIGURE 11.**  
**ILI CONSULTATION RATE AT THE GOVERNMENT HEALTH CLINIC IN MALAYSIA, EPID**  
**WEEK 01/2009 UNTIL 52/2009**



Source: Vector Borne Disease Section, MoH

## PUBLIC HEALTH LABORATORY

Public Health Laboratory services are provided mainly by National Public Health Laboratory, Food Laboratory and Primary health care clinics.

### National Public Health Laboratory (NPHL)

The NPHL in Sungai Buloh provides analytical and diagnostics laboratory services to support the activities under public health Programmes. The scope of the NPHL services is in investigation of outbreaks, surveillance or monitoring Programmes including screening Programmes and for maintaining safety and quality of food in the market. There are four (4) main sections in NPHL i.e. Disease, Food, Epidemiology and Administration Sections. Food Section is coordinated by the Food Quality and Safety Division (FQSD), MoH in term of activities and planning, and thus, the reporting will be covered by the FQSD. NPHL also offers technical assistance to other Public Health Laboratories in Ipoh, Johor Bahru and Kota Kinabalu.

The Disease Section of NPHL received samples for various purposes such as outbreaks, surveillance/monitoring/screening, diagnostic, and others. A Malaria Laboratory Unit was set up in the NPHL mainly for training in the Malaria Control Programme. There's also the Electron Microscopy Laboratory Unit which was set up since 2007 to perform tests for reference samples received from other units within the NPHL.

The Epidemiology Section was given the task to handle a project under Asian Development Bank to develop a web-based application for pathogen surveillance in order to strengthen the national laboratory-based surveillance system. The pilot project which involved 7 state hospital laboratories, 2 Public Health Laboratories and Institute for Medical Research

(Bacteriology Unit) was developed in September 2008. The system named 'e-Laboratory-Based Information System' (eLBIS) aims to facilitate information sharing through a central database and monitoring system. A User Manual document for eLBIS was also produced to assist users of the system.

NPHL was also active in the ASEAN+3 Emerging Infectious Diseases Programme as the proponent country in laboratory-based surveillance and networking.

### **Food Laboratory**

The Food Laboratory Section is responsible for planning the development and coordinating the activities of 10 Food Safety and Quality Laboratories and 4 Food Division at Public Health Laboratories. To ensure all food laboratories are competent to conduct food analysis, the quality management system of ISO/IEC 17025 was implemented in all food laboratories. The food laboratory participated in the International Proficiency Testing (PT) for Food Analysis Performance Assessment Scheme (FAPAS) and the IFM Quality Services for microbiological testing. As a result of the melamine crisis in 2008, the Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) was developed for melamine analysis by National Public Health Sungai Buloh, Johor Bahru, Ipoh and Food Safety and Quality Sarawak and Kedah.

### **Primary Health Care Clinic Laboratory**

The Primary Health Care Clinic Laboratory provides services mainly to support the diagnostic services in the primary health care clinics. The services provided include urine analysis, stool analysis and basic blood investigation (haematology, biochemistry, microbiology and serology).

## **NON-COMMUNICABLE DISEASE**

The Non-communicable Disease Section's activities mainly focused on Diabetes and Cardiovascular diseases prevention and control, Cancer Prevention and Control, Mental Health, and Health Promotion.

### **Diabetes and Cardiovascular Diseases Prevention and Control**

In 2009, there were 629,151 diabetes patients on "active" follow-up at MoH clinics throughout Malaysia. These patients contributed to 2,322,963 attendances in MoH clinics, approximately 10% of total outpatient attendances. In addition, a total of 70,079 patients were newly diagnosed and registered in 2009 (Table 3).

Efforts to monitor the quality of diabetes care at the MoH clinics were continued throughout 2009. According to the Diabetes QA Program "Quality of Diabetes Care at MOH Health Care Facilities: Glycaemic Control", which was launched in 2009, there was a wide variability in the distribution of percentage of patients with good blood sugar level control (HbA1c <6.5%) between the states (Figure 12). Perlis had the best control with 30.7, followed by Perak (23.2) and Melaka (23.0). Meanwhile, the two states with the least optimal control are Kelantan (8.1) and Sarawak (7.9)

**TABLE 3.**  
**DISTRIBUTION OF NUMBER OF ACTIVE DIABETES PATIENTS, TOTAL NUMBER OF OPD ATTENDANCES, AND NUMBER OF NEWLY REGISTERED DIABETES PATIENTS BY STATE, 2008 AND 2009**

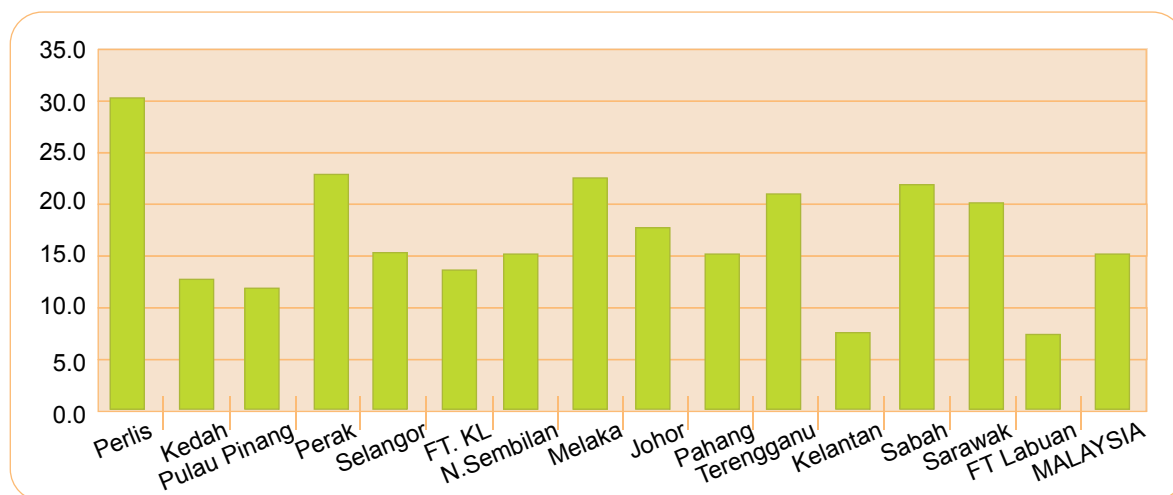
States	No. of Active Patients		Total No. of Attendances by Diabetic Patients		No. of Newly Registered Patients	
	2008	2009	2008	2009	2008	2009
Perlis	9,039	9,696	40,815	38,011	1,190	1,740
Kedah	49,115	71,777	171,372	176,863	5,875	5,797
Pulau Pinang	27,147	31,895	101,904	102,633	5,233	5,427
Perak	68,372	68,372	255,647	314,066	4,907	6,521
Selangor*	101,689	104,137	317,916	358,203	11,067	12,074
FT Kuala Lumpur	20,523	23,728	106,662	109,107	3,600	3,370
Negeri Sembilan	35,841	39,393	119,206	125,447	3,294	3,621
Melaka	31,316	31,427	73,467	84,949	2,996	2,040
Johor	74,715	87,645	265,918	488,411	7,712	9,987
Pahang	40,920	43,871	159,516	184,814	6,885	6,919
Terengganu	16,944	18,433	78,842	92,258	2,993	2,875
Kelantan	24,774	224,774	135,602	33,662	5,709	3,342
Sabah	9,205	9,155	26,926	32,667	979	1,497
FT Labuan	535	n.a.	1,307	n.a.	58	n.a.
Sarawak	64,848	64,848	189,749	181,872	4,773	4,869
<b>Total</b>	<b>574,983</b>	<b>629,151</b>	<b>2,044,849</b>	<b>2,322,963</b>	<b>67,271</b>	<b>70,079</b>

Note: \* includes FT Putrajaya

Source: Disease Control Division, MoH



**FIGURE 12.**  
**PERCENTAGE DISTRIBUTION OF PATIENTS WITH HBA1C <6.5% BY STATE, 2009**



Source: Diabetes QA Program, Disease Control Division, MoH

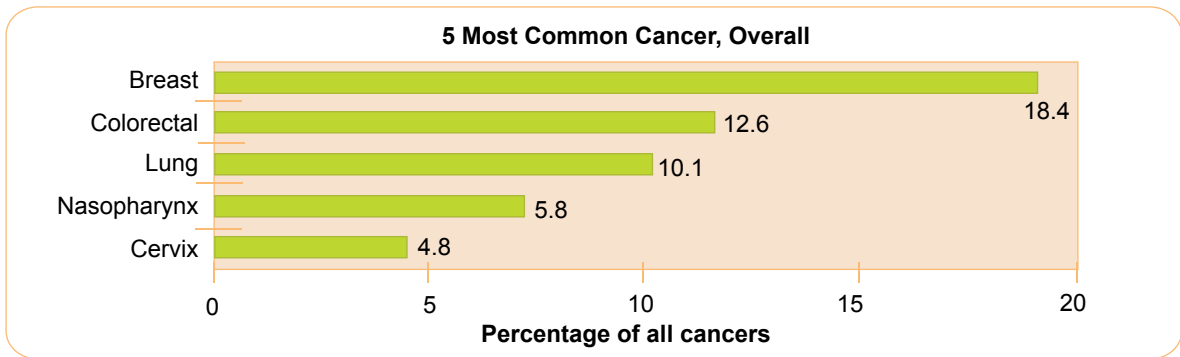
### Cancer Prevention and Control

The management of the National Cancer Registry (NCR) was handed over from the Radiotherapy and Oncology Department of Hospital Kuala Lumpur to the Public Health Programme of Ministry of Health, Malaysia in May 2006. Following that, the NCR has started collecting cancer data from all State Cancer Registries since January 2007. The cancer data is stored at the NCR database using CanReg software which was developed by the International Agency for Cancer Research (IARC), Lyon, France and is being used by more than 150 countries in the world.

The NCR has collected and registered 35,512 new cancer cases diagnosed in 2007, 2008 and 2009. It comprised of 44.5% male and 55.5% female. Of all the new cancer cases registered, 38.5% are Malay, 43.7% Chinese, 7.0% Indian and 10.8% of other ethnic groups.

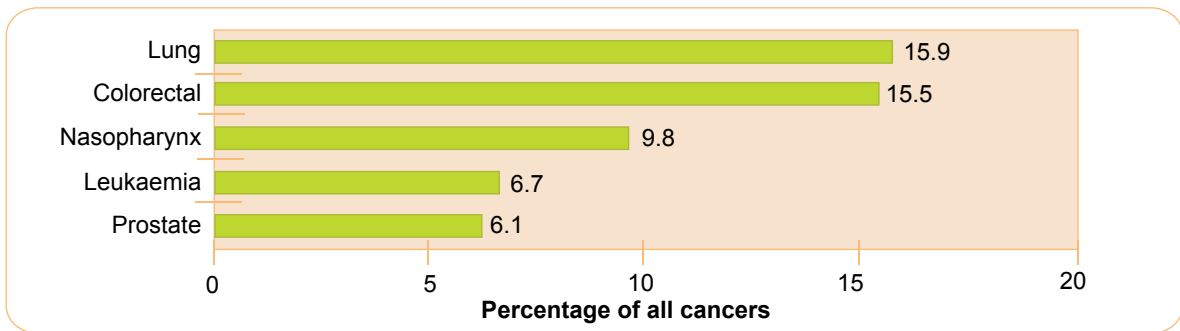
As shown in Figure 13, the top five most common cancers regardless of sex according to the compiled data from 2007 till 2009 are Breast (18.4%), Colorectal (12.6%), Lung (10.1%), Nasopharynx (5.8%) and Leukaemia (5.3%). Whereas by sex, the top five most frequent cancers in male (Figure 14) are Lung (15.9%), Colorectal (15.5%), Nasopharynx (9.8%), Leukaemia (6.7%) and Prostate (6.1%). As for female (Figure 15), the most common cancer was breast (32.8%) followed by Colorectal (10.3%), Cervix (8.7%), Ovary (6.1%) and Lung (5.4%).

**FIGURE 13.  
TOP 5 MOST COMMON CANCERS, TOTAL OF 2007 - 2009**



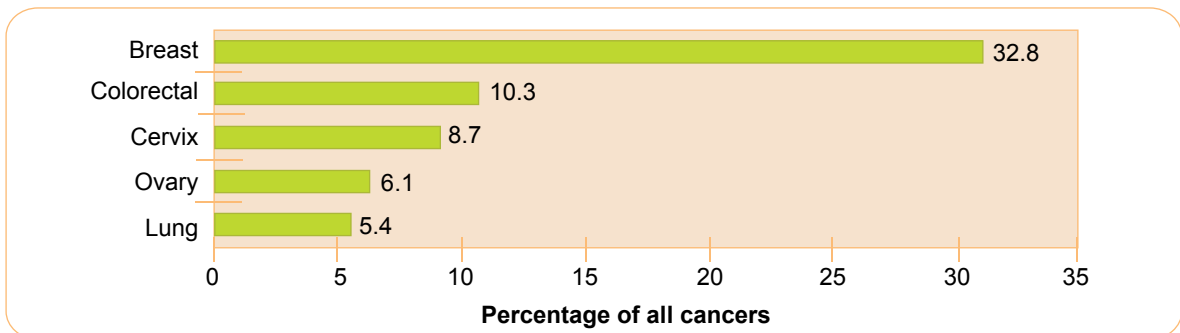
Source: Disease Control Division, MoH

**FIGURE 14.  
TOP 5 MOST COMMON CANCERS FOR MALE, TOTAL OF 2007 - 2009**



Source: Disease Control Division, MoH

**FIGURE 15.  
TOP 5 MOST COMMON CANCERS FOR FEMALE, TOTAL OF 2007 - 2009**



Source: Disease Control Division, MoH

### **Mental Health Activities**

The Mental Health Unit under the Non-Communicable Disease Section is responsible for the development of the Community Mental Health Programme and mental health activities. The objectives of the programme are:

- i. To develop policies for mental health programme, human resources, infrastructure and mental health services in the community.
- ii. To develop surveillance system for community mental health.
- iii. To enhance positive mental health by improving living skills and practicing healthy lifestyle.
- iv. To reduce prevalence of mental illness among high risk groups through screening and early detection.
- v. To strengthen community mental health services i.e follow up of stable patients and psychosocial rehabilitation.

### ***National Suicide Prevention Plan of Action***

The Action Plan of National Suicide Prevention Programme was developed since November 2008. This plan outlines implementation strategies among such as:

- i. To improve awareness among public and health care providers on suicide and suicidal behaviour.
- ii. To promote early detection of signs and symptoms of mental disorders and risks factors for suicide among primary health care providers, teachers, school counsellors, police, community and religious leaders and emergency medical care personnel.
- iii. To foster inter-sector collaboration among various agencies towards enhancing suicide prevention.
- iv. To advocate relevant agencies on efforts towards reducing access to lethal means.

### ***Healthy Mind Services***

The Healthy Mind Services which was piloted at 9 health clinics throughout Malaysia was implemented using the Guidelines and Standard Operating Procedure of Health Mind Services. The objective of the service is to promote the community to screen for their mental health status and risk factors to identify stress, anxiety and depression and to empower the community to handle stress effectively through instilling mental health life skills and relaxation techniques. Clients in this service were either screened using the Depression, Anxiety, Stress Scale (DASS) those that were referred for counselling.

## MATERNAL AND PERINATAL HEALTH CARE

### Antenatal Care

The antenatal coverage in 2009 was 90.7% (Table 4). The average number of antenatal visits by a pregnant mother to public and private health facilities had increased from 9.4 in 2008 to 9.9 in 2009. Anti tetanus toxoid immunisation (ATT) coverage for antenatal mothers showed a decline from 87.7% in 2008 to 77.0% in 2009

### Deliveries and Postnatal Care

There was a decrease in the total number of registered births in Malaysia from 449,939 in 2008 to 445,051 in 2009 (Table 4). The coverage of postnatal care increased from 90.9% in 2008 to 94.1% in 2009. Deliveries conducted by trained health care providers remained at 98.6%.

**TABLE 4.**  
**COVERAGE OF ANTENATAL AND POSTNATAL SERVICES IN MALAYSIA,**  
**2007 – 2009**

Indicator	2007	2008	2009
Estimated no of pregnant mothers	486,764	544,180	542,382
Number of new pregnancies	4,689,928	512,286	491,980
Antenatal care coverage (%)	96.3%	94.1%	90.7%
Anti tetanus toxoid immunisation coverage (%)	82.6%	87.7%	88.5%
Total deliveries	437,519	449,939	445,051
Deliveries conducted by trained personnel (%)	98.6%	98.6%	98.6%
Number of postnatal mothers attending postnatal clinic	383,682	564,312	546,148
Postnatal clinic coverage	86.7%	90.9%	94.1%

*Note: Estimated live birth used as denominator for anti tetanus toxoid coverage.*

*Source: Health Informatics Centre, MoH.*

### Neonatal Jaundice and Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency

In 2009, 75.4% of all newborns were screened for G6PD of which 1.2% were found to have G6PD deficiency as compared to 1.5% in 2008. The percentage of newborn babies detected with neonatal jaundice had increased from 46.3% in 2008 to 58.8% in 2009. Indicating better detection rate, however there were 5 cases of kernicterus resulting in three deaths.

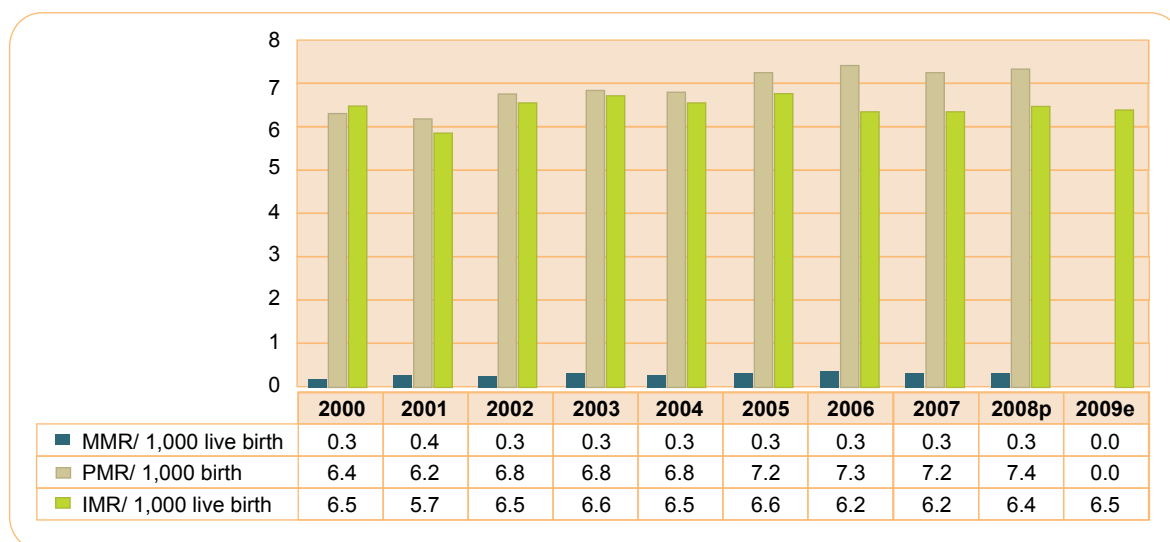
### Thalassaemia Prevention and Control

The World Thalassaemia Day was celebrated May 8th, 2009 in Perlis. The theme was “*Dekati Pesakit, Kenali Keluarga*” and the aim was to educate the public regarding the Thalassaemia disorder. The program was launched by Y.B Datuk Rosnah Shirlin bte. Hj. Abdul Rashid Shirlin, Deputy Health Minister. The Training of Trainers of Thalassaemia Counsellors was carried out since 2005, and up to December 31st, 2009, a total to 208 health personnel (doctors, nurses, health counsellors) been trained.

## Maternal Mortality

Every reported maternal death in Malaysia is investigated and audited through the Confidential Enquiries into Maternal Deaths (CEMD) and classified according to ICD 10. Obstetric embolism, Postpartum haemorrhage, Associated Medical conditions and Hypertensive Disorders in pregnancy are the leading cause of maternal deaths. Maternal mortality ratio (MMR) has remained stagnant around 28-30 per 100,000 live births since 2000 (Figure 16). Among the efforts needed is to follow up high risk women and counselled for effective family planning.

**FIGURE 16.**  
**MATERNAL, PERINATAL AND INFANT MORTALITY RATE IN MALAYSIA, 2000-2009**



Note: p = preliminary, e = estimated, data for MMR and PMR weren't available yet in the estimated figures  
Source: Department of Statistics, Malaysia

## Perinatal mortality

The leading cause of perinatal deaths is '*normally formed macerated stillbirths*' followed by '*asphyxial conditions*' and '*lethal congenital malformations*'. '*immaturity*', '*lethal congenital malformations*' and '*asphyxial conditions*' are the main causes of neonatal deaths. Improving and providing quality care during pre pregnancy and pregnancy period can help to further reduce perinatal deaths.

## CHILD HEALTH

### Attendances of infants, toddlers and pre-school children to health clinics

The attendances to government health clinics in 2009 for various age categories were 68% for infants (0-1 year old), 36.9% for toddlers (1-4 years old) and 16 % for pre-school (5-6 years old). The average clinic visits per infant, toddler and pre-schooler were 7, 4 and 2 visits respectively.

### **Infant and Toddler Mortality Rates**

Infant and toddler mortality rate had decreased from 1980 and plateau from year 2000 onwards. Preliminary data from the Department of Statistics showed IMR in 2009 was 5.5% per 1000 live births and toddler mortality rate was 0.2 per 1000 live births for the same period.

### **Immunisation**

In 2009, the immunisation coverage for BCG (98.3%), polio (98.4%), DPT (97.5%) and Hib (97.3%) had achieved the Universal Child Immunisation target of more than 90%, except for hepatitis B (85.4%) which was below target. The coverage for hepatitis B was low due to the change in policy to introduce the combined DTaP-IPV/Hib which involved changes of Hepatitis B immunization schedule.

Ministry of Health introduced the combined vaccine DTaP-IPV/Hib into The National Immunization Programme (NIP) following recommendation by WHO in October 2008. The vaccine was introduced in 8 selected states namely Selangor, Wilayah Persekutuan Kuala Lumpur, Labuan, Pahang, Kelantan, Terengganu, Sabah and Sarawak. The introduction of this vaccine into NIP for other states was planned to be in 2010.

### **National Congenital Hypothyroidism Screening**

The main objective of this program is for early case detection and appropriate management to prevent mental disability. In 2009, 104 hospitals have implemented the screening program and 546 cases were detected since the program started in 1998. All confirmed Congenital Hypothyroidism cases were followed up by paediatricians in the hospitals. Health education materials, pamphlets and posters were developed to create awareness among parents regarding the importance of the Congenital Hypothyroidism Screening. A new protocol is being revised to improve and strengthened the screening program.

### **Integrated Management of Childhood Illness (IMCI)**

Integrated Management of Childhood Illness (IMCI) is a strategy formulated and introduced by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) in 1996 as the strategy to improve child health. It focused on the care of children under five years old, not only in terms of their overall health status but also on the diseases that may occasionally affect them. In 2009, 120 facilities comprises of Health Clinics, Community Clinic and Maternal and Child Health Clinics had implemented IMCI and 289 health personnel had been trained mainly community nurses, public health nurses and assistant medical officers.

## **SCHOOL HEALTH SERVICES**

In 2009, the School Health teams visited 10,373 (94.17 %) pre schools centers, 6,958 (98.78 %) primary schools and 2002 (98.48 %) secondary schools throughout the country. The school health teams provide health services to 320,643 (94.23 %) of preschoolers, 400,908 (99%) of Standard 1 students, 433,996 (99%) of Standard 6 students and 392,806 (98%) of Form 3 students in 2010. This show that nurses and paramedics were the main backbone of the school health service. In 2009, the health service coverage by nurses in

Peninsular Malaysia and Sabah, and by Assistant Medical Officers in Sarawak remains above 90 percent. The states of Johor and Penang have 90 percent coverage by doctors.

### Students' Health Status

Visual acuity defect was the highest morbidity detected among the school children in 2009. The rate of visual acuity problem detected for 2009 was 91.7, 79.5 and 65.0 for every 1,000 Standard 1, Standard 6 and Form 3 school children examined. Colour defect detection rate was 7.3 and 3.4 for every 1,000 Standard 6 and Form 3 students examined. Nutritional status of Malaysian students for 2009 is as shown in Table 5.

**TABLE 5.**  
**THE NUTRITIONAL STATUS OF STANDARD 1, STANDARD 6 AND FORM 3 STUDENTS, 2009**

	Standard 1 (%)	Standard 6 (%)	Form 3 (%)
Underweight	11.4	8.7	7.4
Normal Weight	75.9	73.1	78.3
Overweight	6.7	9.8	7.2
Obesity	6.0	8.4	7.1

Source: Family Health Development Division, MoH

There was a decline in morbidities related to personal hygiene across all age groups. Comparing the age groups, the preschoolers and Standard 1 students had higher prevalence of scabies infection, head lice and worm infestation.

### School Immunisation

The coverage of school immunisation for Standard 1 students was 97.7% for DT booster, 97.7% for Oral Polio booster, 97.6% for MMR. The ATT immunisation coverage for Form 3 students was 97.1%.

### Quality Assurance Programme

The visual acuity defect detection rate among the standard one was selected as the proxy indicator for monitoring of quality of health services in schools. In 2009, all states except Labuan managed to achieve the national target at or more than 5 percent.

## ADOLESCENT HEALTH

In 2009, a total of 274,253 adolescents aged 10 to 19 years were screened for nutritional health, physical health, mental health, sexual and reproductive health as well as risk behaviours at health clinics nationwide. This accounts for 5.1% of total the population of adolescents screened. A total of 31,407 adolescents had been counselled and 11,433 were referred to hospitals or other agencies for further management.

A total of 124 trainings sessions on adolescent health care and counselling were conducted in 2009 at national, state and district levels involving 1,520 healthcare providers (doctors and paramedics). Training at the national level included courses on Adolescent Health Care and Counseling, No Apologies - Say No To Sex, Understanding and Shaping Adolescents Towards Excellence, Training of Trainers on Engaging the Adolescent Using HEADSS Framework and WHO Programme Training of Trainers: Orientation Programme on Adolescent Health and Utilization of Adolescent Job Aid.

The Family Health Development Division (FHDD) also worked closely with other agencies to conduct adolescent health related activities. In 2009, Ministry of Health conducted the *9th World Congress: International Association for Adolescent Health*, with the theme '*Private Lives Public Issues – Global Perspective On Adolescent Sexual Health*' which was co-organized with the Malaysian Medical Association and Malaysia Association for Adolescent Health at the Shangri-La Hotel, Kuala Lumpur on the 28th -30th of October 2009.

## **ADULT HEALTH**

The main activities for Adult Health Services are Cervical Cancer Screening Programme, Family Planning Programme, Breast Cancer Prevention Programme and activities related to reproductive health and gender. In tandem with the expansion of unit scope which includes health risk assessment for both men and women, the unit's name was changed to the Adult Health Unit.

### **National Pap Smear Screening Program**

Cervical cancer screening and family planning services were available in almost all MOH health clinics in Malaysia. Pap smear screening had decreased from 436,797 number of slides in 2008 to 411,313 in 2009. Assuming the figure represented the number of women screened, it accounted for 18.2 % of the estimated eligible women for a year. However, the coverage of women aged 50 to 65 years who are at higher risk is still low, estimated at 14% of all eligible women for this age group. The percentage of unsatisfactory slides had maintained at 1.36% in 2008 to 1.36 % in 2009. The positive smear rate in 2009 was 0.66%, similar to 0.66% in 2008.

In keeping with international standards, the Pap Smear Request Form and Cytology Report were revised according to the Bethesda Classification 2001, and used by all government facilities in 2008. The Bethesda Classification System has been adopted in Malaysia since 1999. The overall positive detection rate in 2009 has further decreased to 0.6%. Positive smears include Low Grade Squamous Intraepithelial Lesion (LGSIL), High Grade Squamous Intraepithelial Lesion (HGSIL), Atypical Squamous Cells of Undertermined Significance (ASCUS), Atypical Glandular Cells of Undertermined Significance (AGC), Endocervical Adenoma in-situ (AIS), Human Papilloma Virus (HPV) and Carcinoma. The break-ups for each classification are LGSIL – 34%, HGSIL – 17%, ASCUS – 38%, AIS – 2%, AGC – 5%, Carcinoma – 4%.

A total of 3000 units of training module on Pap smear was printed and distributed to all states. Guidelines for purchasing cytology services which was developed in 1998 were



reviewed and circulated in February 2009, in tandem with current practice, policy and standards.

A pilot project on population-based cervical cancer screening was implemented in Mersing and Klang using SIPPS (application software for call-recall system) in 2008 was continued. A demonstration project on Visual Inspection with Acetic Acid (VIA) for early detection of cervical cancer which was initiated in Sik, Kedah in 2008, was completed in March 2009. The final report of the project was expected to deliberate the operability, acceptability, feasibility and safety of Visual Inspection with Acetic Acid (VIA) as a screening tool for early detection of Cervical Cancer.

### **Family Planning Program**

There were a total of 78,110 new family planning acceptors registered in the MoH clinics in 2009. The most popular contraceptive method was contraceptive pill (68.0%) followed by progestogen-only injection (13%), male condoms (11.1%) and intrauterine device (3%).

A new pamphlet in Bahasa Malaysia on family planning which emphasizes general information and FAQs was developed. A total of 150,000 units of pamphlets were printed and distributed to all states. Beginning from 2008, the existing teaching module on family planning was revised in view of new advancement and emerging issues related to family planning and contraception. The printing work were completed in mid 2009 and 3,000 units of modules were distributed to all states.

### **Breast Cancer Prevention Program**

Ministry of Health Malaysia has started breast health awareness campaign since 1995 to encourage women to perform breast self examination (BSE) and undergo clinical breast examination (CBE) by trained health personnel. Recently, it emphasized on clinical breast examination (CBE) as one of screening modalities for breast cancer for younger age women. Starting in 2009, CBE was adopted as the screening method for breast cancer among normal risk women and all health providers are to screen female clients attending the clinics, as part of other screening and health services. Data collection on CBE in health clinics will start in 2010, and therefore in 2009, reporting formats and indicator were developed. Annual training workshop on CBE was conducted using the training module in June 2009, participated by Family Medicine Specialists, Medical Officers and Nurses. A total of 5,000 training modules on CBE were printed and distributed to all states.

### **Gender and Health**

The Director of Family Health Development Division was appointed as Gender Focal Point (GFP) for Ministry of Health. Among the role and functions of the GFP are to assist the government in the implementation of the National Policy on Women and the Plan of Action on the Advancement of Women and other government policies. In view of this, the unit has involved in various related workshops, meeting, preparation of feedbacks on CEDAW and human rights.

The Family Health Development Division as the gender focal point has coordinated a training workshop on Gender & Rights in Maternal and Reproductive Health, in collaboration with the Institute for Public Health, MoH. The workshop was conducted in May 2009 in Malacca.

## HEALTH CARE SERVICES FOR THE ELDERLY

In 2009, a total of 629 (77.8%) health clinics had implemented the health care services for the elderly, an increase by 9.2 % compared to 2008. About 21,768 health personnel at primary health care level had undergone training for health care for the elderly. Five most common morbidities among the elderly seen in the health clinics were hypertension, diabetes mellitus, joint, eye and respiratory problems. Screening and management of dementia was emphasised in selected health clinics. About 18,742 health personnel and care givers from institutions, NGOs, voluntary bodies and other agencies had been trained for care for the elderly. There were 240 *Kelab Warga Tua* formed all over the country.

As of December 2009, a total of 16 health education materials had been produced including a manual with accompanying VCD on *Teknik Mengangkat dan Mengalih Warga Emas*. Training on basic rehabilitation had been conducted for assistant medical officers and staff nurses in the health clinics as a short term measure to overcome shortage of physiotherapist at the clinic.

## HEALTH CARE FOR PERSONS WITH DISABILITIES

Health care programs for Persons with Disabilities (PWD) included care of children with special needs (CWSN) at the health clinic and community level, prevention and control programmes for blindness and deafness, rehabilitation for adult PWDs as well as mental health programmes at health clinic.

In 2009, a total of 1,470 new cases of disabilities were detected among children 0-18 years i.e. an increase of 2% compared to 2008 (1,442 cases). In the same year, 28,372 children attended rehabilitation activities in the 242 health clinics providing rehabilitation services for CWSN. A total of 14,483 home visits were carried out to ensure continuity of care at home. Mental health services in primary care provides 21,936 psychiatric patients with follow-up treatment through the 671 (82.9%) health clinics and the 26 health clinics providing psychosocial rehabilitation services are utilized by 371 patients.

As of December 2009, a total of 329 health care providers were trained as core trainers in the management of CWSN and 82 health care providers were trained as core trainers on training of caregivers and families on management of family members with moderate to severe disabilities living at home and in institutions. The '*Live Life Stay Safe*' training module on sexual reproductive health for children and adolescents with disabilities launched by the Minister of Health on the 29th of October 2009 focused on personal safety and abuse prevention. The module aims to increase awareness among care providers on the reproductive health rights of CWSN and provide skills in teaching children personal safety.

In the year 2009, FHDD together with PKD Putrajaya used the settings approach in SMK Putrajaya Presint 14(1) to conduct the campaign with focus on care of vision and hearing. The activities included health exhibition, visual acuity and hearing assessment and health talks about care of ear and prevention of deafness. Of the 78 students who underwent audiometric testing, 3 (4%) were found to have hearing impairment and of the 60 students tested for visual acuity, 6 (10%) had visual problems. A group of 150 students were involved in the health talk titled 'Care of Ear and Hearing'.

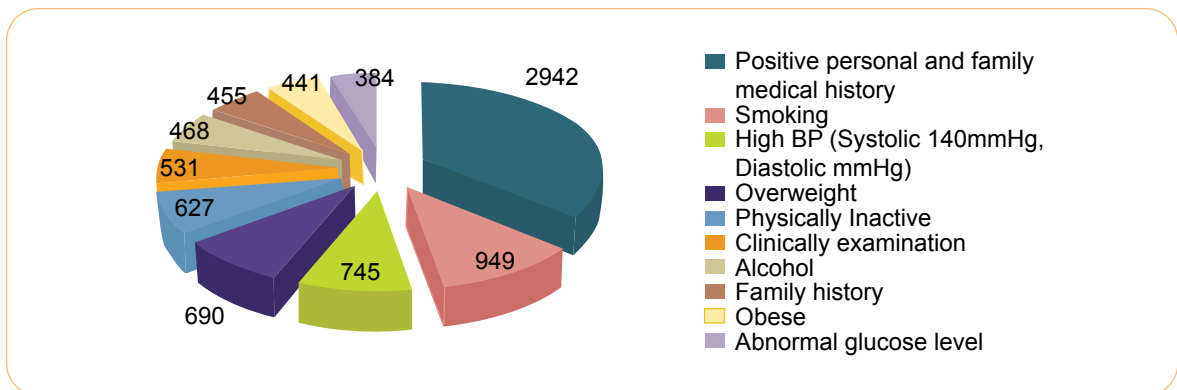
## PRIMARY HEALTH CARE

### Integrated Services at Primary Health Care Clinic using Reviewed Approach (REAP)

Since the policy on REAP was approved for implementation in 2008, a cumulative total of 266 health clinics has implemented integrated health services at the health clinics, delivering comprehensive services of wellness, illness, clinical support, emergency care and health informatics.

In 2009, from the returns from six (6) states namely, Sabah, Sarawak, Johor, Kedah, Perlis and Malacca, of 880,198 patients registered in the health clinics, 13,422 (1.5%) were screened and 7,804 were noted to have at least one risk factor.

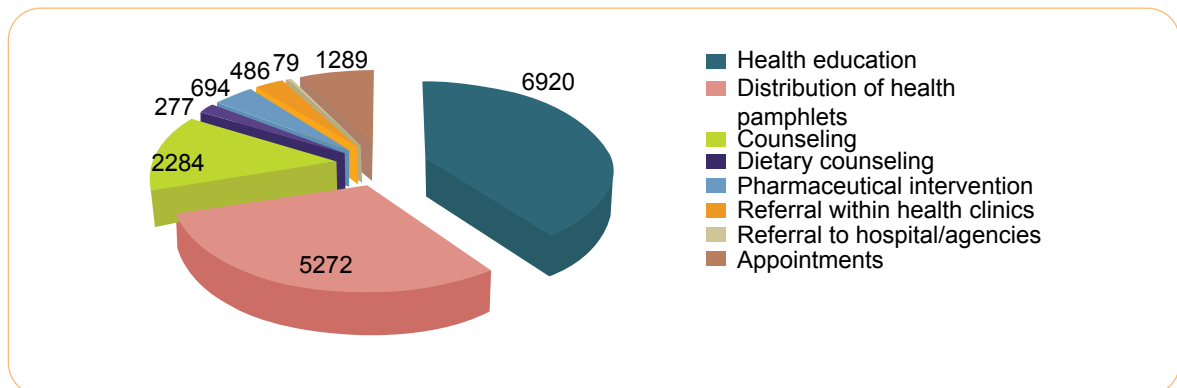
**FIGURE 17.**  
**TOP TEN HEALTH RISKS DETECTED DURING SCREENING, 2009**



Source : Family Health Development Division, MoH

The intervention carried out of those detected with risk factors was health education and distribution of pamphlets in 70% of the cases.

**FIGURE 18.**  
**TYPE OF INTERVENTIONS IMPLEMENTED, 2009**

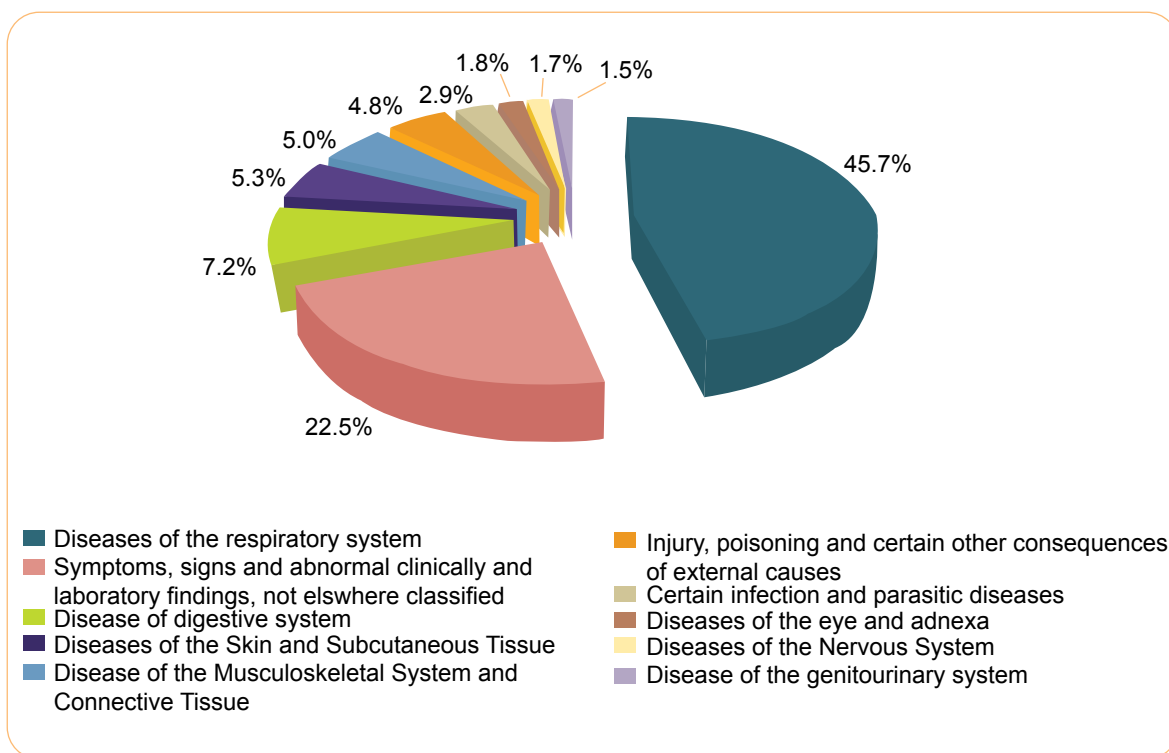


Source : Family Health Development Division, MoH

### National Service Programme (PLKN – Program Latihan Khidmat Negara)

A total of 89 PLKN camps were operational in 2009. MoH has posted paramedics to provide health care for the PLKN trainees in the country. For each camp, the health team consisted of 1 Senior Assistant Medical Officer (U32), 2 Assistant Medical Officers (U29), 2 Staff Nurses (U29), 1 Community Nurse (U19 - Army) and 1 Assistant Medical Officer from the Army (Z8/Z6/LKP9Z4). The services provided by the clinics are the treatment of minor ailment & illness, emergency services and adolescent screening services for the 140,000 PLKN trainees in the sixth series. 92,032 attendances were recorded to the clinics, and the most common disease was of the respiratory system with 45.7% (Figure 19).

**FIGURE 19.**  
**MORBIDITY AT PLKN CAMPS, 2009**

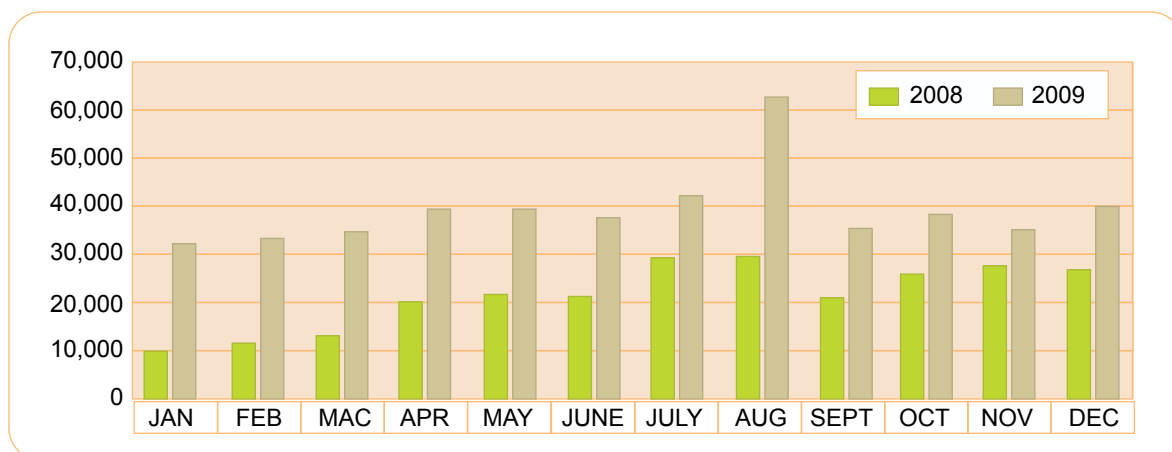


\*Morbidity classification based on ICD- 10 grouping by percentage of total attendance  
Source : Family Health Development Division, MoH

### Extended-hours in health clinics

Extended-hours service was introduced in January 2008 with the aim to reduce congestion of cold cases at Accident and Emergency Departments in neighbouring hospitals. A total of 60 health clinics extended their operational hours till 9.30pm. The number of cases treated at the clinics during the extended hours had steadily increased over the months as shown in Figure 20.

**FIGURE 20.**  
**ATTENDANCE AT HEALTH CLINICS DURING EXTENDED HOURS, 2008 & 2009**



Source : Family Health Development Division, MoH

### Monitoring of waiting time in health clinics (eMASA)

Monitoring of patient waiting time using the eMASA system was continued in 2009 (Figure 21). 92% (855) of eligible facilities has been using the eMASA system, including Outpatient Department of hospitals (74), *Klinik Rawatan Pesakit Selepas Waktu Pejabat* (KRPSWP) of Emergency Department of hospitals (48) and health clinics (733). Generally, the proportion of patients who achieved the targeted waiting time of less than 30 minutes increased incrementally from 70% to 80% over the months except for a drop in December. This drop is in keeping with previous reduction experienced during holiday periods, with the long school break and end of year festivities in December.

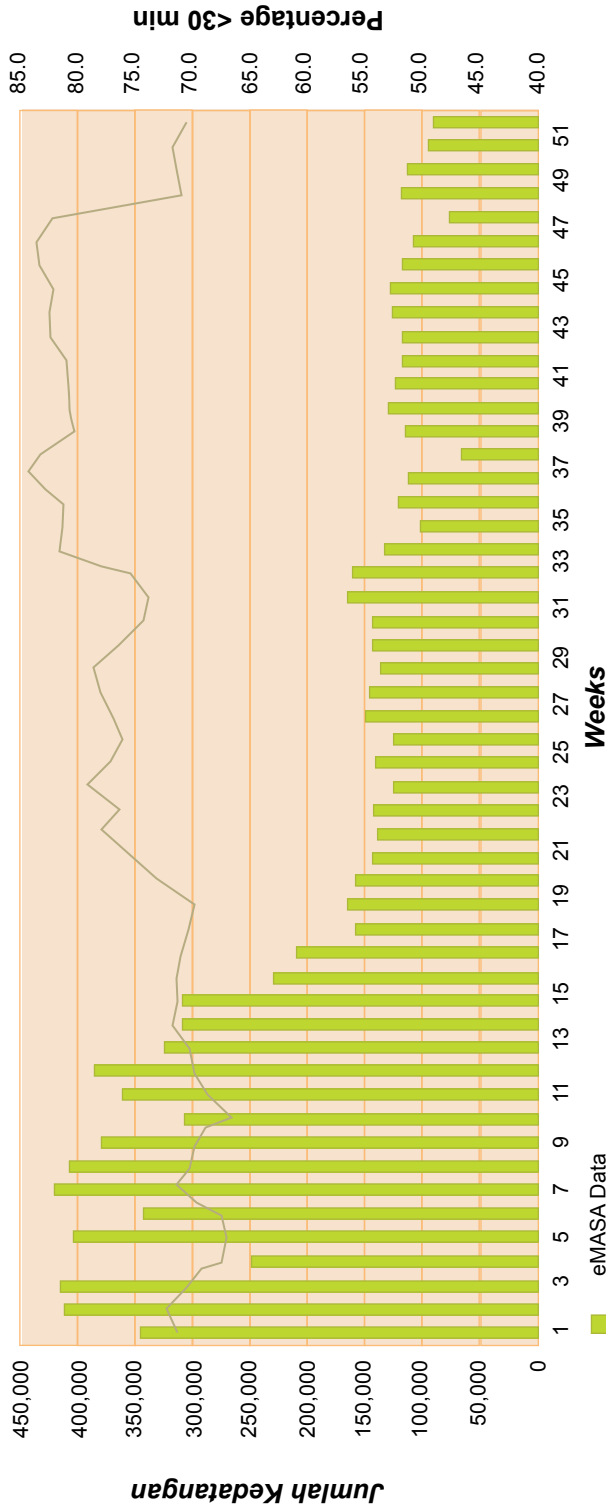
### Routine Medical Examination (RME) for Civil Servants

In 2009, 29,357 civil servants aged 40 years and above were examined, whereby 4,716 (16.1%) were identified with risk factors and morbidities and referred for further assessment and management.

### Pre-Hospital Emergency Care and Ambulance Services

As part of our efforts to upgrade Pre-Hospital Emergency Care in the health clinics, 14% of the treatment rooms have been upgraded and 794 ambulances with equipment were provided to all states. Four training sessions involving 460 assistant medical officers, 282 community nurses and 50 ambulance drivers, were conducted to ensure they have proper skills and knowledge on emergency and pre-hospital care.

**FIGURE 21.**  
**PERCENTAGE OF CLIENT ACHIEVING WAITING TIME <30 MINUTES, 2009**  
**Total Attendances (eMASA Data) vs Percentage <30 min (National Achievement)**  
**(2009)**



Source : Family Health Development Division, MoH

### Mobile Services

The main aim of the mobile services is to increase accessibility to comprehensive health services for the population in remote areas as well as for the marginalized groups, In 2009, there were 196 mobile teams providing such health services; 83 in Peninsular Malaysia , 8 in Sabah and 105 in Sarawak. The basic services provided are maternal and child health including immunization, treatment of minor illnesses, control of communicable diseases, school health services, environmental health and sanitation and emergency care. In 2009, RM13.9 million was allocated to upgrade the vehicles and equipment for mobile services.

### General Practitioners Locum

Public-private integration for primary health care services has been strengthened by introducing a program enabling the General Practitioners in private practice to work in the health clinics as locum or sessional doctors for a reimbursement fee of RM 80 per hour. In 2009, 16 General Practitioners had signed contracts to work in government health clinics throughout Malaysia.

### Community Participation

The nationwide Health Clinic Advisory Panel program, the Village Health Promoters in Sarawak and Primary Healthcare Volunteers in Sabah, are successful community empowering initiatives. They have important roles in advocating health promotion and prevention within the community. As of December 2009, a total of 5,000 health clinics advisory panel members have been appointed by the respective states. The recruitment process is still ongoing.

### Quality Assurance Programme (QAP) In Primary Healthcare

The *Appropriate Management of Asthma and Client Friendly Clinic* indicators are monitored in health clinics. In 2009, the number of clinics that participated in the Appropriate Management of Asthma has increased as compared to 2008, but decreased for Client Friendly Clinic. There was a slight reduction in the performance for Client Friendly Indicator as compared to 2008. The performance of Appropriate Management of Asthma showed improvement. The guideline on asthma management will be reviewed and improvement will be made, taking into consideration the latest recommended management and monitoring of asthma.

**TABLE 6.**  
**QUALITY ASSURANCE PROGRAMME (QAP) IN PRIMARY HEALTH CARE, 2009**

Performance	Asthma				Client Friendly			
	2006	2007	2008	2009	2006	2007	2008	2009
Total no. participating clinic	339	337	412	477	545	542	595	548
Percentage (%)	53.3	46.3	55.4	59.5	74.0	67.8	78.0	68.3

Source : Family Health Development Division, MoH

### **Self Care**

Self care was introduced in health clinics in 2009 with the provision of tools for self monitoring by the individual for blood pressure, body mass index and smoking status. A total of 10,324 (70.9%) who utilized this service were found to have risk factors. The most common risk factors detected were overweight & obesity at 27.7%, hypertension at 21.1%, and smoking at 14.4%.

### **HIV Management in Primary Health Care**

HIV management in primary health care includes screening program which comprises anonymous screening, premarital screening and antenatal screening. Counseling and treatment are also provided at health clinics. Although the services have been available in health clinics since 2000, they were monitored by Disease Control Division until 2009, when some indicators are also monitored by primary health care.

A total of 20,743 anonymous screenings were done in 2009 and 0.3% were found to be HIV positive. For premarital screening, from the 199,202 clients, 0.05% was found to be positive. Anti retroviral therapy for HIV patients has been introduced since 2000. The patients are managed by Family Health Specialist who has been trained in Infectious Disease Management. A total of 171 Family Health Specialists run this program. In 2009, there were 137 new cases and 1929 follow-up cases seen at the health clinics.

### **Harm Reduction Programme in Primary Health Care.**

The Methadone Maintenance Therapy (MMT) and The Needle Syringe Exchange Programme (NSEP) were introduced in primary health care since 2005 and 2008 respectively. In 2009, 77 health clinics provided MMT programme as compared to 32 in 2008. A total of 22 health clinic provided NSEP in 2009 as compared to 6 in 2008.

### **Non Communicable Disease Management in Primary Health Care**

Diabetes is one of the chronic diseases that are commonly seen in health clinics. To further strengthen the management of diabetes in the Ministry of Health facilities, apart from the diabetes indicator of appropriate management in diabetes patient, a new indicator was introduced in 2008 to assess the quality of care of diabetes patients in MOH health care facilities via blood glucose level control. This indicator measures proportion of diabetes patients with HbA1c <6.5% with a clinic target of >30% of patients. In 2009, 77266 samples of HbA1c were taken. However, only 15.4% (11908) diabetics were under control with HbA1c <6.5%.

Hypertension was also commonly seen in health clinics. The indicator to assess the quality of care for hypertensive patients is the percentage of patients with BP <140/90 mmHg. The standard is at least 20% of the hypertensive patients in the health clinics to be under control. The achievement for 2009 was 15%.

### **Radiology Services**

In 2009, there were 147 clinics providing radiology services. Of these, 92.5% of the radiographer posts were filled. A total of 397,535 X-ray examinations were performed in 2009, with chest X-rays the most common (201,366). There was a general improvement in the performance of QAP indicators for radiology services in health (Table 7).



**TABLE 7.**  
**QAP OF RADIOLOGY SERVICES IN PRIMARY HEALTH CARE, 2008 - 2009**

Indicator	No. of participating clinics		Range		Standard	No. (%) clinics not achieving standard	
	2008	2009	2008	2009		2008	2009
% X-ray examination among outpatient in health clinic	78	91	0.20-10.84	0.0-19.0	<5%	20 (25.6%)	24 (26.4%)
% film rejected	107	115	0.2-10	0.0-8.3	<5%	27 (25%)	18 (15.6%)
% appropriate X-ray requests	24	87	69.4-100	69.6 - 100	> % previous year	0	0
% accuracy radiography reports	14	15	78.6-100	79.1-100	> % previous year	0	0

Source : Family Health Development Division, MoH

### Pharmacy Services

The pharmaceutical services are a mainstay of primary health care services. There was an increase of 16% in the prescriptions handled at the pharmacy counters in 2009 as compared to 2008. Out of 23,922,669 prescriptions received in 2009, 98% (23,360,914) were received during office hours and only 2% (561, 755) were received after office hours. There were more than 89% (724) of health clinics using electronic clinic procurement system.

There was a general improvement in the performance of QAP indicators for pharmacy services in health as shown in Table 8. However, there was a drop of performance of KA 2 (drop by 0.5%) in 2009 as compared in 2008.

**TABLE 8.**  
**QAP OF PHARMACY SERVICES IN PRIMARY HEALTH CARE, 2008 - 2009**

Indicator	Standard (%)	No. (%) clinics participating		No. (%) clinics achieved standard	
		2008	2009	2008	2009
KA 1 : % prescriptions intervened	<2.5	599 (95)	601 (97.4%)	577 (96)	596 (96.6%)
KA 2 : % prescription wrongly filled and detected before dispensing	0	440 (70)	387 (62.7%)	378 (86)	331 (85.5%)

Source : Family Health Development Division, MoH

## Pathology Services

The number of tests done in pathology laboratories in the health clinics had increased by 24.1% in year 2009 as compared to 2008. The most frequently requested analytical tests are biochemistry (66.4%) followed by haematology (18.5%) and microbiology (10.1%). By end of 2009, there were 592 haematology analyzers, 196 chemistry analyzers and 284 HbA1c analyzers in the health clinics.

Quality initiatives were strengthened especially in the analytical process of the pathology tests. Besides the existing Internal Quality control activities, External Quality Control or Proficiency Testing (PT) for routine biochemistry and HbA1C tests were continued. External quality control or proficiency testing for routine biochemistry tests was first introduced in year 2005 with 35 laboratories participating. By end of 2009, the number increased to 121 laboratories. Table 9 below the performance of QAP Pathology in 2009. Overall, it shows an improvement of the indicator achievement in 2009 compared to 2008.

**TABLE 9.**  
**QAP OF PATHOLOGY SERVICES, 2008 -2009**

Item	Performance 2008	Performance 2009
Total number of labs reported	351	371
Number (%) health clinics achieved 90% TTAT:		
a) FBC (automation) <60 minute	320 (94.3%)	349 (95.6%)
b) FBC (manual) <60 minute	9 (90%)	3 (100%)
c) Urin FEME <40 minute	43 (93.4%)	3 (100%)
% of health clinics with TTAT > 5% (standard):		
a) phase A (pre-analytical)	2.56%	4.25%
b) phase B (analytical)	0.28%	0.80%
c) phase C (post-analytical)	2.28%	3.19%
Number (%) health clinics which improved its own performance compared to previous year:		
a) FBC (automation) <60 minute	179 (55.9%)	261 (84.7%)
b) FBC (manual) <60 minute	6 (66.7%)	3 (100%)
c) Urin FEME <40 minute	16 (13.9)	2 (66.7%)

Source : Family Health Development Division, MoH

## Tele Primary Care (TPC) activities

Tele Primary Care (TPC) was launched in 2005 and the backbone for this system is the TPC application developed by the Ministry of Health. TPC is currently being used in 33 sites in Johor, 31 in Sarawak, 5 in Perlis, 15 in Selangor and 3 in Federal Territory Kuala Lumpur (WPKL). It links the selected health clinics, district health offices as well as specialist outpatient clinics in hospitals.

As of 31 December 2009, there were 2,412,779 patients registered with TPC System with 52.4% males and 47.6% females. The ethnic composition was 51.6% Malays, 17.7% Chinese, 10.9% Indians and 17.2% indigenous groups from Sabah and Sarawak. 26.8% were in age group 20-29 and 25.5% were 0-19. Records showed that 70% of the patients came for curative treatment, 21% for wellness purposes and the remainder came for procedures, laboratory or pharmacy services.

In 2009, 445 tele-consultation requests were made and of those, 447 responded via the TPC System. Tele-consultation was performed for Continuous Medical Education (CME), Counseling and Patient Education, Diagnostic Assistance, Management Assistance and on Patient Request.

At the end of 2009, Tele Primary Care CIS was successfully interfaced with the eKL application. Patients seen at the 18 clinics within the Klang Valley using TPC, were registered through the TPC system to gain access into eKL services. By December of 2009, the eKL services were piloted at 6 clinics with plans for further expansion to the remaining clinics in 2010.

The top common diagnosis for 2009 differs in every state. However, there were a few common diagnoses seen across all the states, which are Upper Respiratory Tract Infections (URTI), Essential Hypertension and Type 2 Diabetes Mellitus.

Joint research effort with Johns Hopkins University (JHU) using ACG software on TPC data has entered its third phase. The Project 3 final report "Using Tele Primary Care (TPC) to Improve the Delivery of Primary Health Care in Malaysia: Applications of the JHU Adjusted Clinical Groups (ACG) System to Improve Data Quality, Financing and Efficiency" was produced. Source of data used in the study was from the states of Perlis, Sarawak and Johor. The ACG system has proven to work with Malaysian data and through the system the Ministry will then be able develop models to identify "high risk" patients or "high cost" patients. In summary, outputs of the third project in the analysis of the TPC dataset include:

- a) examples of how profiling might be used to not only understand differences in morbidity burden; but also, to potentially affect resource allocation;
- b) a better understanding of how such reports might be used by clinician's to identify at risk individuals
- c) a greater appreciation of the importance of data collection and current recording challenges in assuring data completeness and appropriate allocation of costs to services
- d) An understanding of the potential value of pharmacy information and how it might be used as an adjunct to currently inadequately recorded diagnosis information.

## FOOD SAFETY AND QUALITY

### Export Section

The Food Safety and Quality Division (FSQD) has been appointed as the Competent Authority (CA) by the European Union (EU) to carry out official controls along fish and fishery products supply chain destined for the EU market. To improve capabilities of Ministry of Health as a CA, a new section named Export Section under the FSQD was established on 3 February 2009. This section is responsible to ensure official control activities carried out on the fish and fishery products supply chain are in accordance with the requirements of the importing country while ensuring coordination of official control activities carried out by the Department of Fisheries(DOA) and Malaysia Fisheries Development Board (LKIM).

- **Export of Fish and Fishery Products to EU**
- Verification of compliance status of export establishments, transport vehicles, ice producers, independent refrigerated stores, sources of semi-processed fishery products and imported raw materials
  - i. In 2009, 26 processing establishments which applied for the approval had been inspected. Nine (9) of these processing establishments were approved and re-listed for export of fish and fishery products to the EU. Corrective actions are being taken on non-conformances identified in processing establishments which are yet to be approved.
  - ii. Surveillance audit had been conducted on six (6) approved export establishments. These establishments were found to be maintaining their compliance to the EU requirements.

### Implementation of Monitoring Plan

- i. Three (3) Monitoring Plans have been developed i.e. Capture Fishery Monitoring Plan, Fishery End Products Monitoring Plan and Water and Ice Monitoring Plan.
- ii. 864 samples of fish and fishery products and 242 samples of water and ice were taken in 2009 under the monitoring plan.
- iii. Corrective actions have been taken on all contraventions of EU standards for samples of fish and fishery products and water & ice.

- Improvements in Official Control
  - i. Seven (7) application forms for approval for export of fish and products have been developed
  - ii. Ten (10) SOPs (Standard Operating Procedures) for Official Control activities have also been developed
  - iii. Food Export Certification Information System (FExCIS) has been developed and implemented officially starting on 14 May 2009 for issuance of Health Certificate for the export of fish and fishery products to EU.

- FVO Inspection Mission 2009

FVO Inspection Mission was carried out by two (2) FVO Inspectors from 3 - 12 March 2009. The objective of the mission was to evaluate the CAs' capabilities based on the corrective actions taken on the shortcomings identified in the previous inspection mission in April 2008. The scope of the mission was to inspect the CAs, processing establishments, local aquaculture farms and laboratories. In total, five (5) processing establishments, three (3) aquaculture farms and two (2) official laboratories were inspected.

Based on the inspection mission's findings, the CAs were found to be able to give official guarantees on the control of fish and fishery products exported to EU which is equivalent to EU requirements. Aquaculture farms and processing establishments were found to be in compliance with EU requirements. As recommended by DG SANCO, Ministry of Health made an application on 16 March 2009 for relisting of establishments approved to export fishery products processed from local aquaculture and imported raw materials. In 2009, nine (9) export establishments have been approved and re-listed to export fish and fishery products processed from local aquaculture and imported raw materials to the EU. For the capture fishery sector, CA would ensure the compliance of EU requirements along the supply chain. The FVO Inspection Mission on this sector will be carried out in April 2010.

- ***Export of Fish and Fishery Product to The Countries other than The EU (USA)***

For export of fish and fishery products to countries other than the EU, the processing establishments have to comply with the importing country's requirements. The Food Safety and Quality Division (FSQD) is responsible to ensure that the fish and fishery products exported is safe and is in compliance with the importing country's requirements. A control system has been developed for fish and fishery products exported to United States of America (USA), which includes developing a database on the processing establishments & source of raw materials, verification of the processing establishments and sampling of fish and fishery products exported to the USA.

- Verification of Status of the Processing Establishments for Export of Fish and Fishery Products to USA
  - i. A checklist for verification of processing establishments exporting fish and fishery products to USA has been developed in August 2009.
  - ii. 54 processing establishments had been verified. Out of these, 38 processing establishments were shortlisted for the export of fish and fishery products to USA.
  - iii. Four (4) processing establishments were prohibited from exporting fish and fishery products to the USA due to major non-conformances on pre-requisite programme (PRP) and Hazard Analysis and Critical Control Point System (HACCP).

#### Monitoring Plan

The Monitoring Plan for fish and fishery products exported to the USA has been implemented since October 2009. 250 samples were taken and analysed. No contraventions were reported from the analysis of these samples.

- ***Export of Fish and Fishery Products to Russia***

In 2009, there was only one processing establishment exporting fish and fishery products to the Russian Federation (RF). In January 2009, Russian Federation Service for Veterinary and Phytosanitary Surveillance (Rosselkhoznadzor) imposed new requirements for the import of fish and fishery products. Under this new requirement processing establishments exporting fish and fishery products to the RF have to be inspected and approved by Rosselkhoznadzor before import licences are issued. Since then, Rosselkhoznadzor has stopped import of Malaysian fish and fishery products into the RF.

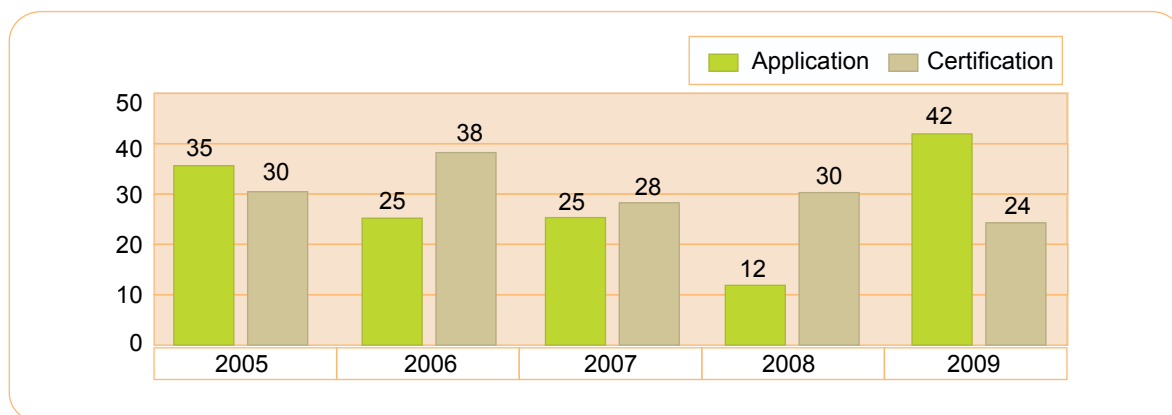
FSQD was requested by Rosselkhoznadzor to provide information on the export control system, volume of production and quantity of fish and fishery products exported to RF. In cooperation with DOF, FSQD has provided the required information on 24 September 2009 and additional information were also provided on 6 November 2009.

#### ***Industry Section***

- ***HACCP Certification Scheme***

The HACCP Certification Scheme was introduced by the Food Safety and Quality Division (FSQD) at the end of 1997 and was launched in 2001. The purpose of this scheme is to assist industry in complying with the requirement of importing countries if necessary, as HACCP is recognized worldwide as a food safety assurance system. As of December 2009, a total of 169 companies were certified under the MoH HACCP Certification Scheme. This certification has helped the industry in meeting the needs of countries of the European Union (EU) and the United States for the export of fish products and fish products.

**FIGURE 22.**  
**NUMBER OF CERTIFICATION, 2005-2009**



Source: Food & Safety Quality Division, MoH

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

The GMP Certification Scheme was established at the request of the importer, especially the small and medium enterprise (SMEs) in the country. This certification scheme was launched by the Minister of Health on December 19, 2006. As of December 2009, a total of 34 companies have received GMP certification. This certification will enhance consumer confidence on the products and assist industry in expanding their market.

- ***Food Handlers Training Programme***

The objective of this programme is to provide exposure and awareness to all food handlers on food hygiene and safety, personal cleanliness and hygienic food premises, and thus reduce the incidence of food poisoning throughout the country. During the year 2009, a total of 57,579 food handlers were trained by The 117 Food Handler Training School, which is recognized by the MoH. A total number of 472,839 food handlers were trained since 1996. A total of 26 participants were trained in the Teaching Evaluation Compulsory Training Course held from 18 to 21 August 2009 at the Ministry of Domestic Trade, Cooperatives and Consumer (KPDNKK). As of 2009, a total of 257 trainers were recognized by MoH to conduct Food Handler Training Course.

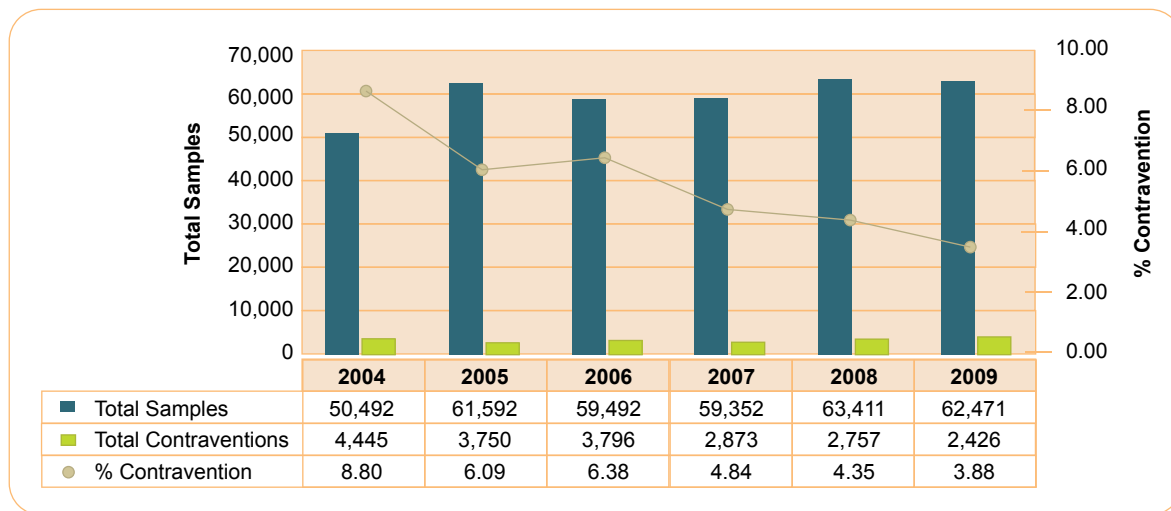
### **Enforcement (Domestic) Section**

- ***Food Sampling***

The purpose of food sampling is to ensure that food prepared or sold in Malaysia adhere to requirements under the Food Act 1983 and the Food Regulations 1985. Food sampling target for 2009 is 48,000 samples based on the norm under National Work Plan i.e. 2 samples/1,000 people/year as specified by Food Safety and Quality Division, Ministry of Health. Food sampling is divided based on analysis parameter as follows: microbiology (40%), chemical (55%) and physical (5%) In 2009, a total of 62,471 food samples were

taken for analysis and 2,426 (3.88%) of the samples contravened certain requirements under the Food Act 1983 and the Food Regulations 1985 (Figure 23). Contravention percentage showed a decreasing trend since 2004 i.e. from 8.7% to 3.88% in 2009. A total of 609 offenders were fined in a sum of RM 1,088,300.00 and three (3) offenders were jailed. Meanwhile, 93 offenders were discharged not amounting to acquittal and 19 offenders were discharged and acquitted.

**FIGURE 23.**  
**FOOD SAMPLING, 2004 - 2009**



Source: Food & Safety Quality Division, MoH

- *Inspection and Closure of Food Premises*

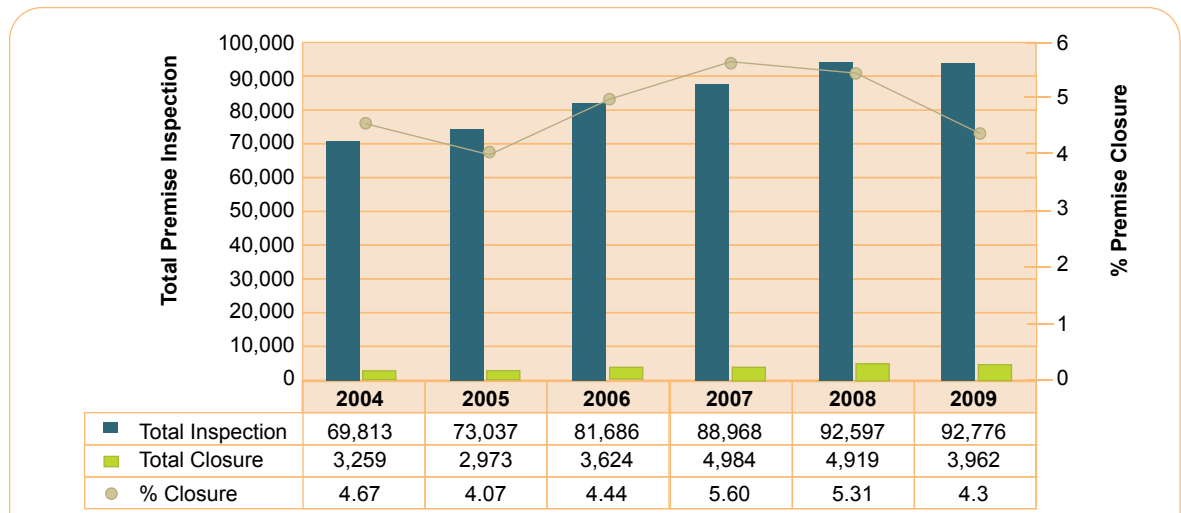
Inspection of food premises is one of the routine activities conducted to ensure that all food premises are clean and hygienic. In 2009, a total of 92,776 food premises were inspected and 3,962 unsanitary food premises were closed under Section 11, Food Act 1983 (Figure 24).

- *Pesticide Residue*

In 2009, a total of 2,548 food samples (Figure 25) were taken for pesticide residue analysis in which 2,012 of the samples were vegetables and 536 remaining samples were fruits. Results of the analysis indicate that 36 (1.8%) of the vegetable samples and 24 (4.5%) of the fruit samples were detected with pesticide residue content above the Maximum Residual Limit (MRL) as stated in Table 16, Regulation 41, Food Regulations 1985.

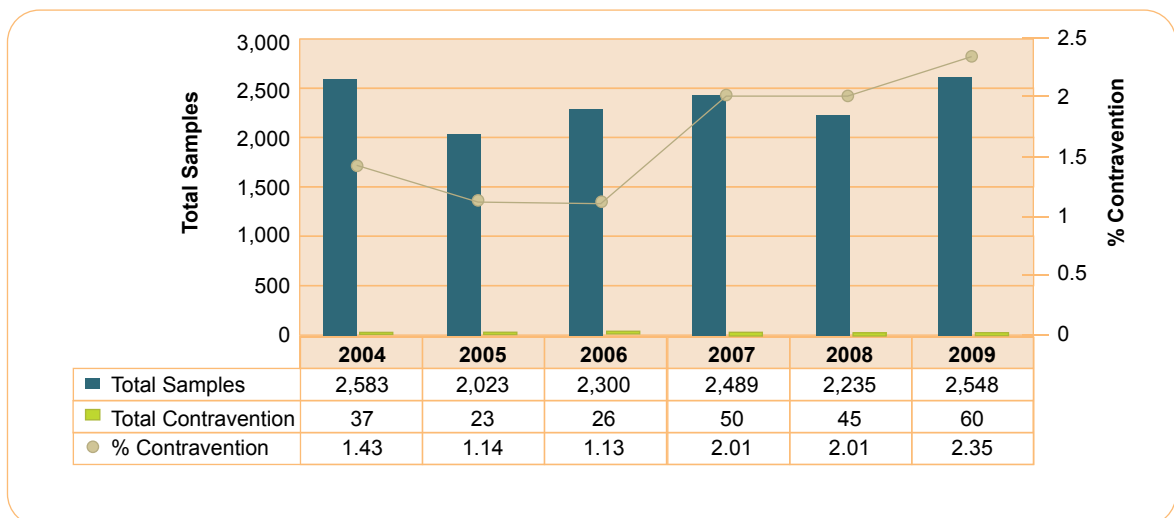


**FIGURE 24.**  
**INSPECTION AND CLOSURE OF FOOD PREMISES, 2004 – 2009**



Source: Food & Safety Quality Division, MoH

**FIGURE 25.**  
**SAMPLING OF FRUITS AND VEGETABLES FOR PESTICIDE RESIDUE, 2004-2009**



Source: Food & Safety Quality Division, MoH

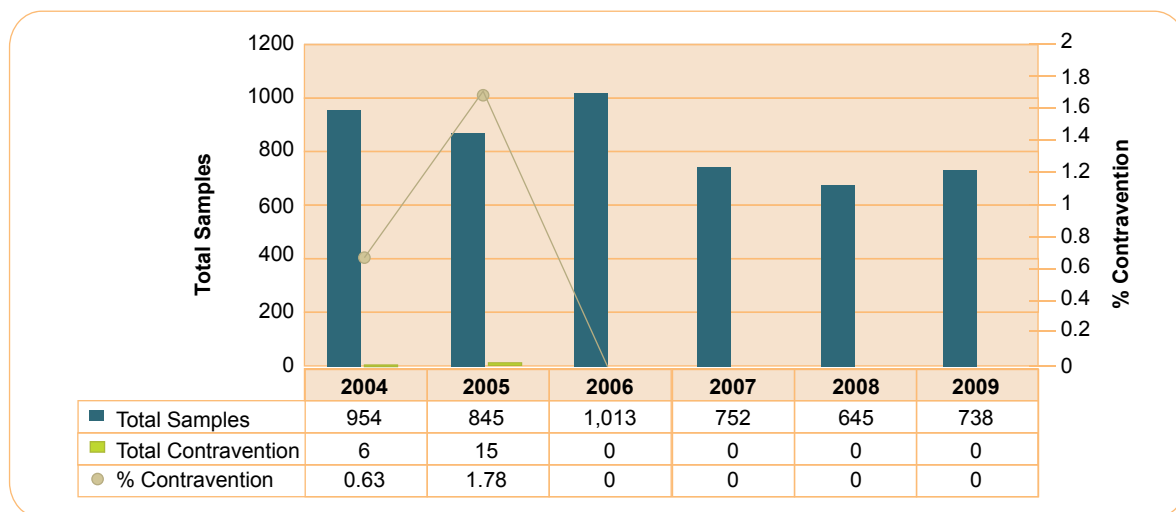
- **Drug Residue**

Abuse of veterinary drugs is still a persistent issue in food safety although the Food Regulations 1985 prohibit the use of Beta-agonist, Nitrofurans and Chloramphenicol in food.

- Nitrofuran**

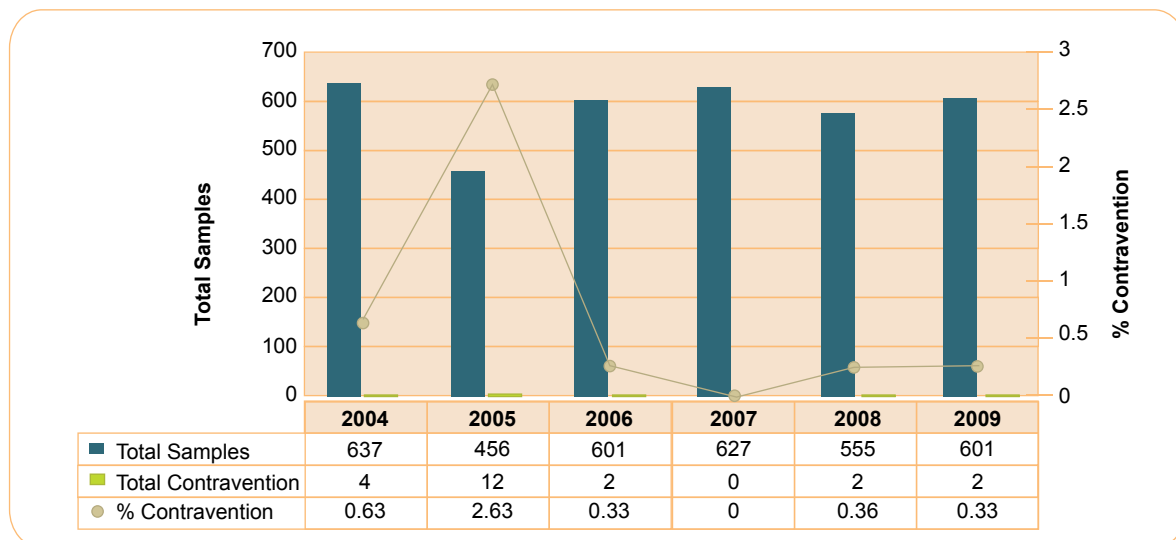
The Ministry of Health is continuously monitoring the issue of nitrofuran abuse in food. A total of 679 poultry samples and 59 egg samples were taken for analysis of nitrofuran residue and none of them contravene the Food Regulations 1985 (Figure 26).

**FIGURE 26.**  
**SAMPLING OF POULTRY AND EGGS FOR NITROFURAN ANALYSIS, 2004 – 2009**



Source: Food & Safety Quality Division, MoH

**FIGURE 27.**  
**SAMPLING OF POULTRY FOR CHLORAMPHENICOL, 2004 -2009**

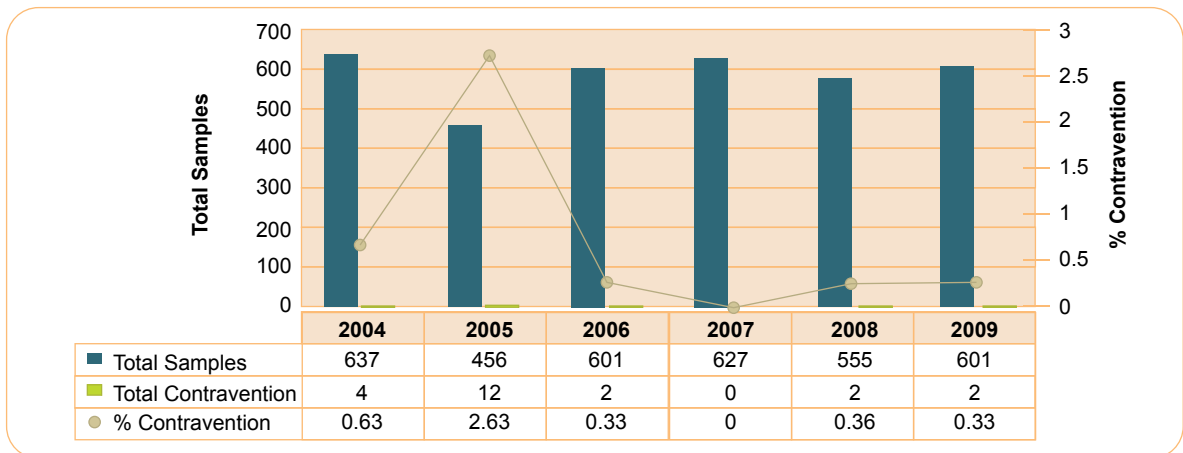


Source: Food & Safety Quality Division, MoH

- Chloramphenicol

Sampling was done to detect abuse of chloramphenicol in poultry and fish. A total of 601 poultry samples were taken and 2 (0.33%) samples were detected to contain chloramphenicol (Figure 24). On the other hand, out of 259 fish samples taken for chloramphenicol analysis, 2 (0.77%) samples were found positive (Figure 28).

**FIGURE 28.**  
**SAMPLING OF FISH FOR CHLORAMPHENICOL, 2004 - 2009**

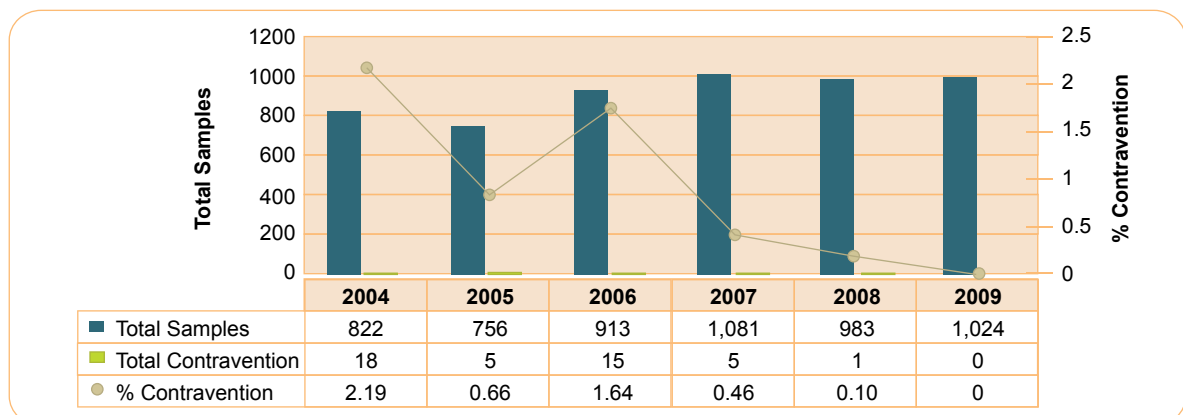


Source: Food & Safety Quality Division, MoH

- Beta-Agonist

In 2009, a total of 1,024 samples were taken for beta-agonist analysis (Figure 26). These include ham (448 samples), beef (410 samples), lamb (78 samples) and duck (88 samples). Continuous enforcement efforts by the Ministry of Health through routine inspections and special operations have a positive impact in the number of beta-agonist abuse which resulted in a reduction of contravention cases. In 2009, none of the samples taken was detected positive for beta-agonist.

**FIGURE 29.**  
**MONITORING OF BETA-AGONIST, 2004 – 2009**



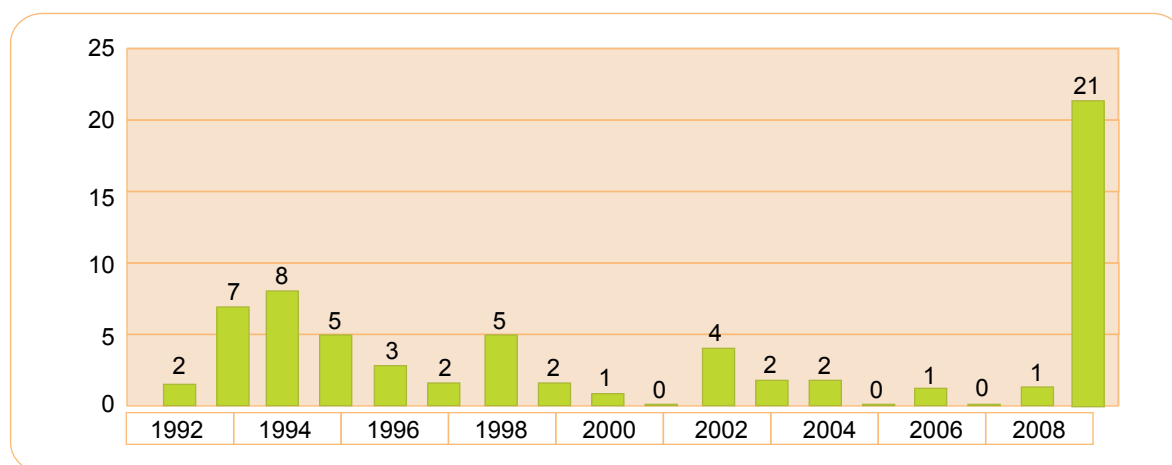
Source: Food & Safety Quality Division, MoH

- *Licensing*

- Natural Mineral Water

Production and importation of natural mineral water in this country must be licensed in accordance with Regulation 360A, Food Regulations 1985. Since this regulation was introduced in 2000, a total of 66 licences of natural mineral water source were issued until the 31st of December, 2009 (Figure 30). The issuance of the licences contributed to fee collection of RM 270,000.00.

**FIGURE 30.**  
**ISSUANCE OF NATURAL MINERAL WATER LICENCES, 1992 – 2009**



Source: Food & Safety Quality Division, MoH

However, only 25 licences were still active in 2009. 22 of the 25 licences issued are from local sources while the remaining licences issued are from foreign sources. No licences of natural mineral water source were revoked in 2009. In 2009, there were 33 applications for license of natural mineral water source received in which 21 new licences were issued during the period.

- Packaged Drinking Water

Regulation 360B, Food Regulations 1985 was gazetted in the year 2000 where it is compulsory to obtain a licence for the source of package drinking water before undertaking the business. Until 2009, a total of 209 applications for packaged drinking license were approved (Table 10). However, only 170 licences are still active until 2009.

- Non-Nutritive Sweetener

There were five different licenses issued by MoH for non-nutritive sweetener under the Regulation 133 (5), Food Regulations 1985. Non-nutritive sweetener includes acesulfame potassium, saccharin and sodium saccharin. In 2009, a total of 24 licences for non-nutritive sweetener were issued which contributed a sum of RM 4,500.00 in fee collection (Table 11).

**TABLE 10.**  
**LICENCE APPROVAL ACCORDING TO STATE, 2001 – 2009**

No.	States	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Active License
1.	Perlis	0	0	2	1	0	0	1	1	2	7	6
2.	Kedah	0	0	4	0	0	2	1	0	0	7	5
3.	Pulau Pinang	0	3	4	0	1	1	2	0	2	13	9
4.	Perak	0	5	0	0	0	5	0	1	0	11	8
5.	Selangor	6	10	5	3	3	4	2	8	3	44	33
6.	FT (KL)	1	1	1	3	1	1	2	1	2	10	10
7.	Negeri Sembilan	0	1	2	1	0	1	0	0	0	5	4
8.	Melaka	0	0	2	1	0	2	0	1	0	6	5
9.	Johor	1	4	4	4	1	7	3	1	1	25	20
10.	Pahang	0	2	7	1	1	2	0	1	1	15	10
11.	Terengganu	0	0	0	0	1	0	0	0	1	2	2
12.	Kelantan	0	2	3	6	3	2	0	8	0	24	20
13.	Sarawak	0	2	2	3	6	4	1	0	0	18	17
14.	Sabah	0	2	6	3	2	1	1	1	2	18	19
15.	FT (Labuan)	0	1	0	0	2	1	0	0	0	4	4
	<b>Total</b>	<b>8</b>	<b>33</b>	<b>42</b>	<b>26</b>	<b>19</b>	<b>33</b>	<b>11</b>	<b>23</b>	<b>14</b>	<b>209</b>	<b>170</b>

Source: Food & Safety Quality Division, MoH

**TABLE 11.**  
**NUMBER OF NON-NUTRITIVE SWEETENERS LICENCES ISSUED ACCORDING TO STATE, 2009**

No.	States	Type of License					Total license issued	Fee Collected (RM)
		B	B1	B2	B3	B4		
		RM200				RM50		
1.	Kedah	0	0	0	2	0	2	400.00
2.	Pulau Pinang	1	1	0	3	0	5	1,000.00
3.	Perak	0	0	0	4	0	4	800.00
4.	Selangor	1	7	0	0	1	8	1,600.00
5.	Melaka	0	0	0	0	1	1	50.00
6.	Kelantan	1	0	0	0	0	0	200.00
7.	FT (KL)	0	1	0	1	1	3	450.00
	<b>Total</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>24</b>	<b>4,500.00</b>

Source: Food & Safety Quality Division, MoH

- Special Operations

The enforcement operations carried out in 2009 is as listed in Table 12.

**TABLE 12.**  
**OPERATIONS CARRIED OUT IN 2009**

No.	Operation
1.	Operation Chinese New Year (Ops Shu 2008)
2.	Operation Belacan 2008
3.	Operation Flavoured Milk
4.	Operation Ramadhan 2008
5.	Operation Packaged Drinking Water / Natural Mineral Water
6.	Operation Beta-agonist
7.	Operation Boric Acid
8.	Operation Plastic Substances in Cooking Oil
9.	Operation Packaged Drinking Water / Natural Mineral Water

Source: Food & Safety Quality Division, MoH

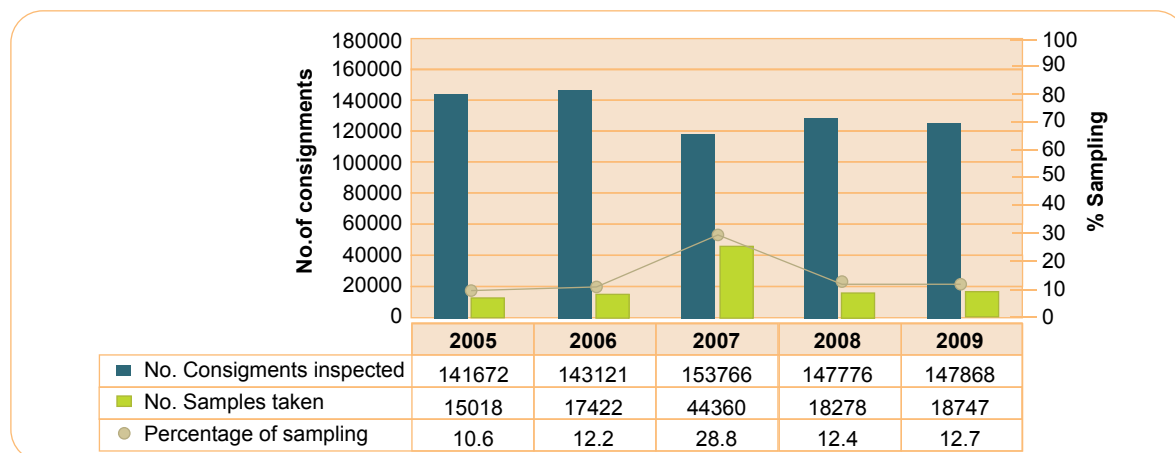
### Enforcement (Import) Section

- *Food Import Control System*

Food import control management is assisted by Food Safety Information System of Malaysia (FoSIM - web based application system). Recently upgraded to Version II, the system uses risk based approach in determining food safety hazard of imported food. The risk attributed to the food is determined by six levels of examination. The levels of examination vary from Level 1 where food is automatically released without inspection to Level 6 where food is automatically rejected.

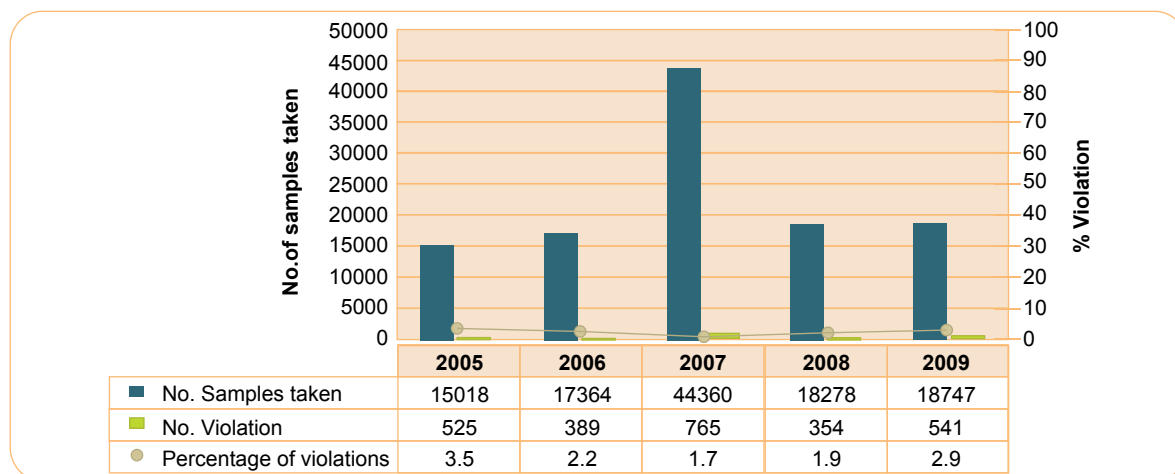
In 2009, 147,868 consignments were inspected and 18,747 samples (12.7%) were taken for analysis (Figure 31). From the total samples taken for analysis, 541 samples (2.9%) contravened the Food Act 1983 and its Regulations 1985 (Figure 32).

**FIGURE 31.**  
**TREND OF FOOD IMPORT CONSIGNMENT INSPECTION AND SAMPLING ACTIVITIES, 2005 - 2009**



Source: Food & Safety Quality Division, MoH

**FIGURE 32.**  
**TREND OF FOOD IMPORT VIOLATIONS, 2005 – 2009**



Source: Food & Safety Quality Division, MoH

In the year 2009, there were 160 food alert issued for food consignments coming from 22 countries. Food Safety and Quality Division (FSQD) reviews and assesses each notification of food alert sent by entry points. FSQD will then disseminate the food alert to all states and entry points for appropriate action.

All flavouring substances imported into Malaysia for use in food must obtain approval from the Director prior to importation. The total number of application received and processed for approval is 407. In the year 2007, there were 10 applications received and processed for approval, where else in 2008 the number of application and approval increase to 236, however in 2009 the number of application and approval were reduced to 161.

Activities carried out by this section in the year 2009 were:

- i. Establishing the National Monitoring Programme of Imported Food Products
  - a) Pesticides residue and heavy metal in nut and nut product (May - October 2009)
  - b) Heavy metal in imported tea, based on food alert from EU RASFF (May - October 2009)
  - c) Mycotoxin in spices, based on food alert from EU RASFF (May - October 2009)
  - d) Acid Boric in imported prawns and shrimp, based on food alert from EU RASFF (May - October 2009)
  - e) Detection of Genetically Modified Food (GMO) in imported grains, based on food alert from EU RASFF (May - October 2009)

- ii. Redrafting and reviewing the proposed Food Import Regulation.
- iii. Reviewing the existing policy on Bovine Spongiform Encephalopathy (BSE) - Interagency Committee on BSE was convened to update the latest available scientific information on BSE and its control. Both the Ministry of Health (MoH) and the Ministry of Agriculture and Agro-Based Industry (MoA) worked closely to address this matter
- iv. Development of FoSIM Version II, with new elements incorporated such as:
  - a) Web-based on line registration for importers and agents
  - Automatic generation of food inspection level using Risk Based Approach
  - b) Higher speed server for higher FoSIM performance
  - c) More user friendly system
- v. FoSIM Version II application training for forwarding agents, importers and Ministry of Health officials.
- vi. Planning & development of specification for fosim domestic to assist in domestic enforcement activities.

### **Codex & International and Standards Development Section**

Previously, the development of standards under the Food Regulations (FR) 1985 and discussions pertaining to Codex standards at the national level were managed independently by two (2) separate Sections. The Committee that oversees the development of FR 1985 rested under the Standard Development Section, while the Committee that looks at Codex standards was under the responsibility of the Codex and International Section.

Despite constant communication and sharing of input from the Codex Section, the task to harmonise national standards with those of Codex proved to be difficult and could not be carried out in tandem with the latest development in Codex standards because of the sectional segregation. Realising this shortcoming, the two Sections were merged in August 2009 and named as the Codex & International and Standards Development Section. Now, reviewing and updating of FR 1985 as well as formulation of new legislations can be performed more comprehensively, efficiently and in line with the development of Codex standards and those of other countries.

#### **• Codex Activities At The National Level**

The Food Safety and Quality Division (FSQD) which is the Codex Contact Point and the Secretariat to the National Codex Committee (NCC), plays the lead role in facilitating and coordinating Codex activities at the national level especially in ensuring national coherence on various Codex issues of national interest and Malaysia's participation in Codex meeting. The NCC consists of 20 National Codex Sub-Committees (NCSC), one (1)



Codex Task Force (TF) and 11 Codex Working Groups (WG) that are established to consider and formulate the national position on subject matters discussed within the corresponding Codex Committees: Appendix 1

In 2009, Malaysia participated in 10 Codex meetings at the international level. At the national level, one (1) NCC meeting, 32 NCSC meetings including WG meetings and four (4) TF meetings were held in preparation for and as follow-up to international Codex meetings.

For the first time since being designated as the host government of the Codex Committee on Fats and Oils (CCFO) in July 2007, Malaysia hosted the 21st Session of the CCFO from 16 to 20 February 2009. The session was successfully held in Kota Kinabalu, Sabah and was attended by 103 participants from 37 member states, one (1) member organisation (European Community) and five (5) international organisations. The session was chaired by Ms. Noraini Dato' Mohd. Othman, Director of the Food Safety and Quality Division, Chairperson of the CCFO.

Malaysia also plays an active role in various cooperation at the ASEAN level such as the ASEAN Expert Group on Food Safety (AEGFS), in which Malaysia acts as the coordinator for the ASEAN Food Safety Improvement Plan (AFSIP). Two (2) delegates from Malaysia attended the 7th Meeting of the AEGFS which was held in Singapore from 13 to 15 October 2009. The 7th AEGFS agreed for Malaysia to review and update the 2004-2008 AFSIP plan for 2010-2015 and be renamed as AFSIP II. Malaysia as coordinator of the Monitoring and Surveillance Programme, presented the Framework on Monitoring and Surveillance at the 7th AEGFS. As a follow through to this Framework, the 7th AEGFS agreed that Malaysia develops a project on Food Consumption Data for the region. Under the 'Enhancing Food Safety by Strengthening Food Inspection Systems in ASEAN Member States' which is a joint project between AEGFS with FAO and the Government of Japan, two (2) workshops and one (1) training course were organized in 2009. Malaysia also participated in two (2) other meetings at the ASEAN level namely the ASEAN Task Force on Codex (ATFC) and the ASEAN Consultative Committee on Standards and Quality (ACCSQ) Prepared Foodstuff Product Working Group (PFPWG).

FSQD is responsible as the National Enquiry Point for all Sanitary and Phytosanitary Measures (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, etc. During the year in review, as many as 958 foreign notifications from the WTO/SPS Committee pertaining to food safety were received and evaluated. In 2009, Malaysia issued eight (8) SPS notifications, of which three (3) were issues under the purview of FSQD. In 2009, a total of 1491 foreign notifications from the WTO TBT Committee pertaining to food safety were received and evaluated.

In 2009, FSQD engaged in several Free Trade Agreements (FTA) between Malaysia - Australia free Trade Agreement (MAFTA), Malaysia - Chile Free Trade Agreement, Malaysia - New Zealand Free Trade Agreement (MNZFTA) and Malaysia - US Free Trade Agreement (MUSFTA). FSQD also engaged in bilateral negotiation between Malaysia -

Indonesia, Malaysia – Thailand, Malaysia – Japan and Malaysia – Egypt; multilateral negotiations between Brunei Darussalam – Indonesia – Malaysia – Philippines; and provided input pertaining to SPS issues on food safety.

- *The Activity of The Advisory Committee on The Food Regulations 1985 (JPPM)*

This Committee was established to approve proposed amendments to the Food Regulations 1985. This Committee comprises representatives from government agencies, public institutions of higher education, consumer and professional organisations. There were eight Expert Working Committees (JKKP) established under this committee to review applications from the industry or other parties to amend the Food Regulations 1985. In addition, the JKKP will also discuss amendments to the Food Regulations 1985 for the purpose of harmonization with Codex standards. FSQD is also a member of various committees under other departments such as the Department of Veterinary Services, Department of Fisheries and Department of Agriculture which are also directly involved in the Food Regulations 1985 review and amendment process.

- *Gazettement of Amendments to The Food Regulations 1985*

In 2009, a total of five (5) gazettements were issued which comprises three (3) new legislation, and two (2) amendments to existing standards. The gazettements are as shown in Table 13.

**TABLE 13.**  
**GAZETTEMMENT OF THE FOOD REGULATIONS 1985 AMENDMENTS IN 2009**

No.	Regulation	Date of Gazettement
1.	Food Hygiene Regulations P.U. (A) 95 / 2009	28 February 2009
2.	Food Regulations (Issuance of Health Certificate for Export of Fish and Fish Product to the European Union in 2009) P.U. (A) 92 / 2009	28 February 2009
3.	Food Regulations (Amendment) Act 2009 P.U. (A) 113 / 2009	12 March 2009
4.	Food Regulations (Amendment) (No.2) 2009 P.U. (A) 306 / 2009	24 August 2009
5.	Food Regulations (Amendment) (No.3) 2009 P.U. (A) 405 / 2009	19 November 2009

Source: Food & Safety Quality Division, MoH

The implementation of the Food Hygiene Regulations 2009 will result in significant implications for all stakeholders involved in the food industry such as operators and food handlers. Since the regulations were gazetted on 28 February 2009, numerous awareness and information activities were held.

The Standard for Wholesome Ice which is an amendment to the FR 1985 was gazetted on 12 March 2009. The amendment was made to raise standard and cleanliness of ice used in the country where it is mandatory for all the ice factories in the country to be licensed. It is also consistent with the requirements of the EU.

- *Product Classification And Label Screening Services*

To improve services of this section to the public, product classification of Food Drug Interface (FDI) products and label screening services was introduced in addition to the labelling advisory services which are currently available.

- i. "Food Drug Interface (FDI)" Product Classification;  
A total of 1411 applications for classification of products were received in 2009 and some of it was discussed at the Food Drug Interface (FDI) Product Classification Committee Meeting. This classification service is to classify whether the products is food by FSQD or pharmaceutical product by National Pharmaceutical Control Bureau.
- ii. Label Screening and Labelling Advisory Services;  
Free label screening service has been given to the industry since 2008. A total of 512 labels have been screened in 2009. Through this service, the industry will be informed of the status of their product label and if they require more clarification, they are advised to apply for the labelling advisory services.

This Section also provides Labelling Advisory Service through the Labelling Advisory Committee to industries that need such services. The charge is RM 1,000.00 per label. The applicant is required to amend their product labels based on the comments provided in accordance with the Food Act 1983 and Food Regulations 1985. A total of 43 labels were reviewed by the Labelling Advisory Committee in 2009.

### **Communication and Consumerism Section**

Communication and Consumerism Section was established in August 2009 and its functions are (1) To plan and coordinate all food safety and quality promotion activities, and (2) To coordinate and respond to complaints and inquiries related to the food safety and quality. Activities done in 2009 were as follows:

- i. Food Safety Promotion at the National Level among TABIKA Children.
  - a) National Level Food Safety Campaign for TABIKA Children was held on 2 March 2009 at the Tabung Haji Complex, Kota Kinabalu, Sabah. The program was launched by the former Deputy Minister of Health, Y.B. Datuk Dr. Hj. Abdul Latif bin Ahmad. The ceremony was attended by 400 TABIKA children and teachers and the theme is "Trust your sense, before eating, observe, smell, taste".
- ii. Transport Coordination Workshop for Food Safety Promotion Activities in Langkawi Seaview Hotel, 9-11 August 2009.
- iii. Meeting Action Plan for Food Safety Campaign 2010 at the Bayview Hotel, Melaka on 9-12 November, 2009.
- iv. Publication of Food Safety Material and Bulletin (Table 14)
- v. Activities to enhance knowledge on food safety through mass media/website and community participation (Table 15)

**TABLE 14.**  
**PUBLICATIONS OF FOOD SAFETY MATERIAL, 2009**

Types	Title
Pamphlets	<ul style="list-style-type: none"> <li>• Specific guidance on the use of towels among food operators</li> <li>• 5 Guides to Safer Food</li> <li>• Ice</li> <li>• Reduce PAH in Food</li> <li>• Wash Hand Sticker</li> </ul>
Poster	<ul style="list-style-type: none"> <li>• OBSERVE, SMELL, TASTE</li> <li>• Observe and Choose</li> </ul>
Exhibition Education Material	<ul style="list-style-type: none"> <li>• OBSERVE, SMELL, TASTE</li> <li>• Observe and Choose</li> <li>• FoSiM</li> </ul>

Source: Food & Safety Quality Division, MoH

**TABLE 15.**  
**ACTIVITIES TO ENHANCE KNOWLEDGE ON FOOD SAFETY IN 2009**

Types	Activities
<i>Exhibition (national)</i>	8 times : <ol style="list-style-type: none"> <li>i. HIMSS Asia Pacific 2009 Conference</li> <li>ii. Smart Kids Exhibition</li> <li>iii. MIHAS</li> <li>iv. Malaysian International Food and Beverages (MIFB)</li> <li>v. Healthy Catering</li> <li>vi. Seminar on Food Processing Industry</li> <li>vii. Fabulous Food 1Malaysia</li> <li>viii. Halal Carnival</li> </ol>
Mass media	Food Safety Media Campaign with the theme "Observe and Choose" 3 times slot TV/Radio 2 articles – Ministry of Health Supplement
Seminar	Standards and Consumer Seminar Series 2009 organized by the Ministry of Domestic Trade, Cooperatives and Consumer (KPDNKK) in collaboration with the Food Safety and Quality Division, MoH and other agencies have been conducted throughout the country.
Research	1 Media Campaign Research was carried out in 2009

Source: Food & Safety Quality Division, MoH

## Policy Section

- Activities Carried Out under The National Food Safety and Nutrition Council (NFSNC)
  - i. One (1) Steering Committee Meeting was held on July 10, 2009 in preparation for the Eighth NFSNC Meeting held on 19 November 2009. The Eighth NFSNC Meeting was chaired by the Honourable Minister of Health and was attended by the Chief Secretary to the Ministry/representative, the Director/representative related agencies, the Federation of Malaysian Manufacturers (FMM), Federation

of Malaysian Consumer Associations (FOMCA) and professional bodies represented by the president/representative of their respective associations. A total of 21 issues and six proposals, including an action plan were tabled at the meeting. The National Action Plan on Food Safety 2010-2020 was approved at the Eighth NFSNC Meeting, in which the action plan was drawn up in accordance with the principles of from farm to table.

- ii. Two (2) technical meeting was held on 16th June 2009 and 9th June 2009 in preparation for the Steering Committee Meeting.

- iii. Permanent Secretariat of National Food Safety and Nutrition Council (NFSNC) has been established in February 2009.

- iv. Review Meeting of National Food Security Action Plan was held from 26th to 29th May 2009

- *Activities Involving Policy For FSQD*

- i. To strengthen food safety and quality activities, organizational structure in FSQD were reviewed:

- a) Policy and Development Section was established
- b) Codex and International Section and Standards Development Section has been incorporated into Codex and International and Standards Development Section.
- c) Promotion and Consumerism Section was established to replace Promotion Unit.
- d) A unit to address issues on exports other than to the European Union (EU) was created under Export Section.
- e) Food Operator Training School (SLPM) activities were acquired from the The Cleanliness and Safety Training Academy (ALKEM) from March 1, 2009.
- f) The Achievement of the 9th Malaysia Plan for Food Safety and Quality Program has been prepared and presented in:
- g) Assessment of achievement of 9MP by a consultant appointed by the MoH
- h) Brainstorming Session to Identify Issues and Challenges towards Health Plan Legislation 10MP.
- i) Technical Working Group (TWG) of 10MP under JKA.

- ii. Planning the 10th Malaysia Plan for Food Safety and Quality Program has been prepared and presented in:
  - a) Brainstorming session to Identify Issues and Challenges towards Health Plan Legislation 10MP.
  - b) *Technical Working Group* (TWG) of 10MP under JKA.
- iii. The following documents have been prepared:
  - a) Strategic Plan Draft: Food Safety and Quality Control 2009 – 2016
  - b) Approximate Budget Management (ABM) in 2010
  - c) Program Agreement 2009-2010
  - d) Review on National Work Plan
  - e) Memorandum for Strengthening Food Safety and Quality Program
- *Activities Involving The Key Result Area (KRA) / Key Performance Indicator (KPI) FSQD*
  - i. Preparation of 5 Key Result Area (KRA) for Food Safety and Quality Activities
    - a) Food Poisoning Reduction
    - b) Market Access for Fishery Product
    - c) Clean Food Premises
    - d) Foods Sold Comply with Food Act 1983 and Food Regulations 1985
    - e) 31 Client Services
  - ii. Two reports have been prepared and submitted to the Human Resources Division, Ministry of Health.
  - iii. Preparation of five Key Result Areas (KRA) for Y.B Deputy Health Minister.
    - a) Food Poisoning Reduction
    - b) Market Access for Fishery Product
  - iv. Preparation of Key Performance Indicator (KPI) for the Director General of Health (DG)
    - a) The number of food industry getting recognition under the certification scheme Hazard Analysis and Critical Control Point (HACCP) Malaysia
  - v. Preparation of Key Performance Indicator (KPI) for Deputy Director General of Health (Public Health)
- *Quality Activities Involving FSQD*
  - i. Preparation of documents for adequacy audit ISO 9001:2000 FSQD
  - ii. Preparation of Work Procedures Manual (WPM) for the Food Safety and Quality Activities in the state
  - iii. Preparation for the Star Rating System (SRS) audit MoH in 2010.

## NUTRITION

The functional scopes of the Nutrition Division are nutrition planning and development, surveillance, rehabilitation as well as promotion. All activities identified under the scopes are implemented with the aim of achieving and maintaining the nutritional well-being of the population.

### Nutrition Planning and Development

Nutrition Planning and Development focuses on monitoring the progress of the implementation of the National Plan of Action for Nutrition of Malaysia (NPANM) 2006-2015. Several activities are carried out by the Technical Working Groups (TWGs) under the National Plan of Action for Nutrition of Malaysia throughout 2009.

The Malaysian Dietary Guidelines, which was first published in 1999, was revised by the TWG Nutrition Guidelines. The revision of the guideline was based on the findings of the habitual dietary patterns of Malaysians, the Recommended Nutrient Intake for Malaysians (2005) and current scientific knowledge. The revision was completed in November 2009 with a national consensus meeting. Subsequently, the TWG (Nutrition Promotion) initiated the advocacy of the revised Malaysian Dietary Guideline to the food industries. To align nutrition research in the country in accordance with the national priorities and needs, the TWG (Research) convened a consultative workshop to identify the nutrition research needs for the 10th Malaysia Plan. As an outcome of the workshop, the document entitled Nutrition Research Priorities in Malaysia for 10th Malaysia Plan (2011-2015) was published and used as a reference by organizations for prioritizing research topics.

### Nutrition Surveillance

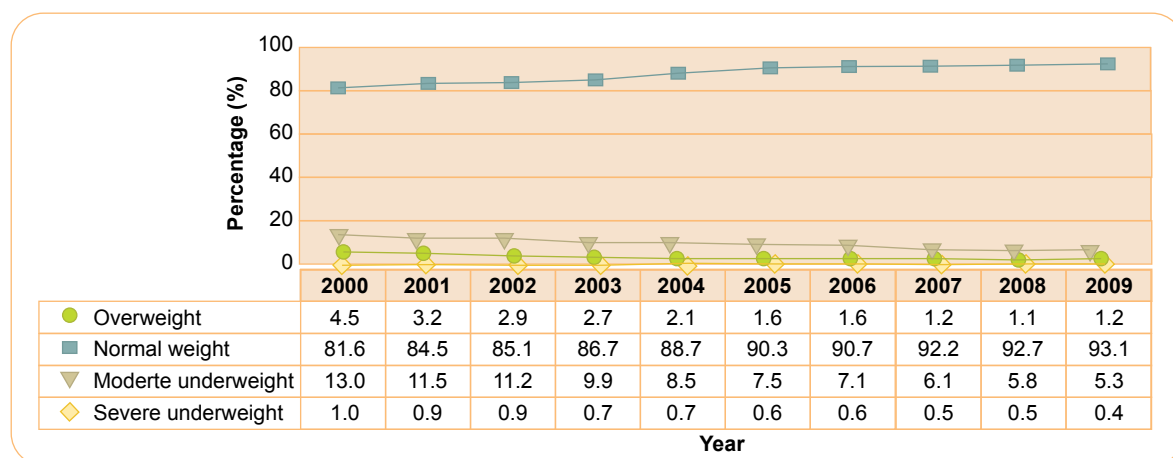
- *Nutritional Status of Children below Five Years in Malaysia*

The Ministry of Health monitors the nutritional status of children under five years old through nutrition surveillance under the Health Management Information System. As shown in Figure 33, the nutritional status of children below five years old continued to improve throughout the years. In 2009, the percentage of moderately and severely underweight children declined from 6.3% in 2008 to 5.7% in 2009 while the percentage of children with normal body weight increased from 92.7% in 2008 to 93.1% in 2009. However, there was a slight increase in the percentage of overweight children from 1.1% in 2008 to 1.2% in 2009.

- *Anaemia amongst Pregnant Mothers*

Anaemia status of pregnant mothers is monitored based on the haemoglobin level amongst pregnant women at 36 weeks gestation who attended the government clinics. In 2009, the percentage of pregnant mothers who were anaemic (haemoglobin level less than 11 gm%) declined from 24.0% in 2008 to 21.5%. The percentage of pregnant mothers with hemoglobin level less than 9 gm% was 1.1% and between 9 gm% to less than 11 gm% was 20.4%. Based on the WHO classification of public health significance, anaemia still poses a moderate public health problem to the country.

**FIGURE 33.**  
**NUTRITIONAL STATUS OF CHILDREN BELOW 5 YEARS, MALAYSIA, 2000 - 2009**



Source: Health Informatics Centre, MoH

#### • *Infant and Complementary Feeding*

The main indicators that are monitored to reflect the infant and young child feeding practices are percentage of infants exclusively breastfed and infants between the ages of six to ten months receiving complementary feeding. In 2009, the prevalence of exclusive breastfeeding amongst infants aged 4 months and 6 months who attended the government health clinics was 35.0% and 14.4% respectively. In terms of complementary feeding, 64.6% infants received timely complementary feeding.

#### **Nutrition Rehabilitation**

Nutrition rehabilitation is implemented through various strategies and interventions tailored to the specific target groups. The Rehabilitation Programme for Malnourished Children, also known as the Food Basket Programme, is carried out to rehabilitate malnourished children. A total of 5,134 children received the food basket in 2009. Out of these, 25.4% were successfully rehabilitated. Table 16 shows the number of recipients and percentage rehabilitated for the last ten years.

The National Iodine Deficiency Disorder (IDD) Survey was conducted in 2008 to assess the current status of IDD in Malaysia. The survey showed that the median urinary iodine (UI) concentration amongst school children aged 8 to 10 years in Peninsular Malaysia, Sabah and Sarawak were 104.1, 150.2, 101.9  $\mu\text{g/l}$  respectively. In Peninsular Malaysia, the states with median UI concentration less than 100  $\mu\text{g/l}$  were Kedah, Pulau Pinang, Perak, Pahang, Terengganu and Kelantan. In these states, more than 50% of the school children had median UI concentration below 100  $\mu\text{g/l}$ .

Distribution of iodized salt and health education activities were continued in 2009. A total of 17,616.7 kilograms iodized salt was distributed to 22,295 pregnant mothers and malnourished children in endemic areas. Health education activities were carried out by health staff to promote iodine-rich foods and the use of iodized salt in cooking.



**TABLE 16.**  
**NUMBER OF RECIPIENTS OF THE REHABILITATION PROGRAMME FOR MALNOURISHED CHILDREN AND PERCENTAGE REHABILITATED AMONG CURRENT RECIPIENTS**

Year	No. of Current recipients on Food Basket Programme	No. of recipients rehabilitated	Percentage of recipients rehabilitated among current recipients
2000	5,186	1,303	25.1
2001	5,125	1,089	21.2
2002	5,021	1,020	20.3
2003	5,137	899	17.5
2004	4,986	1,054	21.1
2005	6,429	1,255	19.5
2006	5,805	1,561	26.9
2007	5,590	1,733	31.0
2008	4,793	1,871	39.0
2009	5,134	1,304	25.4

Source: Health Informatics Centre, MoH

Nutrition counselling by trained nutritionists were offered to patients who are referred by the Family Medicine Specialist or Medical Officer in charge of the clinic. Standard Operating Procedures (SOPs) on Nutrition Management for Diabetes, Hyperlipidaemia and Obesity were produced to guide nutritionists in managing the related cases. The nutrition counselling services at the health clinics were further strengthened in 2009. The number of health clinics offering the service increased from 162 in 2008 to 392 in 2009. A total of 34,958 patients were counselled in 2009.

### **Nutrition Promotion**

- *Infant and Young Child Feeding*

Various nutrition promotion activities were planned and implemented in the effort to improve the eating habits of the population. As healthy nutrition starts from infancy, breastfeeding is one of the pillars of good nutrition. One of the main activities under breastfeeding promotion is the Baby-friendly Hospital Initiative. In 2009, there are 131 hospitals designated as Baby-friendly Hospitals in Malaysia. Out of these, 121 are government hospitals, 2 are hospitals under the Ministry of Education, 2 are hospitals under the Ministry of Defence and 6 are private hospitals.

Breastfeeding training of health staff was further strengthened in 2009 with the directive from the Director General of Health, Malaysia that all nursing training institutions must conduct the lactation management training. In the same year, the Lactation Management Training Module (18 hours) was replaced with a new training module entitled *Breastfeeding Promotion and Support: Revised, Updated and Expanded for Integrated Care, Ministry Of Health Malaysia, 2009*. A training for trainers from the nursing training institutions was conducted

The Code of Ethics for the Marketing of Infant Foods and Related Products had been implemented since 1979 as a strategy to protect, promote and support breastfeeding. A total of 141 informational materials on infant formula products submitted by various infant formula companies were vetted in 2009. Out of these, 83 materials (58.9%) were issued approval codes. The Disciplinary Committee on the Code of Ethics for the Marketing of Infant Foods and Related Products received 7 individual complaints of alleged violations. Out of these, 5 were found to be confirmed violations and disciplinary actions were taken against the companies. A training on the Monitoring of the Code of Ethics for the Marketing of Infants Foods and Related Products was conducted in October 2009 and 95 cases of alleged violations, based on monitoring activities conducted at the state level, were reported.

The Guidelines for the Feeding of Infants and Young Children was launched by the Minister of Health Malaysia on 19 October 2009. It provides guidelines for parents and caregivers on optimal feeding of infants and young children (aged 1-3 years). The guidelines contain nine feeding principles supported by related scientific rationale. The guidelines had been distributed to all health staff and related agencies.

The Guidelines on Menu Planning at Care Centres was also developed with the co-operation of the Social Welfare Department. A training course was conducted for 35 officers from the Social Welfare Department. A total of 845 sets of menus from various agencies under the Ministry of Home Affairs, Community Development Department (KEMAS) and other care centres were reviewed based on the Recommended Nutrient Intakes for Malaysia (RNI, 2005) and the Malaysian Dietary Guidelines 2010. Suggestions for improvement of the menus were forwarded to the respective agencies.

- *Healthy Eating*

In 2009, 84 radio and television slots were allocated by various radio and television stations for the promotion of healthy eating. A dialogue session between the Nutrition Division and the Kumpulan Karang kraf Publisher Sdn. Bhd was held to gain collaboration in promoting healthy eating through local magazines. This led to the publication of 12 nutrition articles in various magazines under the Kumpulan Karang kraf Publisher Sdn. Bhd. Two trainings on Healthy Catering were held at the national level. The aim of the training was to educate caterers on how to prepare and serve healthy foods including recipe modifications. A total of 180 canteen operators from various agencies under the Ministry of Home Affairs, such as the Immigration Department, National Registration Department, Public Service Department and Police Training Centre attended the trainings. A similar training also was conducted for 150 caterers that serve Ministry of Health's headquarters in Putrajaya.

In ensuring accessibility to correct nutrition information, 15 Nutrition Information Centres (NICs) and 50 Healthy Community Kitchens had been set up throughout the country. Various nutrition and nutrition-related activities had been carried out at these centres for the benefit of the community.

In 2009, one of the highlights of the NIC at the headquarters in Putrajaya was the weight screening of staff at the MoH headquarters. A total of 1203 staff were screened of whom 32.6% were found to be overweight and 16.1% were obese based on

the WHO (1998) classification (BMI more than 30kg/m<sup>2</sup>). A 6 months weight management intervention programme was conducted from June to December 2009 by the NIC. A total of 23 overweight and obese staffs who were committed to reduce their weight participated in this programme. At the end of the programme, 65.2% managed to lose their weight.

Nutrition promotion activities in schools had been implemented since the 1970s. Most of the activities were carried out in collaboration with the Ministry of Education. In 2009, the promotion activities were intensified with the production of 134 sets of posters consisting of 10 topics on healthy eating and a comic booklet entitled “Eat Healthily, Healthy Body and Healthy Mind”. The posters and comic booklets targeting primary school children were distributed to the schools through the State Health Departments.

With the aim to improve the health of the National Service trainees through the provision of quality, safe and nutritious foods, the National Service Training Department collaborated with the Nutrition Division in developing the Guidelines on Nutrition and Food Safety at the National Service Training Camps. A seminar was held to educate the camp commandants on the Nutrition and Food Safety Guidelines. Assessment by the state and district Nutrition Officers nationwide found that out of a total of 44 camps assessed in 2009, 38 (86.3%) were found to comply with the practices, such as using fresh and quality raw ingredients, preparing and serving healthy foods as well as serving the recommended menu as outlined in the guidelines.

- *Nutrition Month*

Nutrition Month Malaysia is a yearly event in April, aimed at disseminating information on nutrition to the public. The theme for 2009 was “Healthy Children, Healthier Nation” focussing on children aged 4 to 6 years old. The Nutrition Month Malaysia National Steering Committee developed nutrition key messages in the form of digital video discs (DVDs) and 3 activity worksheets to educate preschoolers about healthy eating. In addition, two guidelines entitled “Raising Healthy Eaters” and “Easy Nutrition Planner” were designed especially for parents and caregivers.

The promotional materials were distributed nationwide. A total number of 217 activities were held during 2009 Nutrition Month Malaysia and more than 20,280 people took part in the activities.

## **WAY FORWARD**

In line with the midterm review of the 9MP 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. Disease surveillance will also be further strengthened to ensure more timely and comprehensive information on disease situations nationwide in ensuring an adequate, appropriate and timely response. This 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 the desired action. Collaborations and smart partnerships 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 2000 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 the 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 2009, 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.



**4**

**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 of Health (Medical). The programme consists of five divisions, the Medical Development Division, the Medical Practices Division, the Allied Health Division, the Nursing Division, and the Telehealth Division.

Medical Development Division is responsible for policy setting and implementation, planning and development of medical services. Its objective is to provide comprehensive medical services that support primary health care, in accordance with policies and standards of Ministry of Health (MoH), 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, Medical Quality Care and Health Technology Assessment.

The Medical Practices Division has the main objectives of drafting, amending and enforcement of any Act and Regulations related to medical services provisions. It also addresses complaints as well as medico-legal issues, and provides technical expertise in liberalising healthcare sector. The Medical Practices Division is divided into sections namely Private Medical Practice Control, Legislation and Globalisation, and Complaints, Enforcement and Medico-legal. It is also the secretariat for the Malaysian Medical Council, Malaysian Optical Council, and Medical Assistant Board.

## MEDICAL RESOURCE UNIT

The main functions of the Medical Resource Unit are as follows:

### 1. Medical Programme Expenditure and Budget

- a) Management Expenditure (OA) for Medical Programme increased by 11.8% in 2009 compared to year 2008 (Table 1). In the same year, more than half (52.3%) of the total expenditure had been used for emolument payment, 47.4% for consumables/ drugs, 0.23% for assets while the rest were for other expenditures.
- b) Medical Resource Unit was also involved in coordinating the *Dasar Baru 2010-2011*, *Perjanjian Program 2010-2011* and *Laporan Pengecualian 2010-2011* for the Medical Programme.

**TABLE 1.**  
**MANAGEMENT EXPENDITURE (OA)**

Year	Allocation	Expenditure	% Expenditure compared to Allocation	% Increment in Expenditure from previous year
2006	5,015,477,836.00	5,391,216,252.00	107.49	-
2007	6,032,287,883.00	6,202,537,125.00	102.82	15.0
2008	6,469,758,900.00	7,025,071,865.00	108.58	13.3
2009	6,515,323,200.00	7,854,700,338.95	120.56	11.8

Source: Finance Division MoH

## 2. Medical Equipments

### a) Procurement of medical equipments

- Medical Resource Unit is involved in preparing the specifications, technical evaluation and price evaluation for medical equipments which are procured by MoH by central tender. In 2009, 6 central tenders were implemented by Medical Development Division compared to 37 central tenders in 2008 (Table 2). This reduction in number was due to the decentralization of medical equipments tender projects to states which resulted in majority of the procurement tenders being handled by the respective states. However, Medical Resource Unit was still indirectly involved in terms of the equipment specifications development, technical evaluation, projects monitoring as well as being part of the committees in state tender projects and being directly involved as member in the MoH price negotiation committee.

**TABLE 2.**  
**TRENDS IN CENTRAL TENDER PROCUREMENT OF MEDICAL EQUIPMENTS, 2005- 2009**

Year	Number of central tenders	Total(RM)
2006	25	67,547,475.00
2007	32	39,147,980.00
2008	37	167,616,000.00
2009	6	28,898,024.00

Source: Medical Development Division, MoH

- ### b) Medical equipments/ product proposals from other companies/ vendors.
- In 2009, there were 32 product demonstrations organized by the Medical Resource Unit. This is part of the process involved in handling applications made by private companies/ manufacturers/ vendors to introduce their medical devices for MoH hospitals usage.

### 3. Hospital Support Services

- a) Collaborate with the MoH Engineering Division to monitor the privatized hospital support services for:
  - i. Clinical Waste Management Services (CWMS).
  - ii. Cleansing Services (CLS).
  - iii. Linen & Laundry Services (LLS).
  - iv. Facility Engineering Maintenance Services (FEMS).
  - v. Biomedical Engineering Maintenance Services (BEMS).
  
- b) Collaborate with the MoH Procurement and Privatization Division to monitor the pharmaceuticals and consumable products services privatization under Pharmaniaga Logistics Sdn. Bhd. Activities include technical evaluation of all Approved Product Purchase List (APPL) products, monitoring of APPL product complaints by end-users and 2010-2012 APPL products retendering / price review process.

### 4. Audit Report

Ensuring all audit queries to Medical Programme were given appropriate feedbacks and answers within the expected timeline.

## MEDICAL SERVICES DEVELOPMENT SECTION

### Hospital Management Service

The functions of Hospital Management Service are to facilitate policy settings and implementation which may include project management related to medical services development, facility development, medical records, information technology and health financing.

- ***Full Paying Patient Services Scheme***

The pilot project of Full Paying Patient Scheme in two government hospitals, Hospital Selayang and Hospital Putrajaya is still on-going. This service scheme, started as pilot in July 2007, has yet to be implemented in other hospitals as MoH is reviewing the service for improvements. These include amendments to allocation of charges for specialists who sign up to join the scheme. For this reason, MoH had appealed to the Treasury, Ministry of Finance requesting for higher percentage of allocation to specialists from current allocation. Six out of nine items that were appealed to be raised from the present rate, (figures in parenthesis), to 100% are Consultation fee (90%), Procedure fee (60%), Investigation fee (30%), Medical Report fee (60%), Medication fee (60%) and Treatment fee (50%). This appeal is primarily due to the scheme being seen as not meeting its objectives that is 'to overcome the migration issue of specialists to the private sector'; whilst giving financial incentives to the specialists who are working with the government'. This is evident by the revenue that were collected were almost equally distributed between the specialists,



52.5% (2008) and 50.0% (2009), and government. Full Paying Patients Service Scheme, showed encouraging achievements over the two year period of implementation in various aspects as demonstrated by the following figures - new cases registered as FPP (2008 - 702; 2009 - 818), total visits (2008 - 2,573; 2009 - 3,085), number of specialists joining the scheme (2008 - 87; 2009 - 96) and revenue collected (2008 - RM 2.1 million; 2009 - RM 2.6 million).

- **Medical Records**

The centralization of medical records 'one patient one folder' was further strengthened within the existing limited spaces. Nearly 195,000 medical report applications were received in 2009. To enhance service delivery to the public, the period to produce medical reports had been shortened to four (4) weeks and two (2) weeks in the State Hospitals and Specialist Hospitals respectively.

- **Information Technology**

Hospital Information System (HIS) implementation progressed to another stage involving three (3) existing hospitals namely Hospital Sultanah Nur Zahirah Kuala Terengganu, Hospital Sultan Haji Ahmad Shah Temerloh and Hospital Bintulu. These hospitals were without fully-pledged information technology infrastructure initially, and the project begun in 2009 and expected to be completed by 2011. The home-grown *Sistem Pengurusan Pesakit* (SPP), a basic Hospital Information System (HIS), implemented in 2008 in Hospital Tuanku Ja'afar Seremban and Hospital Port Dickson was further upgraded on its application and software using Open Source Software in 2009. Altogether, there were 17 HIS hospitals in the Ministry of Health at the end of 2009. The outpatient module of SPP was installed at Hospital Kuala Lumpur, Hospital Tengku Ampuan Rahimah Klang and Hospital Kajang under the SPP-eKL project for the online appointment scheduling.

- **Facility Development**

MoH hospitals are functionally classified into five types of hospitals i.e. State Hospitals (including HKL), Major Specialist Hospitals, Minor Specialist Hospitals, Non-Specialist Hospitals and Special Medical Institutions. The classifications are based on the workload, number of inpatient beds and scope of services rendered; and it allows medical services development to be structured and planned properly. There are 130 hospitals, six medical institutions and one National Blood Bank in 2009 (Table 3). The total inpatient beds of MoH hospitals had slightly increased by 0.58% (38,057 beds) in 2009 compared to 2008. Hospital admission also increased by 2.07% compared to 2008. The bed occupancy rate for 2009 was 65.45% (Table 4).

Currently, 5 new hospitals and a Medical Institution are being constructed (2 new hospitals and 4 replacement hospitals). The replacement hospitals and institutions are Hospital Alor Gajah, Hospital Permai, Hospital Kluang and Hospital Tampin while the Cheras Rehabilitation Hospital and Hospital Shah Alam are new hospitals. Due to structural problems, services at the Tower Block of the Queen Elizabeth Hospital, Kota Kinabalu had been evacuated. Ministry of Health had purchased a private hospital (Sabah Medical

Centre), now renamed Queen Elizabeth Hospital 2, on 9 September 2009 to support these services. Queen Elizabeth Hospital 2 currently remains part of Queen Elizabeth Hospital, Kota Kinabalu.

In line with efforts to increase ambulatory care services so as to reduce demand for hospitalization, by end of 2009 a total of 5 hospitals have dedicated ambulatory care centers, eleven (11) hospitals have dedicated daycare facilities while 26 other hospitals have daycare services in the hospital. Currently, a total of 4 other ambulatory care centers are currently being planned at the Raja Perempuan Zainab II Hospital (Kota Bharu), Tuanku Jaa'far Hospital (Seremban), Sultanah Nur Zahirah Hospital (Kuala Terengganu) and the Kuala Lumpur Hospital.

The achievement of effective bed utilization is a major concern at most hospitals as hospitals are expensive to build and maintain especially in the current economic situation. When hospitals are grouped by functional classification (Table 5), HKL and State Hospitals followed by Major Specialist Hospitals showed better operational efficiency of available beds compared to other group of hospitals in terms of Bed Occupancy Rate (BOR) and Turn Over Interval (TOI). The Average Length of Stay (ALOS) was higher in HKL and State Hospitals as these hospitals functioned as referral hospitals for treatment of complex cases. There has been a measure of bypassing of the population served by Minor Specialists Hospitals and Non Specialists Hospitals as shown by the low BOR and relatively higher TOI at these hospitals. The rise in patients' expectations has contributed to patients' demand for specialty care and they tend to seek medical care from Specialist Hospitals that can offer a larger scope of services. One of the ways to reduce bypassing is the placement of specialists in Minor Specialist Hospitals according to the scope of services required.

- ***Case-mix System***

Various efforts have been put in place to ensure that implementation of the Case-mix System in 10MP took off the ground. However, till year end the budget for this system has yet to be identified. Meanwhile, activities conducted, using existing operational budget, were focused on preparing the human resource. Numerous training courses were conducted which mainly involved the Medical Record personnel. A total of 100 personnel were trained and they were from the six hospitals identified to start off the system. Focus of the training was to ensure coding of diagnoses and procedures were well understood and appropriately applied to the Case-mix System's requirement.

**TABLE 3.**  
**MOH HOSPITALS ACCORDING TO TYPES**

Specialist Hospital and Institution				Non-Specialist Hospital		
HKL + State Hosp	Major Specialist Hosp	Minor Specialist Hosp	Special Medical Institution			
14	21	20	6+1	74		
Kuala Lumpur	Putrajaya	Labuan	Institut	<b>Kedah</b>	<b>Melaka</b>	<b>Sarawak</b>
Kangar	Sungai Petani	Langkawi	Perubatan	Baling	Alor Gajah	Bau
Alor Setar	Seberang	Kulim	Respiratori	Jitra	Jasin	Betong
Pulau Pinang	Jaya	Kepala Batas	*Pusat Darah	Kuala Nerang		Daro
Ipoh	Taiping	Bukit	Negara	Sik	<b>Johor</b>	Kanowit
Klang	Teluk Intan	Mertajam	Pusat	Yan	Kota Tinggi	Lawas
Seremban	Sg. Buloh	Sri Manjung	Kawalan		Pontian	Limbang
Melaka	Ampang	Slim River	Kusta	<b>Pulau Pinang</b>	Kulai	Lundu
Johor Bahru	Selayang	Banting	Negara	Balik Pulau	Tangkak	Marudi
Kuantan	Serdang	Port Dickson	Bahagia	Sungai Bakap	Mersing	Mukah
Kuala	Kajang	Segamat	Permai			Saratok
Terengganu	Kuala Pilah	Kluang	Mesra	<b>Perak</b>	<b>Pahang</b>	Serian
Kota Bharu	Muar	Kuala Lipis	Sentosa	Batu Gajah	Bentong	Simunjan
Kuching	Pandan	Tanah Merah		Cangkat	Cameron	RCBM
Kota Kinabalu	Batu Pahat	Kapit		Melintang	Highland	
	Temerloh	Bintulu		Gerik	Raub	<b>Sabah</b>
	Kemaman	Sarikei		Kampar	Pekan	Beaufort
	Kuala Krai	Sri Aman		Kuala	Jerantut	Beluran
	Sibu	Lahad Datu		Kangsar	Muadzam	Kinabatangan
	Miri	Keningau		Parit Buntar	Shah	Kota Belud
	Sandakan	Likas		Selama	Jengka	Kota Marudu
	Tawau			Sungai Siput		Kuala Penyu
				Tapah	<b>Terengganu</b>	Kudat
					Hulu	Kunak
				<b>Selangor</b>	Terengganu	Papar
				Kuala Kubu	Dungun	Pitas
				Baru	Setiu	Ranau
				Tanjung	Besut	Semporna
				Karang		Sipitang
				Sabak	<b>Kelantan</b>	Tambunan
				Bernam	Tumpat	Tenom
					Pasir Mas	
				<b>N.Sembilan</b>	Gua Musang	
				Jempol	Pasir Puteh	
				Tampin	Jeli	
				Jelebu	Machang	

\*Pusat Darah Negara, unlike other institutions, has no inpatient beds

Source: Medical Development Division, MoH

**TABLE 4.**  
**NUMBER OF INPATIENT BEDS, BED OCCUPANCY RATE AND TOTAL ADMISSION TO MOH HOSPITAL AND INSTITUTION, 2006 – 2009**

Subject	2006	2007	2008	2009
Bed Number (Hospital and Institution)	35,739	37,149	37,836	38,057
Bed Occupancy Rate (%)	65.07	64.23	65.46	65.45
Total Admission	1,905,089	1,964,903	2,072,633	2,115,617
Total Population	26,640,200	27,173,600	27,730,000	28,306,700

Source: Health Informatics Centre, MoH

**TABLE 5.**  
**PERFORMANCE OF MOH HOSPITALS BY FUNCTIONAL CATEGORIES, 2007-2009**

No.	Type of Hospital by Functional Classification	Bed Occupancy Rate (BOR) %			Average Length Of Stay (ALOS) days			Turn Over Interval (TOI) days		
		2007	2008	2009	2007	2008	2009	2007	2008	2009
1.	HKL and State Hospitals	76.82	77.89	75.69	4.42	4.44	4.72	1.43	1.33	1.50
2.	Major Specialists Hospitals	62.21	65.99	67.69	3.69	3.69	3.62	2.62	2.30	2.02
3.	Minor Specialists Hospitals	54.63	55.25	57.04	3.17	3.13	3.12	3.14	3.05	2.91
4.	Non Specialists Hospitals	43.62	45.20	50.02	2.97	2.90	2.93	4.80	4.33	4.04
5.	Medical Institutions	63.50	67.03	65.42	127.08	127.08	125.16	57.19	54.94	56.87

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.

The total number of patients treated at specialist clinics of various medical disciplines increased by 6.9% in 2009 as compared to 2008. Attendances at all clinics showed an increase with the exception of Radiotherapy & Oncology. Table 6 shows the total number of patients who received outpatient treatment at specialist clinics of various medical disciplines in 2008 and 2009.

**TABLE 6.**  
**TOTAL NUMBER OF PATIENTS WHO RECEIVED TREATMENT AT MEDICAL SPECIALIST CLINICS IN 2008 AND 2009 ACCORDING TO DISCIPLINE**

Discipline	No. of patients at specialist clinics		% +/- difference between 2008 and 2009
	2008	2009	
General Medicine	820,189	863,618	+ 5.3
Dermatology	252,442	262,231	+ 3.9
Respiratory Medicine	217,097	241,416	+ 11.2
Psychiatry	379,010	412,013	+ 8.7
Nephrology	186,437	212,460	+ 14.0
Neurology	28,682	29,807	+ 3.9
Radiotherapy & Oncology	62,170	47,047	- 24.3
Cardiology	84,615	101,979	+ 20.5

Source: Health Informatics Centre, MoH

Table 7 shows the total number of patients from various medical disciplines treated as inpatients. In general, admissions for medical specialties increased by 3.3% from 555,949 in 2008 to 574,580 in 2009. Inpatients increased for most of the medical specialties with the exception of Dermatology and Psychiatry. An increase in inpatients was most prominent for the disciplines of Cardiology and Infectious Diseases.

**TABLE 7.**  
**TOTAL ADMISSIONS FOR THE SPECIALIST MEDICAL DISCIPLINES, 2007-2009**

Discipline	Total Admissions			% +/- difference between	
	2007	2008	2009	2007/2008	2008/2009
General Medicine	450,862	485,297	500,387	+ 7.6	+ 3.1
Dermatology	979	980	960	+ 0.1	- 2.1
Respiratory Medicine	6,550	7,215	8,350	+ 10.2	+ 15.7
Psychiatry	21,852	21,217	19,222	- 2.9	- 9.4
Nephrology	9,780	10,481	11,215	+ 7.2	+ 7.0
Neurology	3,780	3,996	4,213	+ 5.7	+ 5.4
Radiotherapy & Oncology	11,302	12,251	13,773	+ 8.4	+ 12.4
Cardiology	5,711	9,724	11,866	+ 70.3	+ 22.0
Infectious Diseases	2,957	3,511	4,594	+ 18.7	+ 30.8
Hepatology	1,481	1,277	n/a	- 13.8	-

n/a: data not available

Source: Health Informatics Centre, MOH

In 2009, the Influenza Pandemic affected the whole world and Malaysia was no exception. Action was taken by the Medical Programme to ensure that hospitals were effectively able to manage cases of influenza in the early part of the pandemic when the causative agent was not known and later Influenza H1N1. Guidelines for the management of Influenza Like Illness and subsequently Influenza H1N1 were prepared and these were then disseminated to the various hospitals. Hospital directors and clinicians from all over the country were called for briefings to Putrajaya to discuss measures that needed to be taken to handle the pandemic at hospitals. This occurred three times between the months of June and September 2009. A meeting with representatives from private hospitals was also held to discuss the management of Influenza H1N1 patients at private hospitals.

Healthcare workers from other states were deployed to Selangor to cater for the increasing number of patients in Selangor. A budget for the procurement of additional Personal Protective Equipment (PPE) for hospitals was distributed to the various states. Via a Cabinet Memorandum, additional financial allocation was requested for the management of Influenza H1N1 at hospitals including allocation to increase the intensive care bed capacity. In addition, the monitoring of the availability of PPE, antiviral drugs and adequate beds to manage patients in hospitals was done daily.

In early January 2009, a dengue management course was held to update clinicians in the management of dengue. Those who had undergone training as core-trainers, in turn had to train other healthcare workers in their respective states. This was conducted as part of an effort to improve management of dengue in hospitals and to reduce dengue mortality.

## **Obstetrics & Gynaecology and Paediatric Services**

### **• *Obstetrics & Gynaecology(O&G) Service Unit***

The Obstetrics and Gynaecology services are continuously improving, in general O&G and in areas of subspeciality i.e. Reproductive Medicine, Maternal Fetal Medicine, Gynae-oncology and Uro-gynaecology services. For the year 2009, RM 3.5 million was approved for upgrading and replacing old equipment in the O&G wards throughout the country.

Other achievements in 2009 were:

1. Approval for Obstetrics Life Saving Programme to be established in 6 regional hospitals.
2. Provision of laser photocoagulation therapy for twin to twin transfusion syndrome (TTTS) at Hospital Raja Permaisuri Bainun, Ipoh. The treatment is for TTTS cases, from stage 2 onwards and at 18 to 26 weeks of gestation.
3. Establishment of National Obstetric Registry (NOR) in cooperation with CRC. Data entry for 73,855 cases have been completed from 1st July 2009 to 31st October 2009. NOR is a clinical "disease" database which compiles the obstetric data, to enable healthcare planning, implementation and evaluation in a defined

population. It involves the 14 state hospitals. Data entry is done by the nursing staff and doctors, using a specific username and password with confidential authentication codes. Each hospital has a dedicated site coordinator represented by one specialist and sister, who oversee the running of NOR on a daily basis.

4. Implementation of Assisted Reproductive Technique (ART) charges, effective from May 2009 for hospitals equipped with ART facilities in regional and satellite hospitals. The charges are to be based on procedures ranging from transvaginal scan and primary investigation, to oocyte pick-up and embryo transfer. Establishment of ART accreditation subcommittee in February 2009 under the National ART Committee to develop standards for ART laboratories and Operation Theatres for accreditation purposes.

Table 8 shows an overall increase of normal deliveries (1.89%) from 2008 to 2009 with the exception in FT Putrajaya, Perlis, Pulau Pinang, Negeri Sembilan, Melaka, Kelantan and Sarawak. There was also increase in number of complicated deliveries (5.97%) in 2009 as compared to 2008. However, FT Kuala Lumpur and Perak showed a decline of such deliveries.

- **Paediatric Service Unit**

Emphasis on improving services was given to certain subspecialty areas, which were:

1. RM 2.2 million was approved for genetic services through a memorandum cabinet paper for Enzyme Replacement Therapy for the treatment of Lysosomal Storage Disorder Diseases. The allocation given was for life-saving drugs, development of new tests and upgrading the genetic laboratory in Hospital Kuala Lumpur and biochemical laboratory in Institute for Medical Research. In April 2009, the genetic department was approved as a separate entity away from that of paediatrics and pathology department due to expanding scope of laboratory work involving oncology, surgical and obstetrics.
2. Replacement of BER Equipment.  
A stimulus package of RM 8 million was given to hospitals to upgrade the NICU/PICU wards especially ventilators and monitoring equipment.
3. Two guidelines on stem cells were published, namely National Guidelines on Stem Cell Research & Therapy and National Standards On Haemopoietic Stem Cell Therapy. These books were launched by the Health Minister during a Stem Cell Seminar held in Hospital Ampang in September 2009. The second road show for stem cell seminar was conducted in Queen Elizabeth Hospital in December 2009 for the clinicians, paramedics, NGO's and the private sector involved in stem cell services.
4. *Guidelines For The Hospital Management Of Child Abuse And Neglect In Malaysia* was published and distributed in August 2009 to all hospitals, police, welfare departments and other agencies involved in managing child abuse cases

**TABLE 8.**  
**PERCENTAGE DIFFERENCE FOR NORMAL AND COMPLICATED DELIVERIES BETWEEN 2007 TO 2009**

State	No. of Normal Deliveries			% +/- Differences		No. of Complicated Deliveries			% +/- Differences	
	2007	2008	2009	2007/2008	2008/2009	2007	2008	2009	2007/2008	2008/2009
Perlis	3,287	3,477	3,353	+5.78	- 3.57	964	1,092	1,116	+ 13.28	+ 2.20
Kedah	21,543	21,874	22,106	+ 1.54	+ 1.06	6,309	6,994	7,465	+ 10.86	+ 6.73
Pulau Pinang	11,341	11,350	11,020	+ 0.08	- 2.91	3,290	3,272	3,641	- 0.55	+ 11.28
Perak	21,542	21,924	21,948	+ 1.77	+ 0.11	8,483	8,436	8,219	- 0.55	- 2.57
Selangor	35,348	38,206	40,337	+ 8.09	+ 5.58	11,057	13,114	14,744	+ 18.60	+ 12.43
FT KL	10,552	8,628	8,678	- 18.23	+ 0.58	4,517	4,150	3,708	- 8.12	- 10.65
FT Putrajaya	3,310	4,074	3,654	+ 23.08	- 10.31	1,590	1,702	2,157	+ 7.04	+ 26.73
FT Labuan	1,137	1,255	1,276	+10.38	+ 1.67	252	221	250	- 12.30	+ 13.12
N. Sembilan	10,708	10,496	10,272	- 1.98	- 2.13	3,147	3,187	3,304	+ 1.27	+ 3.67
Melaka	7,847	8,344	8,207	+ 6.33	- 1.64	2,507	2,590	2,666	+ 3.31	+ 2.93
Johor	36,779	35,015	36,187	- 4.80	+ 3.35	9,572	10,481	10,612	+ 9.50	+ 1.25
Pahang	16,774	17,246	17,237	+ 2.81	- 0.05	4,201	4,400	5,101	+ 4.74	+ 15.93
Terengganu	16,179	15,849	17,032	- 2.04	+ 7.46	2,777	3,047	3,091	+ 9.72	+ 1.44
Kelantan	21,797	22,216	22,051	+ 1.92	- 0.74	3,230	3,384	3,541	+ 4.77	+ 4.64
Sabah	37,884	40,379	42,677	+ 6.59	+ 5.69	6,033	6,687	7,341	+ 10.84	+ 9.78
Sarawak	30,276	30,902	30,714	+ 2.07	- 0.61	5,760	6,184	6,699	+ 7.36	+ 8.33
<b>Total</b>	<b>286,304</b>	<b>291,235</b>	<b>296,749</b>	<b>+ 1.72</b>	<b>+ 1.89</b>	<b>73,689</b>	<b>78,941</b>	<b>83,655</b>	<b>+ 7.13</b>	<b>+ 5.97</b>

(Examples of complicated deliveries: Caesarian, Forceps, Vacuum, etc)  
Source: Health Informatics Centre, MoH



**TABLE 9.**  
**TOTAL NUMBER OF PAEDIATRIC INPATIENTS AND BOR ACCORDING TO STATE FOR 2007-2009**

State	Total No. of Inpatients			% +/- Differences			Bed Occupancy Rate (BOR), %		
	2007	2008	2009	2007/2008	2008/2009	2007	2008	2009	
Perlis	4,935	5,692	6,094	+ 15.34	+ 7.06	102.88	115.90	117.39	
Kedah	27,575	31,862	37,559	+ 15.55	+ 17.88	84.14	82.57	88.25	
Pulau Pinang	19,054	20,166	21,034	+ 5.57	+ 4.56	75.31	76.03	74.03	
Perak	25,633	27,768	28,931	+ 8.33	+ 4.19	49.98	53.73	57.66	
Selangor	32,244	34,813	40,206	+ 7.97	+ 14.97	80.22	75.12	77.55	
FT KL	23,730	24,573	26,096	+ 3.55	+ 6.20	81.44	81.74	82.32	
FT Putrajaya	2,938	3,404	3,447	+ 15.86	+ 1.26	114.99	119.27	123.41	
FT Labuan	884	982	721	+ 11.09	- 36.20	59.51	59.35	44.97	
N. Sembilan	14,860	15,764	16,242	+ 6.08	+ 3.03	66.04	70.11	68.31	
Melaka	9,653	12,355	13,979	+ 27.99	+ 13.14	96.01	104.73	108.92	
Johor	24,987	28,100	29,139	+ 12.46	+ 3.70	50.45	56.01	58.02	
Pahang	15,411	14,526	15,863	- 5.74	+ 9.20	74.29	71.13	69.32	
Terengganu	13,277	13,439	15,723	+ 1.22	+ 17.00	63.95	65.53	75.47	
Kelantan	15,647	17,127	17,127	+ 9.46	0.00	66.87	70.29	68.88	
Sabah	22,192	21,245	19,842	- 4.27	- 6.60	61.47	63.28	57.83	
Sarawak	24,757	27,223	31,651	+ 9.96	+ 16.27	49.57	53.67	58.60	
<b>Total</b>	<b>277,777</b>	<b>298,989</b>	<b>323,474</b>	<b>+ 7.67</b>	<b>+ 8.19</b>				

Source: Health Informatics Centre, MoH

Table 9 shows that the total number of paediatric inpatients had increased by 8.19% in 2009 as compared to 2008. All states showed an increase in the number of patients admitted in 2009 except for Kelantan, Sabah and FT Labuan. The highest BOR was in FT Putrajaya, followed by Perlis and Melaka.

## Surgical Services

The 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 specialties e.g. ophthalmology and subspecialties e.g. vascular surgery provide networking services.

The outpatient attendances to surgical (specialty) clinics shown in Table 10 indicate an increase in number of patients except for the Plastic Surgery discipline.

**TABLE 10.**  
**NUMBER OF OUTPATIENTS AT SURGICAL (SPECIALTY) CLINICS, 2008 - 2009**

Discipline	No. of Outpatients		% +/- difference between 2008/2009
	2008	2009	
General Surgery	537,773	569,504	+ 5.9
Orthopaedic	679,930	723,929	+ 6.5
Ophthalmology	653,065	717,390	+ 9.8
Otorhinolaryngology	360,997	399,672	+ 10.7
Urology	92,683	96,809	+ 4.5
Neurosurgery	27,934	29,930	+ 7.1
Cardiothoracic surgery	11,307	15,933	+ 40.9
Plastic Surgery	39,094	39,047	- 0.1
Hand & Microsurgery	5,202	6,270	+ 20.5
Hepatopancreaticobiliary	NA	NA	NA
<b>Total</b>	<b>2,368,891</b>	<b>2,598,484</b>	<b>+ 9.7</b>

NA = Data not available

Source: Health Informatics Centre, MoH

The numbers of inpatients in all surgical (specialty) wards are shown in Table 11. Similar to surgical outpatient attendees, there was an overall increment in admission in 2009 as compared to 2008.

**TABLE 11.**  
**NUMBER OF BEDS, INPATIENT AND BED OCCUPANCY RATE OF SURGICAL (SPECIALTY) WARD, 2007 – 2009**

Discipline	No. of Beds			No. of Inpatients			% +/- Inpatient Difference Between		Bed Occupation Rate		
	2007	2008	2009	2007	2008	2009	2007/2008	2008/2009	2007	2008	2009
General Surgery	3,829	3,848	3,823	230,152	238,002	234,402	+ 3.41	- 1.51	57.81	68.29	58.46
Orthopedic	2,745	2,819	2,794	122,235	125,841	123,555	+ 2.95	- 1.82	67.97	68.29	68.21
Ophthalmology	679	677	660	31,749	34,224	35,530	+ 7.80	+ 3.82	51.98	45.87	45.88
Otorhinolaryngology	373	384	392	15,120	15,472	16,082	+ 2.32	+ 3.94	45.37	49.57	49.32
Urology	228	234	222	9,166	9,377	9,183	+ 2.30	- 2.07	59.98	57.84	69.80
Neurosurgery	245	286	272	6,111	6,992	6,801	+ 14.42	- 2.73	69.70	62.28	62.86
Cardiothoracic	68	68	68	573	750	959	+ 30.89	+ 27.87	32.28	41.37	69.74
Plastic Surgery	131	159	141	2,698	3,482	2,972	+ 29.06	- 14.65	49.07	47.77	50.72
Hand & Microsurgery	18	18	18	231	470	463	+ 103.46	- 1.49	29.79	42.36	40.14
Hepatopancreaticobiliary	28	34	n/a	1,126	1,482	n/a	+ 31.62	n/a	67.23	81.22	n/a
<b>Total</b>	<b>8,344</b>	<b>8,527</b>	<b>8,390</b>	<b>419,461</b>	<b>436,092</b>	<b>429,947</b>	<b>+ 3.96</b>	<b>- 1.41</b>			

Source: Health Informatics Centre, MoH

The core activity of all surgical specialties were operations performed as shown in Table 12. Overall, there was an increase in number of operations performed in 2009 for both elective and emergency operation.

**TABLE 12.**  
**NUMBER OF ELECTIVE AND EMERGENCY OPERATION PERFORMED, 2007 - 2009**

Discipline	No. of Operation Performed					
	Elective			Emergency		
	2007	2008	2009	2007	2008	2009
General Surgery	86,921	81,693	97,013	173,705	212,950	219,145
Orthopaedic	51,984	61,464	65,569	181,445	182,269	201,836
Ophthalmology	33,743	38,177	42,594	7,247	6,766	6,876
Otorhinolaryngology	28,850	29,540	27,784	10,518	10,205	12,108
Urology	17,459	17,693	17,067	3,636	4,975	6,106
Neurosurgery	1,348	1,488	1,943	5,396	6,993	7,058
Cardiothoracic surgery	1,325	1,239	1,295	280	335	367
Plastic Surgery	4,130	5,679	6,172	2,236	3,951	3,329
Others	NA	NA	32,568	NA	NA	34,928
<b>Total</b>	<b>225,760</b>	<b>236,973</b>	<b>332,318</b>	<b>384,463</b>	<b>428,444</b>	<b>579,045</b>

Source: Health Informatics Centre, MoH

Achievements in 2009 included:

1. A joint effort on a Pediatric Cardiothoracic Surgery Program was conducted by the MoH Malaysia, Narayana Hrudayalaya Hospital of Bangalore and Medi Assist4U Clinic. Stable congenital heart disease patients who are poor and have to wait long for surgery can be operated at Narayana Hospital at a discounted price using Medical Aid Fund. The first batch of patients was sent to the hospital in July 2008. Until 31st December 2009, 88 patients have benefitted from this program with good operative result (followed up by Ministry of Health pediatric cardiologists).
2. Cooperation between public and private sector under pediatric cardiothoracic discipline in which Penang Adventist Hospital offered to operate 50 child for free starting October 2008 until July 2009. Patients were operated by the surgeon in Penang Adventist Hospital and were jointly managed by MoH Pediatric Cardiologist in the Hospital Pulau Pinang with good clinical outcomes. This measure was also taken to reduce the waiting list for Congenital Heart Surgery especially for cases of stable Tetralogy of Fallot.
3. Preparation for bringing in ATLS Course (owned by American College of Surgeon) to Malaysia starts with; i) site visit by 2 faculty members of American College of

Surgeon, Dr Michael Jordan and Prof Kristoff R. Kauffman to Sungai Buloh Hospital on 22 until 23 April 2009 to do an assessment on the facility (for approval), for Malaysia to conduct this course in future, and ii) signing the agreement between MoH and College of Surgeon Academy of Medicine Malaysia on 17 August 2009 during the Ministry of Health and Academy of Medicine joint meeting in IPK, Bangsar.

4. Cochlear Implant Program was started following Dasar Baru 2008/2009 approval and had its first patient in December 2008 and in the year 2009, 34 patients have undergone treatment under this program.
5. Elective surgeries were performed on Saturdays since February 2008 as a measure of reducing waiting time for operation. This is a very important milestone for Surgical (Specialty) Service and Anaesthetic Service and to comply with the Director-General's circular. In year 2009, total number of Saturday elective lists performed were 1917 (number of lists performed). Saturday Elective OT lists are performed in 26 hospitals with high operative work load in 2009.
6. Surgical Team from Hospital Selayang performed surgery in Hospital Beaufort to help reduce waiting time for elective surgery in Hospital Queen Elizabeth following problems with the main block of Hospital Queen Elizabeth.

### Anaesthesiology Services

Anesthesiology Services consists of Anaesthetic Operation Theatre Service, Intensive Care Service and Pain Service. In 2009, there were 79 MoH hospitals providing anaesthetic services with 45 having resident specialists with similar number of hospitals having such service in 2008. For the rest of the hospitals, services were given by anaesthetic medical officers, and visiting specialists. For 28 district hospitals in East Malaysia, services were given by trained assistant medical officers.

Workload for the Anaesthesiology Services in 2008-2009 is depicted in Table 13. Number of anaesthetic given, inclusive of all modalities, showed an increasing trend. This is also seen in attendances at anaesthetic clinic and chronic pain clinic, and intensive care unit admissions.

**TABLE 13.**  
**WORKLOAD FOR THE ANAESTHESIOLOGY SERVICES IN 2008-2009**

Items	2008	2009
No. of Anaesthetic Administered	301,321	308,391
No. of Attendance at Anaesthetic Clinic	30,795	48,491
No. of ICU Admissions	23,928	24,901
No. of Attendance at Chronic Pain Clinic	3,199	4,622

Source: *Anesthesiology Census 2008 and 2009, MoH*

For the Intensive Care Service, in 2009 there were 45 general intensive care units with 424 beds utilized as compared to 2008 where 386 beds were utilized. Networking of Intensive Care Beds which started in Mid Zone in 2006 had been extended to the Northern Zone and Perak Zone in 2008.

### Emergency Service

Emergency Service is growing steadily with the increasing number of emergency physicians. Currently there are 45 of them in the state hospitals and several major specialist hospitals. For 10th Malaysia Plan, MoH targets to have emergency physician in all specialist hospitals.

The number of patients who received services from Emergency Department is increasing. There were 6,745,721 patients who sought medical treatment at the department in 2009 compared to 5,225,798 in 2008 (an increase of 29.08%). Table 14 states the number of cases seen in the Emergency Department and pre-hospital care services in the country.

**TABLE 14.**  
**TOTAL CASES FOR EMERGENCY & TRAUMA DEPARTMENT IN 2009**

State	Emergency & Trauma Department	
	No. of cases seen	% of cases seen
Perlis	72,858	1.1
Kedah	567,595	8.4
Pulau Pinang	419,215	6.2
Perak	700,251	10.4
Selangor	854,362	12.7
FT Kuala Lumpur	414,323	6.1
N.Sembilan	325,122	4.8
Melaka	199,909	3.0
Johor	742,746	11.0
Pahang	398,165	5.9
Terengganu	277,416	4.1
Kelantan	370,997	5.5
Sabah	861,116	12.8
Sarawak	541,646	8.0
<b>Total</b>	<b>6,745,721</b>	<b>100</b>

Sources: Health Informatics Centre, MoH

Under Pre-Hospital Care, MERS (Medical Emergency Response System) 999 project was launched on 1 October 2007 to coordinate emergency calls and improve emergency services in Malaysia. Coordination is very important in order to achieve targeted response time of 15-30 minutes. A total of 25 hospitals have been identified as hubs for Medical Emergency Coordinating Centre throughout the country. The seven centres in Klang Valley area were equipped with software application CAD (Computer Added Dispatch) and GIS

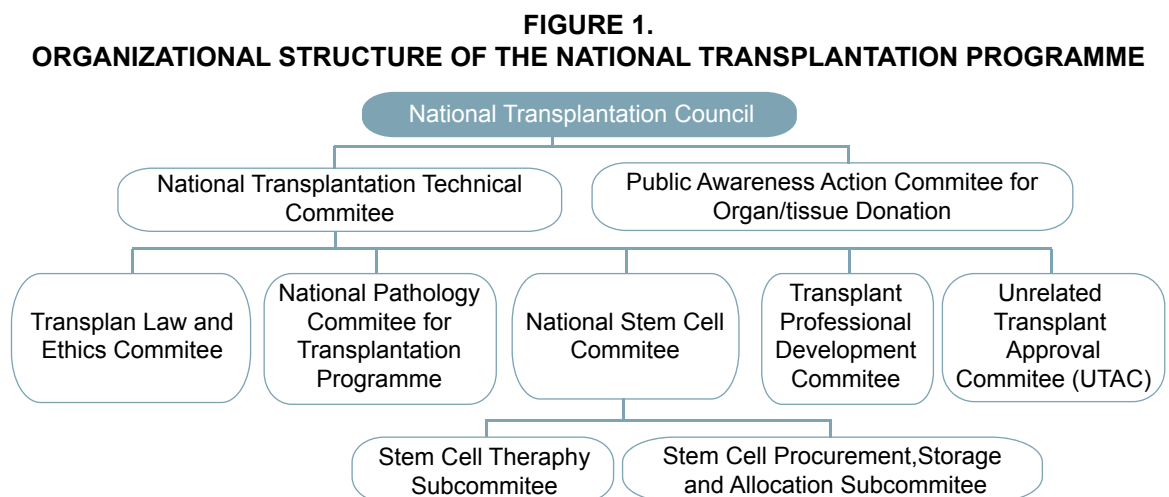
(Geographical Information System). This system is expected to improve inter-agency and intra-MoH coordination. MERS 999 also will be equipped with Pro QA (Question & Answer). It is a question and answer protocol that is supplied by IAED (International Academy Emergency Dispatch). It was still under process of translation to Malay Language and monitored by DSC (Dispatch Steering Committee). Integration of Pro QA and CAD system has been done on February 2010.

### Transplantation Services

MoH has developed and published the National Organ Tissue and Cell Transplantation Policy in 2007. Subsequent to the publication of the Policy, the Ministry has strategized the implementation of National Transplantation Programme into five main thrusts to spearhead the development in the long term period. The thrusts are:

- a) Thrust 1: to increase the organ and tissue donation rate through enhancing the organ/tissue procurement clinical services and public education
- b) Thrust 2: to strengthen its organizational structure
- c) Thrust 3: to strengthen the existing transplantation services including the kidney, liver, heart, lungs, bone marrow & hematopoietic stem cell and tissue transplantation
- d) Thrust 4: to support the development of laboratory and other clinical support services
- e) Thrust 5: to strengthen the ethical and legislative framework

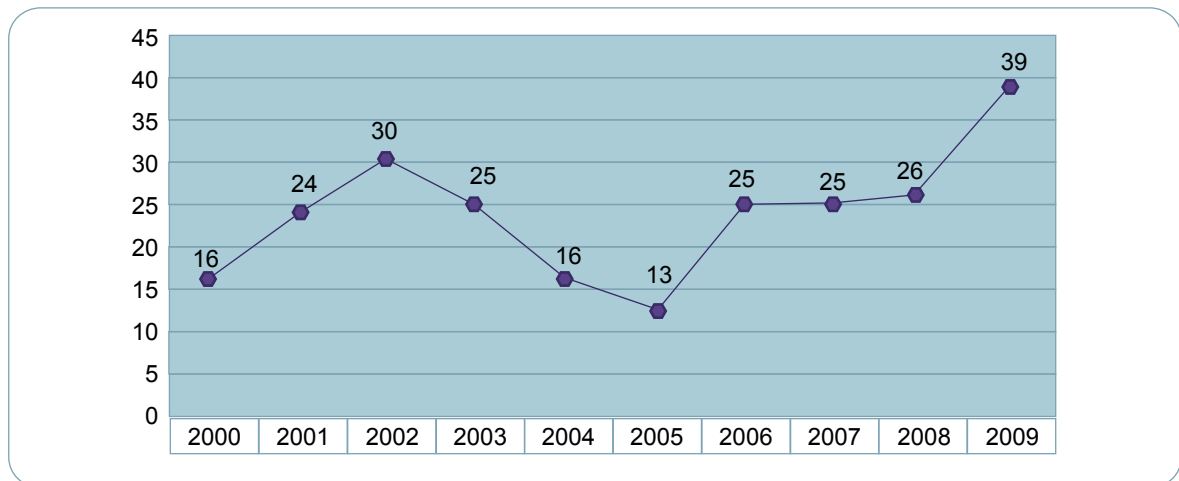
At present, the organizational structure of the National Transplantation Programme is as follows:



Source: Transplantation Unit, Medical Development Division, MoH

The cadaveric organ and tissue donation rate in 2009 recorded the highest since 1975. There were 39 donors who contributed 18 pairs of kidneys, 6 livers, 1 heart, 20 heart valves, 25 corneas, 3 skins and 9 bones.

**FIGURE 2.**  
**NUMBERS OF CADAVERIC ORGAN/TISSUE DONORS, 2000-2009**



Source: Transplantation Unit, Medical Development Division and National Transplant Resource Centre, Hospital Kuala Lumpur ([www.agiftofffe.gov.my](http://www.agiftofffe.gov.my))

Even though the number of cadaveric organ and tissue donation was increasing, it was still low compared to the actual demand for organ transplantation thus contributing to the long waiting time in this country. The long waiting time is further complicated by the fact that the demand continues to increase over the years. For example, in 2000, there were 79 new dialysis patients per million populations (pmp) and in 2009, the number has gone up to 146 pmp. The prevalence of dialysis patients in 2000 was 6,689 patients. However, in 2009, there were 21,159 patients on dialysis, more than 3 times higher compared to 2000. It is estimated that approximately half of dialysis patients, equivalent to 10,500 patients, are eligible and waiting for kidney transplant nationwide. The increasing organ tissue donation rate is however a good indicator that public has become more aware and accepting the importance of organ and tissue donation after death. There were 138,421 donor pledgers in the year 2009, out of which 58% were Chinese, 24% Indians, 16% Malays and others 2%.

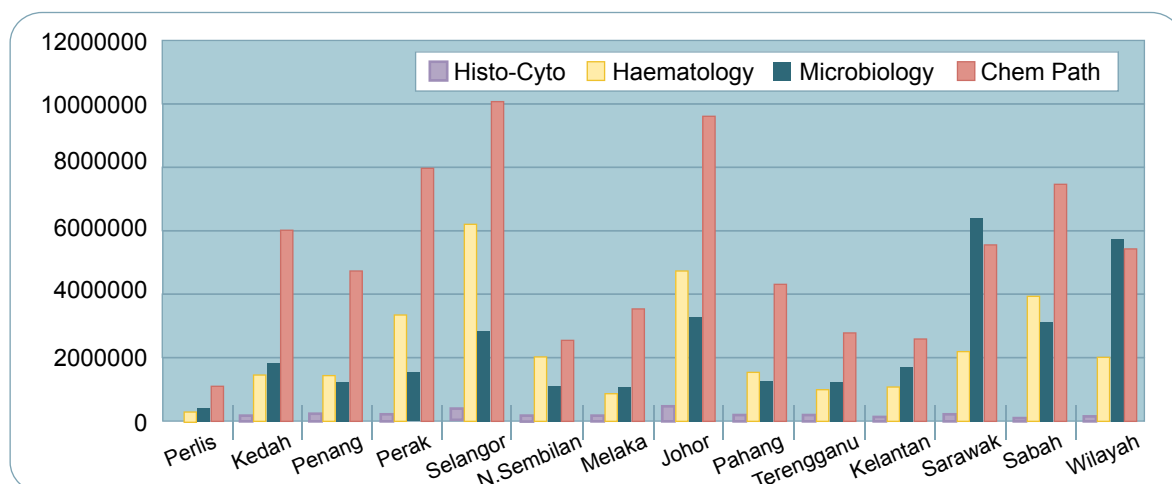
### Pathology Service

Pathology service plays an important role in patient management as well as in public health, through the efficient, accurate and comprehensive clinical laboratory services. Pathology service is available in all MoH hospitals, health clinics, Institute for Medical Research (IMR) and Public Health Laboratories (PHL). Scope of service includes all disciplines of clinical diagnostic tests i.e. chemical pathology, haematology, medical microbiology, immunology, histopathology and cytology. The number of disciplines and clinical diagnostic tests offered by each clinical laboratory depends on the medical specialties and extent of the medical service available in the hospital where the laboratory is located. In the year 2009, a total of 138,472,116 tests were conducted by various MoH's clinical laboratories. The highest



workload was noted in Selangor where the clinical laboratories in Selangor had performed 19,331,196 tests (Figure 3). The IMR provides specialized and referral diagnostics tests that are not available in the hospitals. In 2009, IMR performed 356,687 specialized diagnostics tests (Table 15).

**FIGURE 3.**  
**NUMBER OF LABORATORY TESTS DONE, 2009**



Source: National Advisor, Pathology Service, MoH

**TABLE 15.**  
**SPECIALISED AND REFERRAL TESTS CONDUCTED BY IMR IN 2009**

No.	Field of tests	No. of tests performed
1.	Allergy and Immunology tests	59,339
2.	Human leukocyte antigen (HLA) typing	7,063
3.	DNA analysis of alpha globin gene	5,246
4.	Haemoglobin analysis	2,051
5.	Array comparative genomic hybridization (CGH) analysis	61
6.	Leukemia translocation analysis	62
7.	Bone marrow cytogenetic analysis	3,338
8.	Histopathological examination	5,695
9.	Endocrinology tests	15,458
10.	Nutrition related tests	13,629
11.	Toxicology and Pharmacology tests	2,452
12.	Bacteriology and mycology tests	32,151
13.	Parasitology tests	2,340
14.	Virology tests	163,095
15.	Molecular genetics tests	2,095
16.	Abnormal proteins analysis	17,319
17.	Biochemistry and Biochemical genetics tests	25,293

Source: Institute for Medical Research, MoH

To ensure quality of service provided, a number of clinical laboratories (such as Hospital Raja Perempuan Zainab II, Hospital Tengku Ampuan Afzan and Institute for Medical Research) were in the process of obtaining accreditation status based on ISO 15189, from Standard Malaysia. As part of the process of obtaining accreditation, staffs were given opportunity to attend various courses to enhance competency, capability and productivity.

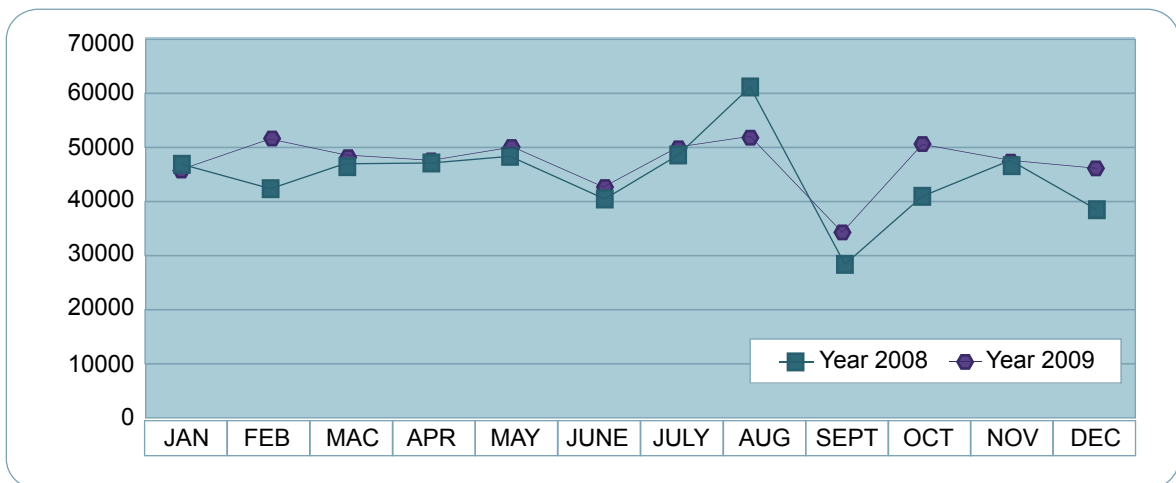
**Blood Transfusion Service**

Blood Transfusion Service (BTS) is an essential part of the healthcare delivery. Its objective is to provide safe, adequate and equitable supply of blood and blood products to meet the health care need of the nation. The service is being coordinated by the National Blood Centre, Kuala Lumpur, which acts as the referral centre for the nation as well as a Regional Centre for Federal Territory, Selangor, Negeri Sembilan and western region of Pahang.

The responsibility of BTS includes clinical transfusion services and haemophilia care, as well as procurement of blood and blood components from voluntarily recruited donor, screening of the donated blood and blood components for presence of transfusion transmitted diseases (HIV, HBV, HCV and Syphilis), preparation of donated blood into its various components, immunohaematology and pre-transfusion testing, blood inventory management, quality management and public education. Special services such as Public Cord Blood Banking, Histocompatibility & Immunogenetics and Plasma Fractionation are provided only by the National Blood Centre.

Each year the requirement for blood and blood components nationwide are steadily increasing, which is reflected in the amount of blood donated (Figure 4, Table 16) and number of patients requiring transfusion (Table 17).

**FIGURE 4.**  
**MONTHLY TOTAL DONATION IN MALAYSIA, 2008 & 2009**



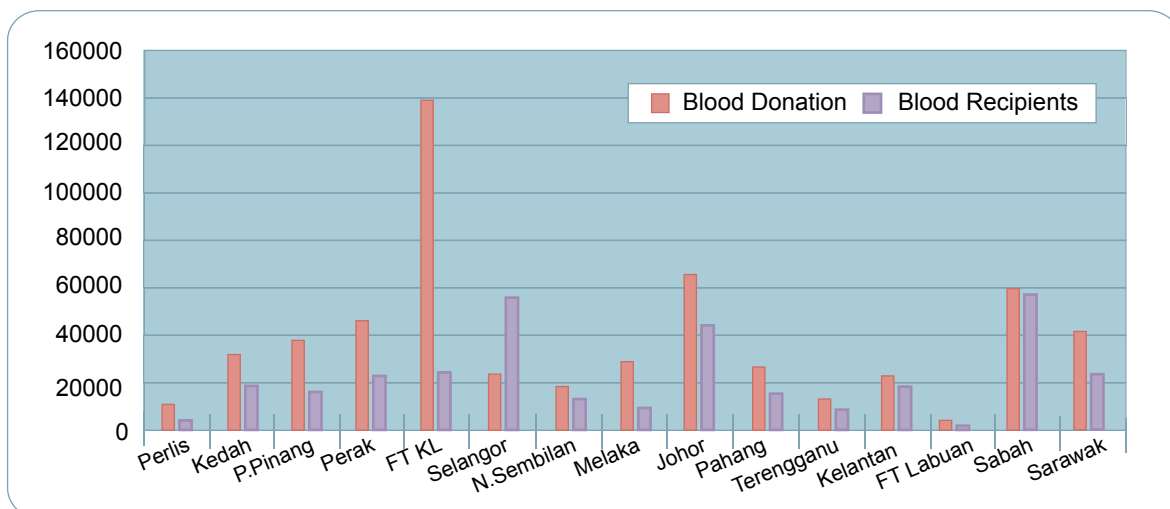
Source: National Blood Centre, MoH

**TABLE 16.**  
**NATIONAL ACHIEVEMENT IN BLOOD TRANSFUSION SERVICES, 2008 - 2009**

ACTIVITY	2008	2009
Blood collected at centre/ blood bank	126,133	126,416
Blood collected at mobile	401,765	439,188
<b>TOTAL</b>	<b>527,898</b>	<b>565,604</b>
New donation	203,455	215,628
Repeat donation	324,419	349,947
Blood and blood components recipient	285,274	317,003

Source: Health Informatics Centre, MoH

**TABLE 17.**  
**BLOOD DONATION AND BLOOD RECIPIENTS BY STATE, 2009**



Source: National Blood Centre, MoH

The National Fractionation Program, which was started in 1991 have shown great progress over the years. In this program, plasma donated by Malaysian donors were sent to the Commonwealth Serum Laboratories (CSL) fractionation plant in Australia to be fractionated into various pharmaceutical products. These products are then distributed to all government hospitals nationwide to be used for patients who need them. Over the years, the quantity of products produced from the plasma fractionation is steadily increasing (Table 18).

**TABLE 18.**  
**AMOUNT OF PLASMA SENT TO CSL AND AMOUNT OF PLASMA PRODUCTS RECEIVED,**  
**2008-2009**

Year	TOTAL PLASMA (KG)	PLASMA PRODUCTS (QUANTITY IN VIAL)			
		20% NSA (Albumin)	Prothrombinex	Intragam (IVIG)	Factor VIII Concentrate
2008	30,602	26,949	6,593	50,405	11,109
2009	26,130	28,634	10,572	49,564	13,303

Source: Health Informatics Centre, MoH

Plan for the future would includes consolidating the service by establishing new regional centres and blood screening centres, improving the safety of blood and blood components by expanding the availability of Nucleic Acid Testing (NAT) to all screening centres and improving the quality of the services by rolling out the Blood Bank Information System (BBIS) to all the blood banks in the country.

### Medical Forensic Service

Forensic Medicine Service began in 2002 with the separation of the department from the Pathology Department. The Forensic Medicine Services provided by Ministry of Health Malaysia are handled by twenty (20) Forensic Medicine Specialists with the help of twenty (24) medical officers, thirty two (32) Forensic Science Officers and other related paramedics trained in Forensic Medicine and Forensic Science. Forensic Medicine covers three areas of specialty namely:

- Forensic Pathology (involving investigation into the cause of death)
- Clinical Forensics (involving the study of living cases)
- Medico-legal Practice (involving aspects of law and ethics in medicine)

In 2009, the workload of the Forensic Medicine Services throughout the country constituted mainly on 4 categories: the ward cases, autopsy cases, clinical forensic cases as well as referral cases.

For continuous development, teaching, training, quality program and research have been the on-going activities in all Departments/Units of Forensic Medicine in Malaysia. Department of Forensic Medicine, Kuala Lumpur Hospital has been chosen to be the hub to conduct a new pilot project on the post-mortem Computed Tomography study under the Ministry of Health. A few studies have been proposed in year 2009 as follows:

- i. Computed Tomography Assisted Autopsy versus gross autopsy in head & neck injury due to Road Traffic Accident
- ii. Anthropological determination of gender
- iii. Drug trafficking – suspect of body packers and stuffers : Comparison study of the dosage and image quality
- iv. Gunshot wound : Comparison CT and classical autopsy in entry and exit wound

**TABLE 19.**  
**WORKLOAD OF FORENSIC MEDICINE SERVICES IN MINISTRY OF HEALTH HOSPITALS,**  
**2009**

No.	STATE	WARD CASES	POSTMORTEM	CLINICAL FORENSIC	REFERRAL CASE	TOTAL
1.	Perlis	869	163	0	0	1,032
2.	Kedah	4,143	924	1	63	5,131
3.	Pulau Pinang	3,943	1,188	20	70	5,221
4.	Perak	8,097	1,686	7	91	9,881
5.	Selangor	7,983	2,198	6	73	10,260
6.	FT Kuala Lumpur	2,566	621	25	49	3261
7.	N.Sembilan	1,753	345	125	19	2,242
8.	Melaka	224	420	2	15	661
9.	Johor	7,586	2,022	4	127	9,739
10.	Pahang	3,109	835	206	59	4,209
11.	Terengganu	1,586	271	77	3	1,937
12.	Kelantan	2,914	504	0	65	3,483
13.	Sarawak	3,479	278	26	68	3,851
14.	Sabah	3,426	430	0	71	3,927
<b>Total</b>		<b>51,678</b>	<b>11,885</b>	<b>499</b>	<b>773</b>	<b>64,835</b>

Note: Referral case = Crime scene investigation and post mortem at districts hospital

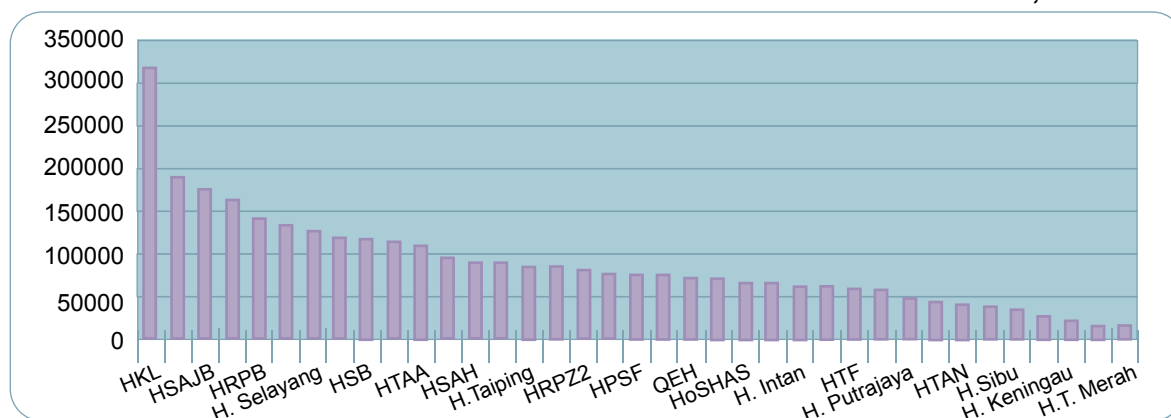
Source: National Advisor, Forensic Medicine Service, MoH

### Diagnostic Imaging (Radiology) Service

Diagnostic Imaging Service is provided in MoH hospitals and a large portion of health clinics. At tertiary hospitals, the service covers a wide spectrum of imaging modalities.

In 2009, there were thirty five (35) Ministry of Health Hospitals with Radiologist and the number of radiological examinations in these specialist hospitals are as shown below.

**FIGURE 5.**  
**NUMBER OF RADIOLOGICAL EXAMINATIONS IN SPECIALIST HOSPITALS, 2009**



Source: National Advisor, Diagnostic Imaging Services, MoH

New modalities purchased in 2009 were:

- i. 1 unit of 64 Slice Computerized Tomography (CT) Scanner in Queen Elizabeth Hospital, Kota Kinabalu.
- ii. 5 units of 4 Slice CT Scanner were installed at Hospital Kuala Krai (Kelantan), Hospital Keningau (Sabah), Hospital Batu Pahat (Johor), Hospital Teluk Intan (Perak) and Hospital Langkawi (Kedah).
- iii. 2 units of Magnetic Resonance Imaging (MRI) equipment installed: a new unit at Hospital Sibul, Sarawak and an additional unit at Hospital Sultanah Aminah, Johor Bahru.

For future developments and to keep abreast with latest technology, Radiologist and Radiographers from the following hospitals were sent for training overseas:

- i. **Cardiac Imaging:** Hospital Serdang, Hospital Sultanah Aminah (Johor Bahru), Hospital Umum Sarawak and Hospital Seberang Jaya (Pulau Pinang).
- ii. **Forensic Radiology:** Hospital Kuala Lumpur and Hospital Sultan Ismail, Johor Bahru.

Neuro-interventional Radiology service was started in Hospital Pulau Pinang, spearheaded by a trained resident Radiologist. It is planned to expand the service to other regional centers i.e southern region, eastern region, Sabah and Sarawak in the near future.

### **Nuclear Medicine Service**

Nuclear Medicine Service provides important information which helps in diagnosis and management of patients because it provides both diagnostic and therapeutic services which involved the administration of various radioactive materials to patients depending on scan and treatment types.

The Nuclear Medicine Service was started in Malaysia in 1964. It comprises of three main branches i.e.:

- a. Clinical Department (Diagnostics, Treatment and Interventional) - main activities
- b. Radiopharmaceutical Department (supportive activity from pharmaceutical activity)
- c. Physics Department (supportive activity from medical nuclear physicists)

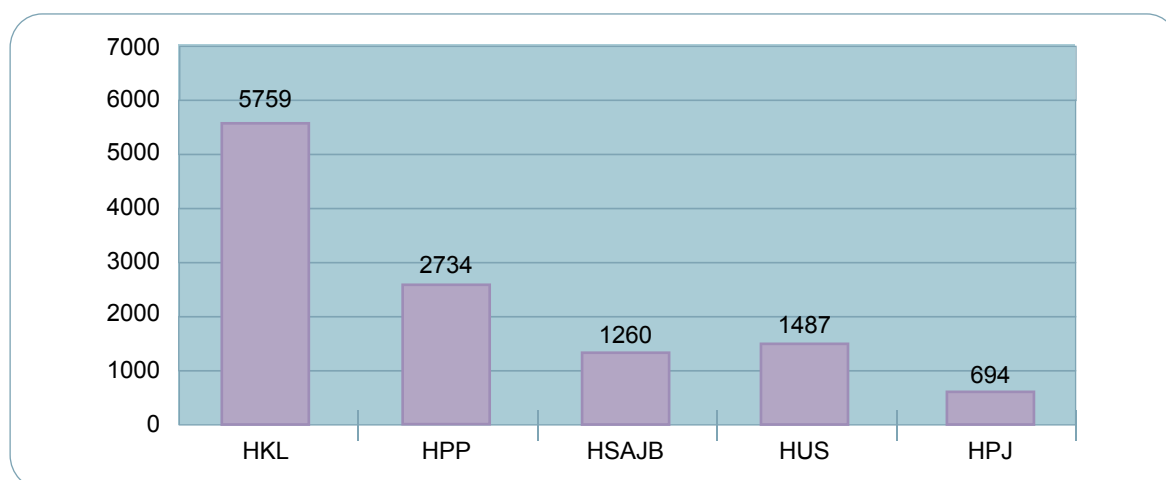
The services were offered at Kuala Lumpur Hospital (HKL), Hospital Umum Sarawak (HUS), Hospital Pulau Pinang (HPP), Hospital Sultanah Aminah, Johor Bahru (HSAJB) and Hospital Putrajaya (HPJ).

New services and developments in 2009 were:

- i. Radioiodine ward at the Hospital Pulau Pinang was ready for use.
- ii. Hospital Pulau Pinang and Hospital Kuala Lumpur received attachment students from Nuclear Medicine Masters Program, Universiti Sains Malaysia (USM). This acts as a pioneer project in producing more Nuclear Medicine Specialist.
- iii. Nuclear Medicine Department, HUS has successfully introduced three new services, which are Myocardial Perfusion Study, MIBG Scan and Gastrointestinal Bleed Scan.

There was an increase in the number of activities of Nuclear Medicine in 2009 compared to 2008 most probably due to the introduction of new services in Nuclear Medicine Department. The number of activities in five centres of Nuclear Medicine for 2009 is as shown below.

**FIGURE 6.**  
**TOTAL NUMBER OF RADIONUCLIDE SCANS IN 5 NUCLEAR MEDICINE CENTRE, 2009**



Source: National Advisor, Nuclear Medicine Services, MoH

### Rehabilitation Medicine Service

Rehabilitation medicine provides specialized inpatient and outpatient services mainly to those with physical disabilities. This service is delivered by core team members from various units namely Rehabilitation Medicine Unit, Physiotherapy Unit, Occupational Therapy Unit, Speech Therapy and Rehabilitation Nursing.

In 2009, several achievements has been made which include initiation of level 4 rehabilitation medicine in Hospital Pulau Pinang, Hospital Raja Permaisuri Bainun (Ipoh), Hospital Queen Elizabeth (Kota Kinabalu), and Hospital Sultan Ismail (Johor Bahru). The other milestone was the recognition of Hospital Tuanku Jaafar, Seremban by Universiti Malaya as the first training centre for Masters of Rehabilitation Medicine (open system). The workload at the Rehabilitation Medicine Centres is as shown below.

**TABLE 20.**  
**WORKLOAD AT THE REHABILITATION MEDICINE CENTRES, 2009**

Hospital	No. of specialists	No. of outpatients	No. of inpatients
Hospital Tuanku Ja'afar, Seremban	5	2,023	321
Hospital Kuala Lumpur	3	2,721	601
Hospital Sungai Buloh	2	1,043	568
Hospital Tengku Ampuan Rahimah, Klang	2	1,589	269
Hospital Serdang	2	3,292	99
Hospital Raja Perempuan Zainab II, Kota Bharu	1	534	102
Queen Elizabeth Hospital, Kota Kinabalu	1	175	60
Hospital Raja Permaisuri Bainun, Ipoh (Started February 2009)	1	332	156
Hospital Sultan Ismail, Johor Bahru (Started July 2009)	1	138	33
Hospital Pulau Pinang (Started July 2009)	1	140	88
<b>Total</b>	<b>19</b>	<b>11,987</b>	<b>2,297</b>

Source: National Advisor, Rehabilitation Medicine Services, MoH

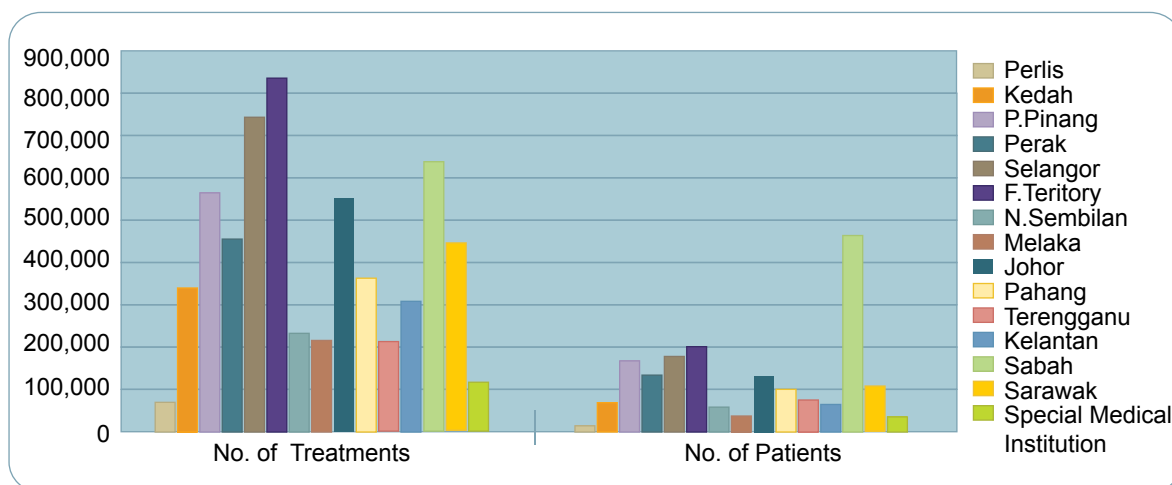
The future developments in Rehabilitation Medicine Services include the operation of the Cheras Rehabilitation Hospital to improve healthcare provision to the disabled patients with the aim to improve quality of life. The project is expected to complete by mid 2013.

### Physiotherapy Service

Physiotherapy is concerned with the assessment, maintenance and restoration of the physical function of the body. It is an important branch of Allied Health Care and may be done both in isolation and conjunction with other types of medical management. In 2009, Hospital Kuala Lumpur remained the major contributor to the workload of the physiotherapist in the country (Figure 7).



**FIGURE 7.  
WORKLOAD OF PHYSIOTHERAPIST IN 2009**



Source: Health Informatics Centre, MoH

### Occupational Therapy Service

Occupational therapy is a profession that is concerned with restoring useful physical functionality following disabling accidents and sickness. The goal of occupational therapy is to assist the patient in achieving an optimal level of independence in daily life. Compared to physiotherapy, occupational therapy focuses more on finer movements necessary for daily living. The scope of the service include clinical specialization, public health service, and expanded an extended role such as Community-based Rehabilitation in psychiatry, SCAN team in paediatrics and management of dyslexia in schools. The number of patients who received occupational therapy had increased substantially over the years. The workload for the year 2009 is shown below.

**TABLE 21.  
WORKLOAD FOR THE OCCUPATIONAL THERAPISTS IN MINISTRY OF HEALTH, 2009**

	Inpatients	Outpatients	Total
No. of Patients	302,188	353,676	605,919
No. of Treatments	1,513,693	1,218,312	2,764,752

Source: National Advisor, Occupational Therapy Services, MoH

### Dietetic & Catering Service

Dietetics and Food Services is an integral component of clinical support in the hospital, and complements medical patient care in a holistic way. Food services are available in all Ministry of Health hospitals and Medical Institutions whereas dietetics services are provided in seventy two (72) hospitals and medical institutions. The Dietetic and Catering Service is responsible for providing both clinical dietetic services as well as catering to patients' and staffs' (only those who are entitled to be provided with meals while discharging their duties) needs.

**TABLE 22.**  
**NUMBER OF MEALS PROVIDED BY THE DIETETICS AND FOOD SERVICES, 2009**

HOSPITAL	K1	K2	K3	Liquid Diet	IF	DK	DM	DR	CM	RH	TOTAL
Perlis	6,309	10,724	78,854	27,894	0	7,803	7,354	11,175	36,780	3,468	190,361
Kedah	22,894	26,939	429,800	172,410	0	59,057	79,598	54,852	193,680	40,203	1,079,433
Pulau Pinang	22,454	19,375	390,327	25,692	11,934	56,094	51,003	36,358	146,806	27,479	787,522
Kelantan	7,972	13,625	507,727	168,575	0	54,701	58,432	34,370	162,921	0	1,008,323
Perak	31,271	64,409	1272,588	21,743	0	58,658	97,282	75,534	295,111	91,443	2,008,039
Selangor	29,636	77,952	915,057	5,732	0	88,143	138,701	74,434	140,291	25,662	1,495,608
N. Sembilan	19,916	17,741	305,966	9,999	0	28,081	34,251	29,959	70,151	30,610	546,674
Melaka	25,332	17,003	236,270	0	0	24,243	18,622	26,730	79,348	7,412	434,960
Johor	31,366	137,911	1,139,649	0	12,350	94,252	104,188	93,437	308,124	20,779	1,942,056
Terengganu	12,911	29,809	247,596	13,447	0	36,270	42,131	22,193	97,746	16,889	518,992
Pahang	13,365	24,074	453,259	58,709	0	49,958	59,957	40,523	111,646	16,093	827,584
FT KL	68,289	149,042	522,288	0	0	68,543	134,657	72,910	190,895	19,250	1,225,874
FT Putrajaya	252,062	0	0	0	0	2,785	7,389	8,782	7,984	6,685	285,687
FT Labuan	1,373	0	13,423	536	0	962	1,915	873	8,313	0	27,395
Sabah	13,229	30,278	1,063,011	30,015	0	300,904	280,407	21,899	21,636	81,183	1,842,562
Sarawak	6,003	8,028	916,300	12,886	0	81,236	120,329	70,785	128,632	17,437	1,361,636
<b>Total</b>	<b>564,382</b>	<b>626,910</b>	<b>8,492,115</b>	<b>547,638</b>	<b>24,284</b>	<b>1,011,690</b>	<b>1,236,216</b>	<b>674,814</b>	<b>2,000,064</b>	<b>404,593</b>	<b>15,582,706</b>

K1 = Kelas 1, K2= Kelas 2, K3=Kelas 3, DK= Diet Kanak-kanak (Children Diet), DM=Diet MAC, CM=Catuan Makan malam (Night Ration), RH= Rawatan Harian (Daycare)  
Source: National Advisor, Dietetics & Catering Service, MoH

The main objective of the Dietetics and Food Services is to provide quality food services and professional dietetic services including health promotions for both in and out patients. In 2009, the number of in-patients and staff meals provided at the Ministry of Health Hospitals and Medical Institutions throughout the country is as shown in Table 23.

**TABLE 23.**  
**NUMBER OF DIETETICS SESSIONS, 2009**

	Individual patients	Group	Total
Inpatients	123,307	-	123,307
Outpatients	49,480	21,365	70,845
Total	<b>172,787</b>	<b>21,365</b>	<b>194,152</b>

Source: National Advisor, Dietetics & Catering Service, MoH

In 2009, the workload for dietetics services throughout the country is shown as in Table 23. The Dietetics and Food Services future plans include towards certification in food safety such as certification in GMP / HACCP, accreditation of food services from MSQH in all state hospitals and districts hospitals with specialists, implementation of centralized plating system for in-patient meals, standardization of specification for all food items used in Ministry of Health and standardization of technical evaluation and procedures in selecting the contractors for the outsourcing of food services in selected hospitals.

Future plan for the dietetics services includes development of dietetic sub-specialization, expansion of Nutrition Support Team services to state hospitals and accreditation of dietetic services from MSQH in all state hospitals.

### **Central Sterilization Supply Unit (CSSU)**

The Central Sterile Supply services (CSSS) is also known as The Central Sterilization Supply Unit (CSSU). The CSSU is responsible in processing and supplying medical/ surgical equipments, both sterile and non-sterile. The equipments are cleaned, prepared, processed, stored, and issued for patient use. Sterile Processing Departments are typically divided into four major areas to accomplish the functions of decontamination, assembly and sterile processing, sterile storage and distribution. In the year 2009 the services expanded tremendously, in fact few hospitals had received new equipment such as autoclave machine, and washer disinfector for replacement. The hospitals which received new equipments in 2009 are listed in Table 24.

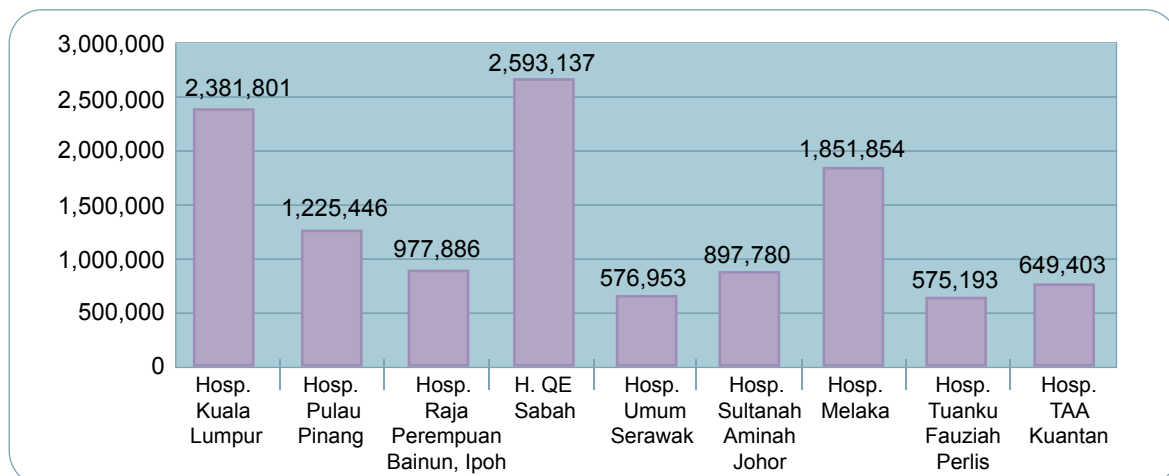
**TABLE 24.**  
**LIST OF HOSPITALS WITH NEW EQUIPMENT, 2009**

HOSPITAL	AUTOCLAVE	WASHER DISINFECTOR
Hospital Tuanku Fauziah Perlis	1	-
Hospital Pulau Pinang	1	-
Hospital Seberang Jaya, Pulau Pinang	1	-
Hospital Tengku Ampuan Rahimah, Klang	1	-
Hospital Kuala Lumpur	1	-
Hospital Daerah Labuan	-	1
Hospital Tuanku Ja'afar, Negeri Sembilan	1	-
Hospital Sultanah Aminah Johor	4 (stimulation package)	-
Hospital Kota Bahru , Kelantan	1	-
Hospital Pasir Mas , Kelantan	1	-
Hospital Tengku Ampuan Afzan, Kuantan	1	-
Hospital Kanowit, Serawak	1	-
Hospital Kapit	1	1

Source: National Advisor, CSSU, MoH

The workload of CSSU in several hospitals for the year 2009 is shown in Figure 8. There are hospitals which have achieved ISO 9001-2000 status and Accreditation by MSQH such as Hospital Kuala Lumpur and Hospital Tengku Ampuan Afzan, Kuantan. The challenge faced by CSSU is increased workload to meet patients' needs which resulted in increased budget need for consumables.

**FIGURE 8.**  
**WORKLOAD OF CSSU IN 2009**



Source: National Advisor, CSSU, MoH

## Medical Social Works Services

Medical Social Works Services was first introduced in Malaysia in 1952 in a few major hospitals namely Hospital Kuala Lumpur, Penang, Sabah and Sarawak. The services provided then were largely financial and social support in nature.

The Medical Social Works Services has now been extended to state hospitals, district and health clinics across the country, and is increasingly expanding and its role challenging as well as extensive. Presently role of medical social work officers are also required in the health care setting because of its focus on promoting health and wellness. The biopsychosocial intervention; a non-clinical approach to optimize the management of the patient's/client's cognitive and social problems. This approach complements patient's care in line with the concept of *Holistic and Comprehensive Care* (the physical, mental, social, and spiritual aspects of patient care).

Interventions provided by the Medical Social Work Officers, consists of supportive therapy and practical assistance. Supportive therapy includes crisis intervention, consultation and counseling services to improve client's quality of life and coping skill towards a better understanding of the disease and treatment involved. Practical assistance encompasses assessment towards funding of treatment, institutional placement, discharge planning and networking with government organizations and non-governmental agencies. The Medical Social Work Officers work with inter-disciplinary medical teams to achieve total patient care.

In 2009, a total of 157,340 patients were referred, comprising of 63,870 requiring Therapeutic Support and 93,470 Practical Support.

**TABLE 25.**  
**MEDICAL SOCIAL WORKS SERVICES ACTIVITIES, 2009**

Intervention	In patient	Out patient	Total
Interview	86,537	70,803	<b>157,340</b>
Multidisciplinary Team Discussion	47,796	41,496	<b>89,292</b>
Ward rounds	16,248	0	<b>16,248</b>
Networking	49,396	44,364	<b>93,760</b>
Home visit	5,696	4,189	<b>9,885</b>
Socio- economic Assessments	43,693	38,917	<b>82,610</b>
Supportive Therapy	31,308	32,562	<b>63,870</b>
Practical Support	39,505	53,965	<b>93,470</b>
<b>TOTAL</b>	<b>320,179</b>	<b>286,296</b>	<b>606,475</b>

Note : Total patients given intervention

1. Supportive Therapy : 63,870

2. Practical Support : 93,470

Source: Medical Social Service Department, HKL

The main achievements include the compilation of the Code of Ethics, Key Performance Indicators (KPI), a road show to promote Continuous Professional Development and the launching of the Socio-Economic Assessment guideline for the Ministry of Health. In addition, the Association of Medical Social Officers has established a *Tabung Kebajikan Perubatan Malaysia* for needy patients, and is actively involved in community projects such as establishing Half-way Homes for patients requiring long term treatment and Nur Hasanah Transit Home for abandoned patients.

## **MEDICAL PROFESSIONAL DEVELOPMENT SECTION**

### **Clinical Specialists Requirement**

In 2009, there was an increase of 7.6% in the number of clinical specialists working in MoH hospitals. The total number of specialists was 2,740 from various specialties and grades including 220 specialists who were on contract basis (Table 26). Even though there was an increase in the total number of specialists but it is yet to meet the need of the country.

### **Engagement of Private Practitioners**

Private practitioners continue to be employed on sessional basis considering the need for provision of certain specialty in some MoH hospitals. In 2009, there were 25 applicants from the private practitioners to give service to MoH compared to 16 applicants in 2008 (Table 27).

### **Gazettement of Clinical Specialists**

The Special Gazettement Committee meets at least 3 times a year. However, monthly meeting is being scheduled to facilitate the gazettement process. The use of log book which was introduced in 2005 has facilitated clinical specialist gazettement process. In 2009, 300 specialists were gazetted and this was 27% reduction compared to 2008 where there were 409 specialists. The largest number of specialist being gazette was from the discipline of General Medicine followed by Anaesthesiology and Paediatric as seen in Table 28.

**TABLE 26.**  
**NUMBER OF SPECIALIST IN MOH HOSPITALS, 2007 - 2009**

Discipline	No. of Specialist (including Subspecialty Trainee)					
	2007		2008		2009	
Anaesthesiology	260	(22)	272	(11)	282	(17)
Cardiology	33	(3)	38	(5)	36	(9)
Cardiothoracic Surgery	12	(2)	22	(2)	10	(6)
Dermatology	30	(8)	31	(8)	24	(7)
Emergency Medicine	36	-	44	-	54	(1)
Forensic	20	(2)	20	(3)	19	(1)
General Medicine	305	(39)	327	(40)	311	(42)
General Surgery	232	(41)	232	(37)	204	(36)
Hand & Microsurgery	1	-	1	-	1	-
Nephrology	44	(1)	45	(1)	48	(1)
Neurology	18	(3)	15	(2)	17	-
Neurosurgery	20	(2)	21	(2)	24	(1)
Nuclear Medicine	-	-	6	-	6	-
Obstetric & Gynaecology	251	(22)	246	(20)	224	(20)
Ophthalmology	144	(18)	158	(17)	155	(15)
Orthopaedic	177	(15)	189	(12)	190	(10)
Otorhinolaryngology	89	(14)	98	(11)	103	(11)
Paediatric	250	(18)	262	(17)	258	(15)
Paediatric Surgery	17	(6)	17	(6)	11	(5)
Pathology	138	(5)	140	(8)	160	(7)
Plastic Surgery	21	(2)	23	(2)	21	(2)
Psychiatry	93	(4)	94	(3)	108	(3)
Radiology	151	(6)	151	(4)	162	(3)
Radiotherapy & Oncology	11	(3)	14	(3)	11	(5)
Rehabilitation Medicine	14	-	21	-	23	-
Respiratory Medicine	17	(2)	23	(2)	23	(3)
Sports Medicine	4	-	6	-	6	-
Urology	25	(1)	26	-	29	-
<b>Total</b>	<b>2413</b>	<b>(239)</b>	<b>2542</b>	<b>(216)</b>	<b>2520</b>	<b>220</b>

Note: ( ) Contract Officer

Source: Medical Professional Development Section, Medical Development Division, MoH

**TABLE 27.**  
**NUMBER OF PRIVATE PRACTITIONERS EMPLOYED ON SESSIONAL BASIS, 2009**

Hospital	Discipline	Number
Hospital Umum Sarawak	Neurology	1
	Radiology	1
	Cardiology	2
	Urology	1
Hospital Sibul	O&G	1
	Orthopaedic	1
	General Surgery	1
Hospital Miri	Paediatric	1
Hospital Sultanah Aminah	Pathology	1
	Medical	2
Hospital Kuala Lumpur	Anaesthesiology	1
	Orthopaedic	1
Hospital Queen Elizabeth	Ophthalmology	1
	General Surgery	1
Hospital Duchess Of Kent	General Surgery	1
Hospital Melaka	Urology	1
	Cardiology	1
	Anaesthesiology	2
Hospital Ipoh	Colorectal Surgery	1
	Cardiology	1
	Neurosurgery	1
	Nephrology	1
<b>Total</b>		<b>25</b>

Source: Medical Professional Development Section, Medical Development Division, MoH



**TABLE 28.**  
**NUMBER OF SPECIALISTS GAZETTED BASED ON SPECIALTY, 2007 - 2009**

Specialty/Subspecialty	No. of Specialists* Gazetted		
	2007	2008	2009
Anaesthesiology	39	59	31
Cardiac Anaesthesiology	-	-	2
Intensive Care	-	-	1
Breast & Endocrine Surgery	2	1	2
Cardiology	4	4	7
Cardiothoracic Surgery	2	2	1
Dermatology	3	-	-
Emergency Medicine	6	8	9
Endocrinology	2	1	-
Forensic	-	3	-
Gastroenterology	3	5	4
Geriatric	1	-	-
General Medicine	49	63	50
General Surgery	21	42	18
Hand & Microsurgery	1	-	-
Nephrology	3	1	3
Neurology	3	1	1
Neurosurgery	1	4	4
Nuclear Medicine	-	1	-
Obstetrics & Gynaecology	39	55	19
Fetomaternal Medicine	-	-	1
Urogynaecology	-	-	1
Advance O&G	-	-	1
Ophthalmology	20	17	22
Orthopaedic	17	18	26
Otorhinolaryngology	14	12	15
Pathology	9	18	13
Paediatric	20	31	28
Paediatric Cardiology	-	1	1
Paediatric Neurology	-	1	-
Paediatric Surgery	1	-	1
Paediatric Endocrine	-	-	2
Plastic Surgery	3	3	2
Psychiatric	4	8	5
Radiology	22	35	10
Interventional Radiology	-	-	2
Radiotherapy & Oncology	1	1	2
Rehabilitation Medicine	4	2	5
Respiratory Medicine	1	-	4
Rheumatology	-	4	3
Sports Medicine	-	3	2

Specialty/Subspecialty	No. of Specialists* Gazetted		
	2007	2008	2009
Upper Gastroenterology	-	3	-
Urology	1	1	2
<b>Total</b>	<b>296</b>	<b>408</b>	<b>300</b>

*\*including Contract Specialists*

*Source: Medical Professional Development Section, Medical Development Division, MoH*

## Specialist Training Program

The general administration of Master in Medicine Program is managed by the Training Management Division of the Malaysian Ministry of Health with the technical input from the Medical Development Division.

Starting from the 2008/2009 session, the total slot for the Master in Medicine Program had been increased to 600 as compared to 450 in the previous years. Out of the 600 slots, 400 slots (66.6%) were allocated for the Open System and the remaining 200 slots (33.3%) given for the Close System. Master in Nuclear Medicine was introduced in the 2008/2009 session. Thus, there were 22 disciplines offered in the program altogether. Although a total of 614 offers had been sent out for the various disciplines, only 557 candidates had finally accepted to register in the programme. The detail number of candidates offered and accepted to join the program is shown in Table 29.

In 2009, a total of 277 Medical Officers under Medical Programme reported back to MoH after completing their specialist training compared to 199 in 2008. For further improvement of the Master in Medicine Programme, more slots for the open system will be made available, more disciplines will be offered and the number of slots for each discipline will also be increased.

## Subspecialty / Fellowship Training

The application to join subspecialty / fellowship training has been increasing year by year. In 2009, there were 356 specialists who underwent fellowship training compared to 354 specialists in 2008. The number of subspecialty discipline had also increased to 90. The most popular subspecialty was cardiology followed by urology, colorectal surgery and breast and endocrine surgery. Other subspecialty that showed increasing trend were, hematology, respiratory medicine and hepatobiliary surgery

**TABLE 29.**  
**DISCIPLINES OFFERED AND NUMBER OF TRAINEES FOR 2007/2008, 2008/2009, AND 2009/2010 SESSIONS**

Discipline	2007/2008 Session		2008/2009 Session		2009/2010 Session	
	No. of Offers	No. of Acceptance	No. of Offers	No. of Acceptance	No. of Offers	No. of Acceptance
Anaesthesiology	53	49	72	70	76	73
Clinical Oncology	4	4	4	4	5	4
Emergency Medicine	24	23	37	34	40	38
Family Medicine	34	32	52	36	52	42
General Surgery	43	42	42	41	45	44
Internal Medicine	40	38	56	51	46	39
Neurosurgery	5	5	3	2	4	4
Nuclear Medicine	-	-	4	4	5	5
Obstetrics & Gynaecology	25	25	43	40	37	36
Ophthalmology	25	24	32	31	36	32
Orthopaedic	30	30	40	37	44	42
Otorhinolaryngology	26	21	23	19	21	18
Pathology	32	31	44	41	33	32
Paediatric	28	25	39	34	34	30
Paediatric Surgery	3	3	4	4	4	4
Plastic Surgery	2	2	6	6	5	4
Psychiatry	20	20	28	25	23	20
Public Health	27	24	28	23	44	42
Radiology	31	30	37	36	37	36
Rehabilitation Medicine	6	5	10	9	10	10
Sports Medicine	3	3	3	2	3	3
Transfusion Medicine	6	5	7	7	10	9
<b>Total</b>	<b>467</b>	<b>441</b>	<b>614</b>	<b>556</b>	<b>614</b>	<b>567</b>

Source: Medical Professional Development Section, Medical Development Division, MoH

### **Continuous Professional Development (CPD)**

This Medical Professional Development Section continues to coordinate sponsorship and selection of the candidates for Medical Programme to attend courses, workshops and seminars locally or internationally with cooperation from Training Management Division of MoH. From 2006, the total allocation for this purpose had been increased under the 9th Malaysia Plan for human resources development where candidates were sponsored to attend courses/workshops/seminars locally or internationally.

In 2009, a total of RM 31,400,000 had been allocated for CME programme locally or internationally (Table 30). Out of that, RM25,400,000 was for local training and RM 6,000,000 for overseas training.

**TABLE 30.**  
**CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD) ACTIVITIES, 2008 & 2009**

Year	Total Allocations (RM)
<b>2008</b>	
Overseas Training	4,000,000.00
Local Training	20,875,486.00
<b>Total</b>	<b>24,875,486.00</b>
<b>2009</b>	
Overseas Training	6,000,000.00
Local Training	25,400,000.00
<b>Total</b>	<b>31,400,000.00</b>

Source: Medical Professional Development Section, Medical Development Division, MoH

Continuous Professional Development (CPD) is a bigger form of Continuous Medical Education (CME) which is more comprehensive in nature. It is a systematic planned process of life-long learning and professional development. It enables health professionals to maintain and enhance knowledge, skills and competency for effective and continuous practice in meeting the health care of the patients and the community.

CPD Pilot Project was introduced in 2007 where the implementation was on voluntary basis. From 2008, it was made compulsory to officers in three categories namely Medical Officer, Dental Officer and Pharmacist. Points collected from attended courses have to be recorded in a log book. During the same year, the Public Service Department (*JPA*) has approved that the CPD to be used as the replacement for the evaluation of competency level (PTK) for the specific component (*PTK-Khusus*) which is known as PTK-CPD for all those three categories of staff.

In 2008, 89.9% of the user registered with CPD passed PTK-CPD and the number of staff passed the PTK-CPD had increased to 93.6% in 2009 involving 95.7%, 91.3%, and 88% of the medical officers, dentists and pharmacists respectively.

After successfully implementing the PTK-CPD for two years, this program will be extended to other service schemes in MoH in 2010 which include Engineers, Researchers, Nurses, Assistant Medical Officer and Allied Health Personnel with an estimation of 73,000 - 75,000 users.

### Housemanship Program

The Housemanship Program is a period of apprenticeship after graduation from medical school before new medical graduates are given full registration to practice independently as doctors. The program is formulated in such a way as to ensure that medical graduates gain the appropriate knowledge, skills and experience as well as to groom them to have the

right attitude to meet the standards of the profession. In 2006, there were 1,059 medical graduates who underwent housemanship training and the number grew to 1,290 in 2007 and almost tripled to 3,058 in 2009.

Before 1996, the housemanship training period was for one year involving only two postings (medicine and surgery or O&G) for a period of 6 months each. From 1996, three compulsory postings were introduced (medicine/paediatrics, surgery/orthopaedics and O&G) but the period of the posting was reduced to four months each. However, to further enhance the quality of doctors, the period of training had been increased from one year to two years since January 2008. The 2-year housemanship training encompassed training in 6 disciplines namely Medicine, Obstetrics & Gynaecology Surgery, Paediatric, Orthopaedic, and Emergency Medicine for a period of 4 months each. At the moment, all new house officers are employed by the government on the grade of UD41. Upon successful completion of the training, they will be promoted to grade UD44, subjected to fulfilment of other criteria.

## **QUALITY IN MEDICAL CARE SECTION**

The Quality Improvement Activities in the Patient Care Services QAP comprise several more approaches in addition to the traditional “problem-solving through indicators” approach or “QA”, utilized in the mid-1980s, when the QAP (only consisting of the NIA and HSA then) was launched. Significantly, new approaches to quality such as clinical (peer-review) audit, clinical governance and risk management, externally-conducted organizational audit of Quality Management Systems (QMS), statistical process control (CUSUM) and increasingly importantly, the assessment and improvement of inter-personal quality, have also gained prominence.

These multiple approaches have been undertaken to achieve not only technical quality but also inter-personal quality, realize our goal for Quality, which is *internalising* and *institutionalizing Quality* so that both our clients and patients will receive high quality healthcare as well as attain good health outcomes.

### **National Indicator Approach (N.I.A.)**

In 2009, 15 Clinical and 5 Allied Health disciplines contributed to the 58 NIA indicators, with performance being monitored 6-monthly (an average of approximately 3 indicators per discipline). For 2009, in 51 out of 58 indicators, at least one hospital had “shortfall in quality” or “SIQ”. The “top 10” clinical indicators with the most number of hospitals registering SIQs are as follows:

**TABLE 31.**  
**SIQs RATE, 2009**

No.	NIA indicator	No. of Hospitals with SIQ
1.	Measurement of Improvement of ADL (Activities of Daily Living) Independence for Stroke Patients after ADL Intervention	50
2.	Rate of Posterior Capsular Rupture during Cataract Surgery	45
3.	Incidence of Physical Contamination of Food Served to Patients	42
4.	Timeliness in the Preparation of Medical Reports	38
5.	Waiting Time of less than 3 days for Fixation of Long Bone Closed Fracture	22
6.	Turnaround Time of $\leq 2$ working days for Special Radiological In-patient Examinations Reports	20
7.	Timeliness of Dispatching Medical Records of Discharged Patients to the Medical Records Department	20
8.	Patients with Backache Achieving Highest Level of Function Within 24 visits (or 6 month period) In a Single Continuous Episode of Care	18
9.	Incidence of Massive Primary Post-partum Haemorrhage (PPH)	18
10.	Occurrence of Urinary Tract Injury Following Hysterectomy	17

Source: *Quality in Medical Care Section, Medical Development Division, MoH*

## Hospital Accreditation

In 2009, 95 out of 136 MoH hospitals have successfully been accredited by the Malaysian Society for Quality in Health (MSQH). Among the 95 accredited hospitals, 53 hospitals still have current and valid accreditation status; 52 hospitals achieved Full accreditation status (3 years) and one hospital achieved Partial accreditation status (1 year) thus requiring a Focus Survey. For various reasons, 31 hospitals have "Ended Status". As of 31st December 2009, 8 hospitals were awaiting the results of their Full Survey status (pending) while three hospitals were awaiting their Focus Survey status.

## MS ISO Certification

The Medical Programme successfully attained ISO certification in September 2008. This certification exercise will be continued annually.

Out of a total of 136 MoH hospitals, 73 hospitals had successfully attained ISO certification; 46 hospitals were without ISO certification while 10 hospitals were still in the various stages of attaining certification. There were 6 hospitals with "expired" certification.

## Peri-Operative Mortality Review (POMR)

In 2008, the format of the review had been changed to a general peri-operative mortality data registry which captured the information needed as a baseline data base for all

surgical areas. The data collection method has been changed to an electronic data collection system where the data is stored centrally. Two “hands-on” training sessions were carried out throughout 2009 to ensure proper use of the system by the end-users in the participating Hospitals.

A National Audit on Pre-operative Medical Referral was conducted in 16 major MoH hospitals in 2008. The report was published in 2009. Based on the audit findings, of the 700 hundreds referred patients, more than 36% were deemed “unessential”. It was recommended that pre-operative medical referrals should be specialist-based and in accordance with the “ACC/AHA 2007 guide on pre-operative cardiovascular evaluation and care for non-cardiac surgery”. Where possible, all patients scheduled for elective surgery, regardless of their physical status, should be referred to the anaesthetic clinic for assessment. A follow-up audit should be conducted to evaluate the impact of the implemented changes.

The National Audit on Waiting Time for Elective Surgery was successfully conducted and the report was published in 2009. A total of 4927 cases were retrieved and analyzed (80.2% of cases sampled). However, it was noted that there was only weak correlation between the waiting time and operating theatre time availability, manpower or workload and the variability of waiting times among hospitals and among specialties could not be explained adequately by these factors.

### **National Audit on Adult Intensive Care Units (NAICU) – now known as the Malaysian Registry of Intensive Care (MRIC)**

In 2009, the NAICU underwent a major re-organisation and was renamed the Malaysian Registry of Intensive Care (MRIC), with 31 participating hospitals. Among the objectives of the MRIC are: to establish a database of patients admitted to the adult ICUs, to review the clinical practices of intensive care, to determine clinical outcomes, to determine the resources and delivery of intensive care service, to evaluate the impact of quality improvement measures on patient care, to provide comparisons of performance of participating centres against national and international standards and to conduct healthcare research related to intensive care.

The 2nd Report was successfully published in late 2009. Data was collected prospectively from 31 participating ICUs (with a total of 330 beds). 21,226 cases were analysed, with a reporting rate of 89%. It was noted that the percentage of “denied ICU admissions” due to lack of beds had declined from 56.5% to 40.0% in the last four years. Head injury, sepsis and community-acquired pneumonia were the three most common diagnoses leading to ICU admission in MoH hospitals (they have remained so for the past 7 years) and the mortality rate was 27.0% (head injury), 62.2% (sepsis) and 46.3% (community-acquired pneumonia). The average SAPS II score was 35.8, which carries a predicted risk of in-hospital mortality of 28.0%. The incidence of Ventilator-associated pneumonia (VAP) decreased by more than half, from 28.0 to 11.6 per 1000 ventilator days in the last 7 years.

## Patient Safety

The Patient Safety Council of Malaysia approved the various strategies to improve patient safety in the Malaysian health care system such as:

- **Incident Reporting and Learning System**

Incident Reporting and Learning System is considered as an important tool for establishing “no blame, safety culture” and promoting organizational learning. The Council had directed the development of such system for both the private and public sectors. A draft reporting format and Incident Reporting Manual had been prepared based on the WHO Guidelines and the WHO’s International Classification for Patient Safety (IC4PS). It was successfully piloted in Hospital Kuala Lumpur and will be fine-tuned for implementation in 2010.

- **Root Cause Analysis (RCA) Training**

Root Cause Analysis is a key tool for analyzing the results of Incident reporting. Training workshops in RCA had been successfully conducted for various categories of MoH staff, in collaboration with the WHO Patient Safety consultant, to enable them to conduct investigations into any “incident” in a structured and systematic manner.

- **2nd WHO Global Patient Safety Challenge: “Safe Surgery Saves Lives”**

A Safer Surgery through Better Communication Checklist was developed by the POMR Committee for MoH hospitals. It is a modification of the WHO Safe Surgery Checklist. This initiative was established to improve the safety of surgery. The checklist was piloted in 2009 and officially launched for national implementation in late 2009 by the Director of Medical Development Division, Y. Bhg. Dato’ Dr. Azmi bin Shapie.

## Hospital Infection Control

Based on data compiled from the State hospitals, encouragingly, the trend of Health Care-Associated Infection (HCAI) and MRSA rates in hospitals has shown a decline. The National HCAI prevalence rate over the 6 years has shown progressive reduction from 5.44% in March to 3.04% in September 2009 and National MRSA rates declined from 0.27% in 2004 to 0.16% in 2009.

The hand hygiene compliance study, conducted between May 2008 and June 2008, was the first data set available from all State hospitals. The National average for hand hygiene compliance rate in the State hospitals was 56.6% from May 2008 to June 2008. Encouragingly, the compliance rate increased to 66% in October 2009. The new and revised edition of ‘Policies and Procedures on Infection Control’ guideline was finalized and launched in May 2010. This Guideline is intended to assist healthcare providers keep track of and adhere to best practices in the control of hospital infection. It is also to ensure uniformity in the practice of infection control in all MoH hospitals. In 2009, a National Wound Care Technical Committee was formed to co-ordinate all technical activities and issues related to wound care management in MoH hospitals. A number of MoH hospitals were identified as pioneer hospitals to initiate their Wound Care Management Units.



## Participation in the Prime Minister's Quality Award 2009

The Office of the Director-General of Health Malaysia was one of the five public sector agencies that received the 5 STAR award following MAMPU's STAR Rating assessment in December 2008. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Merican, the Director-General of Health Malaysia, received the plaque and certificate of award in the STAR Award for Public Sector Agencies Ceremony organized by MAMPU on 21st April 2009 at the PICC. Tan Sri was also invited to speak on 'Best Practices in the Ministry of Health' during the award ceremony.

**IMAGE 1.**  
**5 STAR AWARD - PLAQUE & CERTIFICATE**



*Source: Quality in Medical Care Section, Medical Development Division, MoH*

Following the award, the Office of Director-General of Health Malaysia was automatically nominated for the Prime Minister's Quality Award in 2009 with the panel of assessment visit held in 20 October 2009.

## HEALTH TECHNOLOGY ASSESSMENT SECTION

The main activities of Health Technology Assessment Section (MaHTAS) are conducting health technology assessments (HTA) and rapid reviews known as Technology Reviews (TR), developing Clinical Practice Guidelines (CPG) and also conducting related training to health care providers. In 2009, three HTA reports and six CPGs were produced by this section (Table 32). From the 28 TR produced, three were recommended that they can be routinely used, two can be used only in certain conditions, twelve to be used in research environment and eleven not recommended to be used. Among the technologies that were not recommended were, Parting Laser Perforator for obtaining capillary blood, and Electrical Impedance Tomography for breast cancer screening. All reports and guidelines can be accessed through the MoH website.

**TABLE 32.**  
**HTA REPORTS AND CPG PRODUCED IN 2009**

Reports / Guidelines
<p>Health Technology Assessment Reports:</p> <ul style="list-style-type: none"> <li>• School Scoliosis Screening Program</li> <li>• Intraocular lens (IOL) implantation-hydrophilic acrylic versus hydrophobic acrylic</li> <li>• Bevacizumab for 1) Age-related Macular Degeneration 2) Diabetic Retinopathy</li> </ul>
<p>Clinical Practice Guidelines:</p> <ul style="list-style-type: none"> <li>• Management of Percutaneous Coronary Intervention</li> <li>• Management of Type 2 Diabetes Mellitus (4th edition)</li> <li>• Management of Schizophrenia in Adults</li> <li>• Management of Chronic Obstructive Pulmonary Disease</li> <li>• Management of Transfusion Dependent Thalassaemia</li> <li>• Management of Dementia (2nd Edition)</li> </ul>

Source: Health Technology Assessment Section, MoH

### **Achievements in 2009**

#### **• Training**

Three HTA courses were conducted, training a total of 84 health care professionals. Three trainings on Systemic Reviews for Evidence-based CPG Development were conducted for members of CPG Development Group. A total of 65 health care professionals were trained consisting of clinicians and pharmacists.

#### **• Strengthening and capacity building activities**

In April 2009, MaHTAS received WHO financial support for a contractual partner namely Professor Guy John Maddern from Australia Safety and Efficacy Register of New Interventional Procedures-Surgical (ASERNIP-S) to evaluate the HTA program, particularly in the conduct of health technology assessment process and implementation as well as provide recommendations and strategies to further improve the quality of products produced by MaHTAS. Some of his recommendations were;

- i. To increase HTA courses for regional centers to further educate and publicize the value of HTA
- ii. To include consumer summary or lay description for all HTA products produced
- iii. Facilitate external staff appointments to MaHTAS and attempt to retain new appointments for 3–5 years to enable adequate training and experience for the organization
- iv. Encourage short staff exchanges to other HTA agencies to gain or improve specific skills

A consumer summary writing course was conducted on 1st to 3rd December 2009 as a strategy to increase understanding and hence, increase utilization of HTA reports by various target users. Thirty three participants comprising of clinical specialists, medical officers, pharmacists, nurses, health education officers and journalists attended the course. Miss Eleanor Ahern, a Senior Project Officer for Consumer from Australian Safety and Efficacy Register of New Interventional Procedures - Surgical (ASERNIP-S) was invited to conduct the course.

A continuous survey on utilization of HTA and Technology Review reports was introduced through MaHTAS user feedback.

- *CPG Implementation activities*

To ensure increase in utilization of the evidence-based CPG by target users, active dissemination of CPG is instituted through development of training modules based on the developed CPG. Two trainings were conducted at national level based on the Training Modules on CPG Management of Dengue Infection in Adults (2nd Edition) and Management of Type 2 Diabetes Mellitus/T2DM (4th Edition). A total of 4708 and 856 health care professionals have been trained in the Management of Dengue Infection in Adults (2nd Edition) and Management of Type 2 Diabetes Mellitus/ T2DM (4th Edition) respectively.

A patient information leaflet (home-based card) on Dengue Infection was developed for use by both patients and healthcare providers to monitor patients with fever.

Quick references (QR) on Management of Type 2 Diabetes Mellitus 4th Edition and Management of Schizophrenia in Adults were also developed and disseminated to health care providers in both public and private sectors.

## **MALAYSIAN MEDICAL COUNCIL**

The Malaysian Medical Council was established by an Act of Parliament which was passed on 27 September 1971 and gazetted on 30 September 1971. It has the purpose of providing safe and competent medical and health care services for the country.

### **Activities and Achievements**

- *Registration*

The summary of registrations being approved and issued by the Council between 2001 and 2009 according to categories is shown in Table 33 and Table 34.

- *Annual Practicing Certificate*

The total numbers of APCs issued in 2009 were 22,355 compared to 20,282 in 2008. It is noted that there has been a yearly increase of number of APCs issued (Table 35).

**TABLE 33.**  
**NUMBER OF NEW REGISTRATIONS APPROVED AND ISSUED, 2001 – 2009**

Type of Registration	2001	2002	2003	2004	2005	2006	2007	2008	2009
Provisional Registration	1,029	1,104	1,083	1,126	1,112	1,122	1,534	2,527	3,150
Full Registration (without condition)	1,060	1,088	653	968	1,137	1,801	1,726	1,882	458
Full Registration (with condition)	163	76	128	267	296	240	200	576	155
<b>Total</b>	<b>2,252</b>	<b>2,268</b>	<b>1,864</b>	<b>2,361</b>	<b>2,545</b>	<b>3,163</b>	<b>3,460</b>	<b>4,985</b>	<b>3,763</b>
<b>Grand Total</b>	<b>26,661</b>								

Source: Malaysian Medical Council, MoH

**TABLE 34.**  
**NUMBER OF PRACTITIONERS GRANTED FULL REGISTRATION, 2001 – 2009**

FULL REGISTRATION	2001	2002	2003	2004	2005	2006	2007	2008	2009
Malaysians, according to Section 14									
• Completed Housemanship Locally	996	1,002	568	858	1,060	1,695	1,604	1,793	361
• Completed Housemanship Overseas	64	86	85	110	77	106	122	89	97
<b>Total</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>1,882</b>	<b>458</b>
Foreigners, according to Section 14(3)									
• Completed Housemanship Locally	13	9	15	16	0	8	18	26	3
• Completed Housemanship Overseas	150	67	113	251	296	232	182	317	152
<b>Total</b>	<b>163</b>	<b>76</b>	<b>128</b>	<b>267</b>	<b>296</b>	<b>240</b>	<b>200</b>	<b>343</b>	<b>155</b>
<b>Grand Total</b>	<b>1,223</b>	<b>1,164</b>	<b>781</b>	<b>1,235</b>	<b>1,433</b>	<b>2,041</b>	<b>1,926</b>	<b>2,225</b>	<b>613</b>

Source: Malaysian Medical Council, MoH

**TABLE 35.**  
**NUMBER OF ANNUAL PRACTICING CERTIFICATES ISSUED ACCORDING TO STATE AND SECTOR, 2003 - 2009**

State	2003		2004		2005		2006		2007		2008		2009	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Perlis	50	37	78	36	83	44	60	33	95	28	120	28	139	38
Kedah	316	410	338	447	349	457	355	444	446	458	484	483	580	482
Pulau Pinang	320	781	346	841	357	853	370	822	514	874	559	938	683	960
Perak	507	764	514	892	527	919	483	773	662	803	759	835	924	854
Selangor	685	1,891	721	2,050	735	2,097	757	2,103	1,198	2,337	1,393	2,508	1,692	2,624
FT Kuala Lumpur	1,778	1,623	1,700	1,783	1,686	1,825	1,675	1,545	2,239	1,762	2,590	1,881	2,797	1,952
FT Putrajaya	82	0	85	3	119	3	202	6	254	9	257	10	294	10
Negeri Sembilan	259	290	290	320	306	334	212	319	354	341	401	401	532	372
Melaka	173	293	239	333	247	344	231	326	306	378	322	363	374	406
Johor	456	862	461	874	477	891	456	924	612	981	752	1,041	933	1,072
Pahang	286	289	305	311	316	319	223	311	340	355	440	378	489	385
Terengganu	210	140	201	144	219	153	227	141	260	166	266	182	335	193
Kelantan	574	186	584	186	595	194	595	192	637	209	784	207	926	218
Sabah	200	288	268	329	279	337	225	312	462	342	592	358	696	379
FT Labuan	7	16	9	15	8	15	13	12	18	16	12	17	12	17
Sarawak	308	343	327	362	332	377	300	339	471	357	543	378	605	382
<b>Total</b>	<b>6,211</b>	<b>8,213</b>	<b>6,466</b>	<b>8,926</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>10,274</b>	<b>10,008</b>	<b>12,011</b>	<b>10,344</b>
<b>Grand Total</b>	<b>14,424</b>		<b>15,392</b>		<b>15,797</b>		<b>14,986</b>		<b>18,284</b>		<b>20,282</b>		<b>22,355</b>	

Source: Malaysian Medical Council, MoH

- **Letter of Good Standing**

The Letter of Good Standing is required for registration with other foreign medical councils or registering bodies. It is issued upon request to any registered medical practitioner who has no disciplinary action pending or taken against him. The number of Letter of Good Standing issued was 385 in 2007, 559 in 2008 and 473 in 2009.

**TABLE 36.**  
**LIST OF ACCREDITED LOCAL UNDERGRADUATE MEDICAL SCHOOLS**  
**(AS OF 31ST DECEMBER 2009)**

Public Institutions	
Name	Accreditation Date
Universiti Malaya	January 15, 1971
Universiti Kebangsaan Malaysia	June 22, 1979
Universiti Sains Malaysia	July 11, 1986
Universiti Malaysia Sarawak	May 15, 2000
Universiti Putra Malaysia	June 5, 2001
Universiti Islam Antarabangsa Malaysia	May 14, 2002
Universiti Teknologi MARA	April 10, 2008
Universiti Malaysia Sabah	Mei 26, 2008
Private Institutions	
Name	Accreditation Date
Penang Medical College	June 2001
International Medical University	February 19, 2002
Melaka-Manipal Medical College	July 9, 2003
Perak Royal College of Medicine (University of Sheffield)	January 19, 2006
Asian Institute of Medicine, Science & Technology (AIMST)	August 17, 2007
Alliance College of Medical (Joint Program with Universitas Sumatera Utara)	February 26, 2009

Source: Malaysian Medical Council, MoH

- **Accreditation/Approval**

Approved and accredited local undergraduate medical schools as of 31st December 2009 are listed in Table 36.

Until December 2009, there were 20 undergraduate program awaiting accreditation. The accreditation visit will be done once the first batch reaches the final year. These programs are as shown below in Table 37.

**TABLE 37.**  
**LIST OF APPROVED LOCAL UNDERGRADUATE MEDICAL SCHOOLS AWAITING**  
**ACCREDITATION (AS OF 31ST DECEMBER 2009)**

<b>PUBLIC</b>	<b>YEAR ESTABLISHED</b>	<b>YEAR TO BE ACCREDITATED</b>
Kolej Universiti Islam Malaysia	2004	2010
Universiti Kebangsaan Malaysia with Universiti Padjadjaran, Indonesia	2006	2011
Universiti Darul Iman	2009	2014
<b>PRIVATE</b>	<b>YEAR ESTABLISHED</b>	<b>YEAR TO BE ACCREDITATED</b>
University College Sedaya International	2005	2010
Monash University Sunway Campus	2005	2010
Cyberjaya University College of Medical Sciences	2005	2010
International Medical School, Bangalore (under Management & Sciences University)	2006	2011
Universiti Andalas, Indonesia with Management & Sciences University, Malaysia	2006	2011
Perak Royal College of Medicine (Universiti Kuala Lumpur)	2007	2012
Management & Sciences University with Shah Alam Campus	2008	2013
Universiti Sains Malaysia with KLE Belgaum, Karnataka, India	2009	2014
Universiti Kebangsaan Malaysia with ACMS	2009	2014
UniKL-Royal Perak Medical College with Vinayaka Mission's University, Salem, India	2009	2014
Asian Institute of Medicine, Sciences & Technology with JJM Medical College, Davangere Karnataka	2009	2014
National University of Ireland, Galway and University College, Cork with Allianza College of Medical Sciences	2009	2014
Kolej Universiti Insaniah	2009	2014
Universiti Tunku Abdul Rahman	2009	2014
Taylor's University College	2009	2014
Melaka-Manipal Medical College with Manipal campus	2010	2015
SEGI University College	2010	2015

Source: Malaysian Medical Council, MoH

In 2009, another 3 foreign medical training institutions were approved by the Health Minister and inserted in the Second Schedule of the Medical Act 1971. The institutions were:

**TABLE 38.**  
**LIST OF RECOGNIZED FOREIGN MEDICAL TRAINING INSTITUTIONS IN 2009**

COUNTRY	MAIN UNIVERSITY	NAME OF INSTITUTION	RECOGNIZED SINCE
United Kingdom	Warwick University	Warwick Medical School	May 22, 2009
	Keele University	Keele University School of Medicine	May 22, 2009
	University of Brighton & University of Sussex	Brighton-Sussex Medical School	May 22, 2009

Source: Malaysian Medical Council, MoH

- **Disciplinary Problems**

A total number of 119 complaints were received in 2009. Based on the 22,423 APCs issued in 2009 the complaint per 1,000 Registered Medical Practitioners was 5.3 whereas in 2008 it was 4.3 showing an increasing trend (Table 39).

**TABLE 39.**  
**TOTAL COMPLAINTS RECEIVED PER 1000 PRACTITIONERS, 2008 & 2009**

Years	Total Complaints Received	Total APCs Issued	Complaint Per 1000 Practitioners
2008	87	20,280	4.3
2009	119	22,423	5.3

Source: Malaysian Medical Council, MoH

There were 22 disciplinary inquiries completed in 2009 under the Medical Act 1971. The majority of cases meted with punishment continue to relate to issues of neglect and disregard of professional responsibilities. Table 40 illustrates the outcome of Council inquiries between 2003 and 2009.

Pursuant to Section 31 of the Act, practitioners who have been disciplined by the Council can appeal to the High Court of Kuala Lumpur. As of 31 December 2009, there are a total of 31 cases pending at the High Court.



**TABLE 40.**  
**OUTCOME OF COUNCIL INQUIRY, 2003 – 2009**

Types of Punishment	2003	2004	2005	2006	2007	2008	2009
Charge dismissed and practitioner found not guilty	1	5	6	12	10	11	11
Practitioner struck off from the Medical Registry	0	0	0	2	0	2	2
Name suspended from the Medical Registry	1	2	9	8	6	7	7
Reprimanded	3	3	5	6	8	5	2
<b>Total</b>	<b>5</b>	<b>10</b>	<b>20</b>	<b>28</b>	<b>24</b>	<b>25</b>	<b>22</b>

Source: Malaysian Medical Council, MoH

## **MALAYSIAN OPTICAL COUNCIL**

The Malaysian Optical Council (MOC) was established on 1st February 1992. As a corporate body, MOC is responsible in the registration of optometrists and opticians. MOC is also given the responsibility of monitoring the optometry services and practices in Malaysia through the enforcement of laws according to the Optical Act 1991 and Optical Regulations 1994.

### **Optometrists and Opticians' Registration**

The registration of optometrists and opticians has reached 3299 as of 31st December 2009. A total of 779 optometrists were registered under section 19 (1) and 2520 opticians were registered under section 18 Optical Act 1991. From all the registered practitioners, 2707 practitioners had applied for Annual Practising Certificate for 2009.

Registered opticians who are qualified to apply for Permit to Prescribe and Dispense Contact Lenses under Section 30, Optical Act 1991 and Regulation 24, Optical Regulations 1994 have submitted their applications to obtain the above mentioned certificate.

Registered optometrists are qualified to prescribe and dispense contact lens under Section 29(2) Optical Act 1991.

According to World Council of Optometry (WCO), the requirement for optometry practitioners is the ratio of 1 practitioner per ten thousand populations (1:10000). In 2009, there were 3493 optometry practitioners; therefore making the ratio of optometry practitioners to the Malaysian population with a population of 28.31 million was 1:8105.

## Annual Practicing Certificate

Until end of 2009, there were 786 optometry practitioners who had not renewed their APC. All practitioners who did not give any latest information on their status were already given a reminder to renew their APC

**TABLE 41.**  
**TOTAL NUMBER OF OPTOMETRY PRACTITIONERS ACCORDING TO SECTIONS**  
**(UNTIL DECEMBER 2009)**

REGISTERED PRACTITIONERS		TOTAL NUMBER OF PRACTITIONERS	ANNUAL PRACTICING CERTIFICATE	CONTACT LENS PRACTITIONER
<b>OPTOMETRISTS</b>				
Section 19 (1)	779	779		779
Section 19 (2)	-			
<b>OPTICIANS</b>				
Section 18 (1)	982	2714	2707	559
Section 18 (2)(a)	1730			
Section 18 (2)(b)	1			
Section 18 (3)	1			
<b>TOTAL</b>		<b>3493</b>	<b>2707</b>	<b>1338</b>

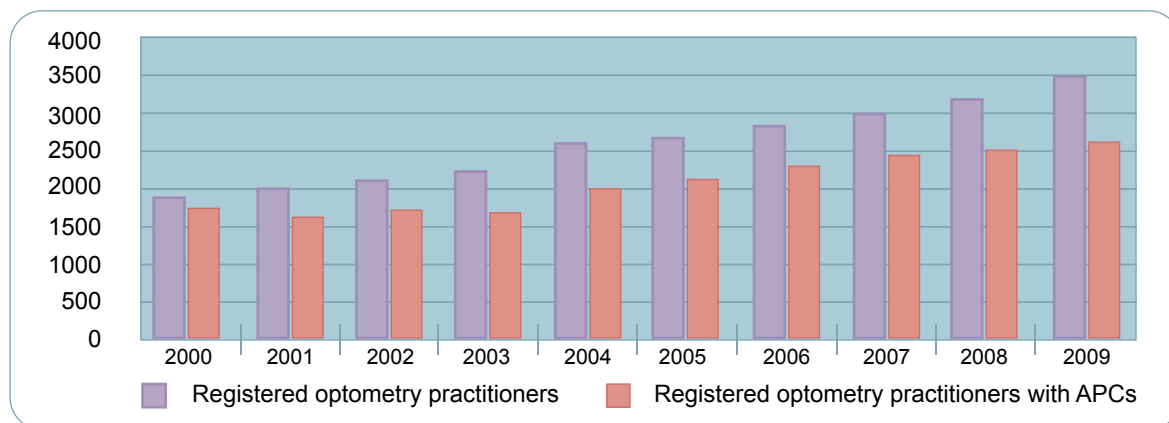
Source: Malaysian Optical Council, MoH

**TABLE 42.**  
**TOTAL NUMBER OF REGISTERED OPTOMETRY PRACTITIONERS AND TOTAL NUMBER OF PRACTITIONERS WHO HAD RENEWED THEIR APC, 2000 - 2009.**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Registered optometry practitioners</b>	1910	2004	2069	2240	2549	2660	2847	2992	3200	3493
<b>Total APC</b>	<b>1749</b>	<b>1605</b>	<b>1674</b>	<b>1674</b>	<b>1977</b>	<b>2077</b>	<b>2220</b>	<b>2443</b>	<b>2496</b>	<b>2707</b>

Source: Malaysian Optical Council, MoH

**FIGURE 10.**  
**DISTRIBUTION OF REGISTERED OPTOMETRY PRACTITIONERS WITH APCS, 2000 - 2009**



Source: Malaysian Optical Council, MoH

## Malaysian Optical Council Achievements in 2009

### 1. *Optometry/Opticianry Programme Standards for Institution of Higher Learning Malaysia*

Optometry/Opticianry Programme Standards were set up by the Ministry of Health, Malaysia and the Malaysian Optical Council in collaboration with Malaysian Qualifications Agency (MQA). The document has been endorsed by the Malaysian Optical Council and was successfully printed in December 2009. The official launching ceremony is planned in early 2010 and will be used as a guide in the accreditation process assessment for Optometry and Opticianry Programs in Institutions of Higher Learning in Malaysia.

### 2. *Standard Operating Procedure (SOP) for Optometry Services.*

The Standard Operating Procedure for Optometry Services has been set up and was successfully printed in December 2009. The SOPs for optometry services are as below;

- a. Care of patients with refractive error.
- b. Care and Vision Rehabilitation with Contact Lens Usage.
- c. Care of patients with Binocular Vision Anomalies
- d. Care and Vision Rehabilitation for Low Vision Patients
- e. Primary Eye Care
- f. Care of Paediatric Optometry Patients

All SOPs documented are summarized in Operation and Management Plan. All 7 documents including the Operation and Management Plan will be published by the Malaysian Optical Council with ISBN-978-983-44504-x-x.

### **3. Contact Lens Examinations**

Contact lens examinations for the registered opticians under Section 30(5) Optical Act 1991 were done twice for 2009. The first examination was on 15 April 2009 for theory and 11 – 12 May 2009 for the practical examination. The theory examination was the last examination scheduled for the registered opticians. The second examination was held on 17 November 2009 for practical exam.

A total of 60 candidates sat for the first examination and out of that, 5 candidates passed and were given the Contact Lens Prescribing and Dispensing Permit. For the second examination, 6 candidates sat for the examination and only 1 candidate passed, and was given the Contact Lens Prescribing and Dispensing Permit.

### **4. Enforcement Activities**

To further enhance the knowledge in enforcement activities, Malaysian Optical Council has organized an Optical Act 1991 Enforcement and Surveillance Audit Workshop from 14 to 18 March 2009 at Kg. Tok Senik Resort, Langkawi. The workshop's aimed to produce an enforcement team which will be responsible for any enforcement activities of the Optical Act 1991.

### **5. Key Performance Indicators Workshop for KKM Optometrists**

Key Performance Indicators Workshop for KKM Optometrists was held from 6 to 8 November 2009 at Everly Resort Hotel, Melaka. The workshop was held to form a management system in an organization with a measure of individual work performance according to Blue Wave Strategy. A total of 28 participants from around Malaysia had participated in this workshop.

## **MEDICAL ASSISTANTS BOARD**

The Medical Assistants Board is a body established in accordance to Act 180 Medical Assistants (Registration) 1977 as stated under section 3. The general objective of the Board is to regulate the practice of the Assistant Medical Officers and to ensure all regulations are fully implemented.

### **Medical Assistants Board and Act 180 Medical Assistant (Registration) 1977**

The Establishment and Constitution of the Medical Assistants Board is stated in Act 180 Medical Assistant (Registration) 1977. Under the Act, no person shall be employed as an Assistant Medical Officer or to perform the duties as such unless such person is registered under the Act.

**TABLE 43.**  
**NEW REGISTRATION OF MEDICAL ASSISTANT, AS OF 31ST DECEMBER 2009**

MINISTRY OF HEALTH ( MoH )		NON-MoH SECTOR	
Ulu Kinta MA College	220	Private Sector	2
AlorSetar MA College	125	HUKM	9
Seremban MA College	174	HUSM	4
KSKB Kuching	133	KIST	23
ATM	3		38
<b>Total</b>	<b>655</b>	<b>Total</b>	<b>6.1</b>
<b>Total number of New MA registration until December 2009 = 693</b>			

Source: Medical Assistants Board, MoH

### Registration Report of Medical Assistant as of 31st Disember 2009

The total number of Assistant Medical Officers registered with the Board since 1974 until 2009 was 10,682.

### Annual Practice Registration Report (APC) of Medical Assistant

The total Annual Practicing Certificates produced in in January till September 2009 was 8,922 which was 86% of the total registered Assistant Medical Officers (AMO) and 14 % of the active registered AMO application were made after September 2009. Revenue collected in Late fee contributed a total amount of RM 22,060.

### PRIVATE MEDICAL PRACTICE CONTROL SECTION

The Private Medical Practice Control Section undertakes the role to implement the Private Healthcare Facilities and Services Act 1998 which has come to its third year of implementation in 2009. The regulation and control of private healthcare facilities and services under this Act include registration, approval, licensing, handling of complaints, enforcement activities and matters relating to the private healthcare facilities and services.

### Registration

At the end of 2009, 6,672 private medical clinics and 1,536 private dental clinics were registered with the Ministry of Health which saw an increase of 4.72% and 7.05% from 2008 respectively (Table 44). There were 140 private medical clinics and 27 private dental clinics registrations disposed in 2009 mainly due to relocation or cease of operation.

**TABLE 44.**  
**NUMBER OF REGISTERED PRIVATE MEDICAL CLINICS AND PRIVATE DENTAL CLINICS IN MALAYSIA, 2008/2009**

No.	State	Number of Registration					
		Private Medical Clinic			Private Dental Clinic		
		2008	2009	Increase (%)	2008	2009	Increase (%)
1.	Johor	797	814	17 (2.1)	159	166	7 (4.4)
2.	Kedah	330	342	12 (3.6)	51	54	3 (5.9)
3.	Kelantan	178	197	19 (10.7)	47	56	9 (19.1)
4.	Melaka	273	285	12 (4.4)	34	35	1 (2.9)
5.	Negeri Sembilan	261	272	11 (4.2)	48	50	2 (4.2)
6.	Pahang	218	227	9 (4.1)	46	52	6 (13)
7.	Perak	476	496	20 (4.2)	104	117	13 (12.5)
8.	Perlis	609	627	18 (3.0)	106	108	2 (1.9)
9.	Pulau Pinang	31	32	1 (3.2)	4	4	0 (0)
10.	Sabah	1487	1570	83 (6.0)	385	417	32 (8.3)
11.	Sarawak	152	159	7 (4.6)	37	39	2 (5.4)
12.	Selangor	298	320	22 (7.4)	78	80	2 (2.6)
13.	Terengganu	303	311	8 (2.6)	82	86	4 (4.9)
14.	FT (KL)	950	1010	60 (6.3)	251	269	18 (7.2)
15.	FT (Labuan)	8	10	2 (25)	3	3	0 (0)
<b>Total</b>		<b>6371</b>	<b>6672</b>	<b>301 (4.72)</b>	<b>1432</b>	<b>1536</b>	<b>101 (7.05)</b>

Source: Private Medical Practice Control Section, MoH

### Approval and Licensing

For establishment of new private healthcare facilities and services, the Ministry of Health had received 110 new applications in 2009 as compared to 117 in 2008. A total of 347 private healthcare facilities other than private clinics, were licensed in 2009 (Table 45). Out of these, 133 licenses were issued with terms and conditions to ensure patients' safety and quality healthcare.

However, out of 356 approved establishments or maintenance of private haemodialysis centres, only 60 (16.9%) were licensed up to 2009. The shortfall were mostly due to physical limitations which compromise infection control measures and inability to meet staffing norms for qualified, trained and experienced healthcare professionals because eligible staff needs to have at least 200 hours of training and experience in haemodialysis treatment in order to be the person in charge or at least 6 months training under nephrologists' supervision to be deemed fit to provide haemodialysis treatment and care.

**TABLE 45.**  
**NUMBER OF LICENSED PRIVATE HEALTHCARE FACILITIES AND SERVICES OTHER THAN PRIVATE CLINICS IN MALAYSIA, 2009**

No.	State	Number of Licensed Private Healthcare Facility or Service			
		Private Hospitals	Private Haemodialysis Centres	Others*	Total
1.	Johor	31	9	7	47
2.	Kedah	10	6	0	16
3.	Kelantan	3	2	1	6
4.	Melaka	4	6	1	11
5.	Negeri Sembilan	7	4	1	12
6.	Pahang	8	3	1	12
7.	Perak	14	7	0	21
8.	Perlis	0	0	1	1
9.	Pulau Pinang	24	12	5	41
10.	Sabah	6	2	1	9
11.	Sarawak	10	5	5	20
12.	Selangor	52	9	21	82
13.	Terengganu	1	2	2	5
14.	FT (KL)	39	8	17	64
15.	FT (Labuan)	0	0	0	0
	<b>Total</b>	<b>209</b>	<b>75</b>	<b>63</b>	<b>347</b>

\*Others include private maternity home, private nursing home, private ambulatory care centre, private blood bank, private hospice and private community mental health centre.

Source: Private Medical Practice Control Section, MoH

## Inspection

Mandatory inspection activities had been carried out as a prerequisite for licensing of all private healthcare facilities other than private clinics. In addition, inspections were also conducted to support the applications for registration, approval and upgrading from the private healthcare facilities and services. On the whole, 142 inspections were conducted by the Private Medical Practice Control Section in 2009.

Pre and post-registration inspections of private clinics were also conducted on scheduled basis by the Private Medical Practice Control Units in all states to ensure compliance with standards delineated under the Private Healthcare Facilities and Services Act 1998 and its regulations.

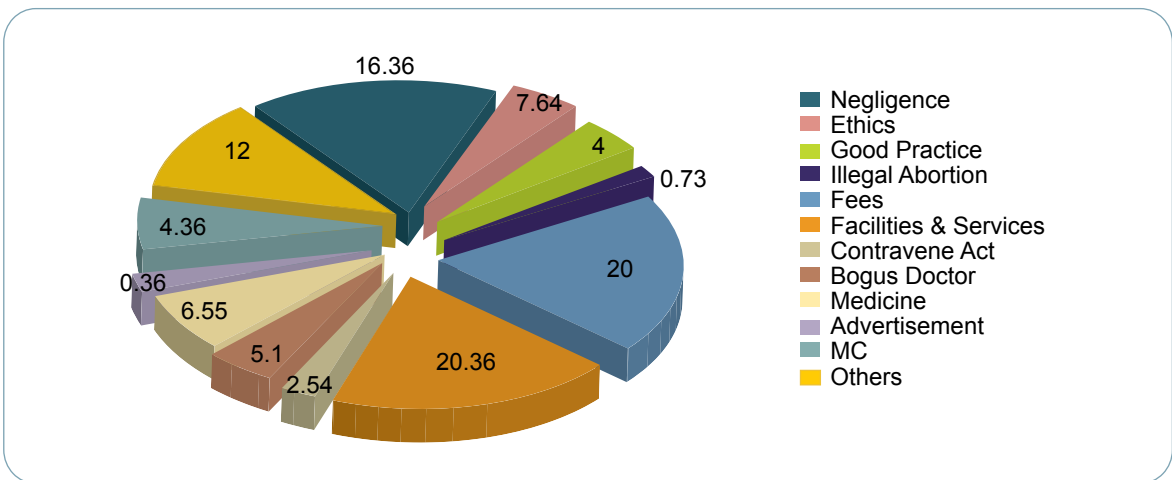
### Managed Care Organizations (MCOs)

In accordance with the provisions under Part XV of the Private Healthcare Facilities and Services Act 1998, 27 MCOs were entered into the Register of Managed Care Organization.

### Complaints

Management of complaints related to private healthcare facilities and services had been placed under the care of the Private Medical Practice Control Section starting 2009. By year end, complaints received by the Section have increased by 55.37% from 177 in 2008 to 275 in 2009. The types of complaints received in 2009 are shown in Figure 11 in which, only 118 (42.90%) complaints were exclusively related to the Private Healthcare Facilities and Services Act 1998. Overall, 120 (43.64%) complaints were resolved within the same year. Any individual or coexisting unrelated complaints were also referred to the relevant organizations such as the Malaysian Medical Council (MMC) and Medical Advertisement Board (MAB).

**FIGURE 11.**  
**NUMBER AND TYPES OF COMPLAINTS RECEIVED BY THE PRIVATE MEDICAL PRACTICE CONTROL SECTION, 2009**



Source: Private Medical Practice Control Section, MoH

### Enforcement

Likewise, enforcement activities under the Private Healthcare Facilities and Services 1998 in 2009 were also monitored by the Private Medical Practice Control Section. In that year alone, 16 raids had been conducted as compared to 14 raids in the previous years and the reasons for the raids are shown in Table 46.



**TABLE 46.**  
**NUMBER OF AND REASONS FOR RAIDING ACTIVITIES ON PRIVATE HEALTHCARE**  
**FACILITIES AND SERVICES, 2009**

No.	Reasons for Raid	No. of Raid	
		2008	2009
1.	Unlicensed Premises	3	4
2.	Unregistered Premises	5	3
3.	Illegal Abortion	0	2
4.	Bogus Doctor	6	6
5.	Seroconversion	0	1
<b>Total</b>		<b>14</b>	<b>16</b>

*Source: Private Medical Practice Control Section, MoH*

### **Consultative Services**

Consultations by the Private Medical Practice Control Section have always been provided to the stakeholders, at no cost to facilitate compliance with all requirements under the Private Healthcare Facilities and Services 1998 and its regulations. In 2009 alone, a total of 381 consultative services had been provided, which include, amongst others, 47 consultative services to facilitate licensing of private haemodialysis centres and 334 consultative services for the establishment and operation of new private healthcare facilities and services.

### **Public Dialogues**

Creation of awareness among the stakeholders has a major role in promoting patient safety and quality healthcare for the public. There were 10 dialogue sessions participated by the Private Medical Practice Control Section to ensure continuous co-operation and commitment from the healthcare industry.

### **Capacity Building**

In 2009, 109 staffs of the Private Medical Practice Control Section and Private Medical Practice Control Units in all states have been trained in various areas on enforcement. A structured modular training program for enforcement has also been prepared and approval has been given in principle by the Ministry of Health to start formal training of staff in medical law at tertiary level. In addition, 16 in-house trainings on the implementation of the Private Healthcare Facilities and Services 1998 and its regulations have also been organized to strengthen the current workforce within the Private Medical Practice Control Section.

## **MEDICAL LEGISLATION AND GLOBALISATION SECTION**

Medical Legislation Section is responsible for the drafting of new medical laws and its regulations as well as amendment of existing laws and regulations. The Globalization Unit under this section functions as the technical secretariat for healthcare services sector liberalization.

### **A. List of health laws under the responsibility of the medical legislation section:**

#### **1. Pathology Laboratory Regulations 20\_\_**

The Pathology Laboratory Regulations draft was improved and sent for review by Ministry of Health's Legal Advisor.

#### **2. Allied Health Profession Bill 20\_\_**

Allied Health Profession Bill 20\_\_ was at its final stage of drafting and the preparation of its regulation was started with cooperation from the Allied Health Sciences Division that was newly established.

#### **3. Human Reproductive Cloning Bill 20\_\_**

This draft was reviewed and decision was made that the issue on reproductive human cloning will be addressed in the new draft of Assisted Human Reproduction Technology Bill 20\_\_.

#### **4. Cosmetology Bill 20\_\_**

The draft of this bill was studied and revised again in order to identify the most appropriate mechanism to regulate the cosmetologist and services provided by cosmetologist because of multi agencies involvement.

#### **5. Mental Health Regulations 20\_\_**

Mental Health Regulation 20\_\_ was reviewed by Attorney General's Chamber and improvement was made accordingly by this section. It was expected to be in force by 2010.

#### **6. Assisted Reproductive Techniques Bill 20\_\_**

Few meetings were held where a new concept of regulating this service were agreed upon. New drafting committee will be appointed in 2010 and will commence the drafting meeting at the earliest possible.

#### **7. Medical Act 1971**

Draft amendment of the Medical Act 1971 was submitted to the Attorney-General Chambers for review. The amendment is expected to be presented in the Parliament in early 2010.

#### **8. Human Tissue Act 1974**

Review of the final draft of the amended Act was pending the final draft of Medical Act 1971 as there were cross-references between the two Acts. It was proposed that it is to be incorporated into the new Organ Transplantation Bill yet to be drafted.

## **9. Medical Assistant (Registration) Act 1977 and Regulations 1979**

Discussion on the amendment of draft is ongoing.

### **B. Lists of Liberalization Activities:**

#### **1. ASEAN Coordinating Committee on Services (CCS) and Healthcare Services Sectoral Working Group (HSSWG)**

Two meetings were held in 2009 where issues pertaining to Mutual Recognition Arrangements (MRA) Medical Practitioner and MRA Dental Practitioner were discussed. The section's Deputy Director represented Malaysia as the Chairperson of the working group.

#### **2. Mutual Recognition Arrangement (MRA)**

MRA Medical Practitioner and MRA Dental Practitioner were signed in February 2009.

#### **3. ASEAN Framework Agreement on Services (AFAS)**

Improvements were made for commitment in Private Hospital Services under AFAS seventh package in terms of foreign equity and trade barriers.

#### **4. Free Trade Agreements**

ASEAN-Australia-New Zealand Free Trade Agreement was concluded in 2009.

#### **5. Liberalization Seminar: Towards the Implementation of Mutual Recognition Arrangement**

This seminar was organized on 1st October 2009 at Chancery Place, Diplomatic Precinct, Putrajaya. It was held in collaboration with the Oral Health Division and Nursing Division of Ministry of Health. It was attended by almost 100 participants from private institutions, universities and public sector representing medical, dental and nursing professions.

#### **6. Consultations with stakeholders**

This section was involved in dialogue sessions with stakeholders which discussed matters related to liberalization of healthcare services.

#### **7. Global Healthcare Congress 2009, Singapore**

Three officers from this section attended the above conference held at Grand Hyatt Hotel from 23-25 February 2009. The conference was informative because it provided participants with the latest development in the healthcare industry globally.

### **MEDICOLEGAL SECTION**

The Medicolegal Unit is responsible for handling and investigating cases specified public complaints, technical complaints and medico-legal cases laid against the government health clinics and government hospitals under the Ministry of Health. It also functions as a coordinator and as a referral centre for both medico legal and potential medicolegal cases. Apart from this, the Unit also cooperates with Judicial and Legal Training Institute (ILKAP) and other agencies in organizing courses on medicolegal for staffs in the Ministry of Health.

## Technical Complaints & Potential Medico Legal Cases

Technical complaints and potential medico legal cases are expected to increase from year to year. For all potential medico legal cases, Medicolegal Unit would request the Health Departments of respective states to form an Independent Inquiry Committee (IIC) in order to investigate and report these cases. A representative from the Medicolegal Unit chosen as Committee Members of IIC will be present for all the meetings. The Committee will establish facts and analyze them. The findings, conclusions and recommendations will be documented as a report. The potential medicolegal cases will be discussed in the Ex gratia Meetings monthly if compensation are requested by patient or complainant. If medical negligence noted, ex gratia payment would be paid after approval by Attorney General Chamber's and the Director General of Health Malaysia. For 2009, a total of 8 ex gratia meetings have been held to consider potential medico legal cases for ex gratia payment.

### Medical Litigation Cases

Generally the function of this Unit in managing medical litigation cases is to provide cooperation and assistance to the Attorney General Chamber's, in order to handle all medical litigation cases charged against the Ministry of Health as below:

- a. assisting Attorney General Chamber's in filing the defense statements by requesting documents / information needed by them from State Health Department or hospitals involved
- b. providing expert witness / other information / documents related to any summoned cases

The number of cases settled often depends on the court process. Simple cases might take a shorter period to be settled. This Unit will follow up cases which have been settled, and for the cases that have been compensated, the Ministry of Finance will ask the Ministry to take action against the person involved. Disciplinary action will be taken against them and then the case can be closed.

### Medico Legal Courses (Cooperation with ILKAP)

The increasing number of potential medico legal cases and medico legal cases from year to year has led to awareness on the need of medico legal awareness training and courses among the staff of Ministry of Health. Therefore with the cooperation of Judicial and Legal Training Institute (ILKAP) this unit has taken initiative to co-organize medico legal courses for MOH's staffs given preference to those exposed to medicolegal cases. For the year of 2009, 3 medicolegal courses had been held for paramedics, medical specialist and medical administrator respectively.

### Achievements

Table 47 shows the number of potential medicolegal cases and medical legal cases settled from year 2005 until 2009. These include cases settled by court, cases settled out of court, cases which had been withdrawn or annulled by the court and cases settled through ex gratia payment. The settled cases only cover government hospitals under Ministry of Health. Table 48 shows the amount of compensation paid by court order and out of court (ex gratia payment) to the patients / complainants / plaintiffs from 2005 to 2009.

**TABLE 47.**  
**NUMBER OF POTENTIAL MEDICOLEGAL CASES AND MEDICAL LEGAL CASES SETTLED, 2005-2009**

No.	DISCIPLINE	2005	2006	2007	2008	2009	Total
1.	O & G	4	8	7	5	18	42
2.	Surgery	1	3	2	4	7	17
3.	Orthopaedic	1	0	1	4	2	8
4.	Paediatric	3	3	2	2	7	17
5.	Anaesthesia	0	0	0	1	0	1
6.	Medical	0	1	3	6	14	24
7.	Psychiatry	0	1	0	0	0	1
8.	Ophthalmology	0	0	0	0	1	1
9.	Oncology	0	0	0	0	2	2
<b>Total</b>		<b>9</b>	<b>16</b>	<b>15</b>	<b>22</b>	<b>51</b>	<b>113</b>

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

**TABLE 48.**  
**COMPENSATION PAID UPON COURT ORDERS AND EX GRATIA, 2005 – 2009**

No.	DISCIPLINE	2005	2006	2007	2008	2009	Total
1.	O & G	257,994	315,224	328,775	114,000	844,135	1,860,128
2.	Surgery	25,779	121,809	28,265	132,362	87,319	395,534
3.	Orthopaedic	15,000	-	10,000	70,034	29,736	124,770
4.	Paediatric	30,000	32,907	293,819	189,867	109,300	655,893
5.	Anaesthesia	-	-	-	12,000	-	12,000
6.	Medical	-	613,057	423,353	659,096	1,551,224	3,246,730
7.	Psychiatry	-	141,993	-	-	-	141,993
8.	Ophthalmology	-	-	-	-	75,000	75,000
9.	Oncology	-	-	-	-	152,200	152,200
<b>Total</b>		<b>328,773</b>	<b>1,224,990</b>	<b>1,084,212</b>	<b>1,177,359</b>	<b>2,848,914</b>	<b>6,664,248</b>

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

## TELEHEALTH

The Telehealth initiative was launched by the government of Malaysia to lead the country's healthcare system into the Information Age. Telehealth will play an essential role in catalyzing the development of the MSC, and to achieve the economic development goals in Vision 2020. The Telemedicine Blueprint (1997) provides the conceptual model and

implementation roadmap for the roll-out of telemedicine across the nation, and link Malaysia into a global network of virtual health services.

Ministry of Health's health ICT projects led by the Telehealth Division are geared towards achieving the eight health service goals which will transform the current healthcare system to provide effective, efficient and affordable services that promote wellness throughout life (wellness focus), focusing services on the person instead ensuring seamless, continuous care which is tailored to individual or group need are available when and where required, providing accurate and timely information and promote knowledge to enable a person to make better informed health decisions (Informed person), empowering and enabling individuals and families to manage health through knowledge and skills transfer (self help), and providing health services closer to home or at home.

In order to provide better quality services and a reduction in costs, the development of an Integrated Health Information System should be considered. Integrated health information system will lead to healthcare services that are structured to achieve the eight health goals. With the integrated health information system, there will be better access to medical and administrative patient data along with higher quality patient health data management. At the same time, there will also be more effective gathering of medical information for health care business process planning and optimization.

Creation of integrated health information system can be made possible with the adoption of Malaysian Health Informatics Standards; which include National Health Data Dictionary (NHDD) and Integrated Healthcare Enterprise (IHE), and technical standards published by the Health Informatics Centre of the Planning and Development Division, and the Information Management Division.

Besides integrating health information system, other telehealth services like Continuous Professional Development (CPD), MyHealth, Teleconsultation and MyHIX/LHR were further strengthened to support the delivery of quality healthcare services. Patient participation in the healthcare processes will be increased through giving empowerment to individuals, and patient focused approach with care providers now playing role as facilitators, enforcer and legislator.

### ***TeleConsultation (TC)***

The Teleconsultation services encompassed 4 disciplines namely Neurosurgery, Radiology, Cardiology and Dermatology. Enhancement and expansion of specialised online services along clinical services network has been done in consultation with Medical Development Division and National Consultant for these 4 disciplines.

Procurement of new TC system was carried out since September 2008 and development works started since July 2009. The installation of equipment, software, local area network and TC applications at the sites will be expected to be completed by December 2010.

## **Health Online**

The MyHealth Portal continues to provide a platform for the dissemination of credible local health information and education outreach covering both illness and wellness aspects to the Malaysian public. The revamped portal has been made available since 25 July 2009. Until December 2009, the portal has registered more than 742,228 hits, with an average of approximately 14,680 hits per month for year 2009.

The portal content is continuously being reviewed and new topics added. To date, there are 673 topics in Bahasa Malaysia and 694 topics in English. Content has been expanded to include nutrition, medication, oral and mental health. The portal design is always being enhanced once every 6 months to provide a fresh look and feel. A total of 100 new topics were uploaded in 2009.

A total of 3,641 e-mails on matters related to health have been received from the public through 'Ask the Expert' service. A panel, comprising of specialists from various disciplines, provide support in answering queries from the individuals.

A new module known as Health Risk Assessment is made available on 30 July 2009 covering obesity, diabetes, heart disease, mental health, smoking and physical activity.

## **Continuing Professional Development (CPD)**

- **Online CPD Services**

Online CPD Services is a program designed to assist various categories of MOH staff members to have equal opportunities and access to various up-to-date CPD activities and materials. Online CPD Services comprises of Online Monitoring of Continuing Professional Development (myCPD) and Virtual Library.

- **myCPD**

myCPD system has been operational since February 2008 and initially 3 categories of MOH staff members (medical officers, dental officers, and pharmacists) were required to record all their CPD activities through this online system.

myCPD functions as an online logbook which allows MOH staff members to plan, record and track their CPD activities and hence acquire CPD credit points which can be used to complement their competency assessment (*PTK*). It incorporates an extensive evaluation and competence development for MOH staff in both functional and generic component. It is now possible to provide a comprehensive mechanism to evaluate its personnel more appropriately and objectively.

As of 30 November 2009, there were 43,499 registered users carrying out 1,419,318 transactions online. Percentage of doctors, dentists and pharmacists registered with myCPD system is as stated in Table 49.

**TABLE 49.**  
**NUMBER OF HEALTH CARE PROVIDERS REGISTERED IN THE MYCPD SYSTEM, 2009**

Category of service scheme	No. of post filled (as of 30 Sept 2009)	No. registered with myCPD	Percentage (%)
Doctors	15,446	11,146	72.1
Dentists	1,506	1,595	105.9
Pharmacists	3,116	3,039	97.5

Source: Telehealth Division, MoH

Medical Development Division is the division managing myCPD helpdesk since 1 June 2009. On average, myCPD helpdesk received 150 calls per month and five e-mails daily from myCPD users. Yearly PTK-CPD report is jointly produced by the Professional Development Section of Medical Development Division, and Competency Development Division.

In 2010, myCPD will be extended to 6 more service schemes (nurses, assistant medical officers, allied health sciences, research officers, tutors and engineers). MyCPD will also be incorporating generic module for Competency Division, MOH usage and integration with CPD-PTK and CPD-APC.

- **Virtual Library**

MOH Virtual Library portal, a one-stop centre for information and knowledge sharing in medical, scientific and technical disciplines for MOH staff members can be accessed from <http://vlib.moh.gov.my> since 20 April 2009. It provides access to both local and international knowledge database as well as local publications. The portal can be accessed by all MOH staff members as well as the general public. The subscribed content access is restricted to MOH officers only.

Virtual Library is foreseen to bring enormous benefits as it is able to operate 24 hours per day which enables any MOH staff member to utilise the website despite their busy working nature in providing health services to patients. Furthermore, Virtual Library is specially designed to cater for MOH staff members living in rural areas.

The portal is currently linked with eight library systems at the following locations:

1. MOH Headquarters in Putrajaya.
2. Institute of Medical Research, Kuala Lumpur
3. Institute of Health Management, Kuala Lumpur
4. Hospital Kuala Lumpur
5. Hospital Tuanku Ja'afar, Seremban
6. Hospital Pulau Pinang



7. Hospital Sultanah Bahiyah, Alor Setar
8. Hospital Umum Sarawak, Kuching

Total registered users as of 30 September 2009 are 146,291 and 145,747 active users.

Starting 2010, MOH will be going for central subscription of e-journal & online database. Centralised subscription is done to avoid repeated subscription of similar online database by each healthcare facility. The number of users accessing e-journal and online database will be unlimited (unlimited users). This shall lead to development of MOH officers who are knowledge equipped, efficient and effective in delivering comprehensive, quality and best health service to the public.

### **Other Telehealth Initiatives with Multimedia Development Corporation Sdn Bhd (MDeC)**

- ***Malaysia Telehealth Connectathon***

Connectathon provides the avenue for companies to test their products for interoperability where information can be shared with other systems. Local standards and guidelines are made available to all companies participating in Malaysia Telehealth Connectathon testing.

Connectathon has been held on 14 January 2009 where 12 products have been tested based on 6 integration profiles. These will be used as basis for health system integration for both public and private health sectors in Malaysia. Showcases were exhibited during the HIMSS AsiaPac 2009.

At the same time, 3 educational sessions were conducted to various stakeholders to create awareness and buy-in from various stakeholders from both public and private healthcare sectors.

- ***Malaysian Health Information Exchange (myHIX)***

MOH has embarked on a small scale integration project known as myHIX together with MDeC to facilitate sharing of patient clinical information between various healthcare facilities.

The proposal of myHIX was approved at the 27th FCC Meeting, which was chaired by Yg. Bhg. Tan Sri KSN on 25 June 2008. The scope of implementation was then approved by the Telehealth Steering Committee 2008 chaired by Y. Bhg. Tan Sri DG of Health on 18 November 2008.

The pilot project involved 6 healthcare facilities with Hospital/Clinic Information System (Putrajaya Health Centre, Hospital Putrajaya, Hospital Tuanku Ja'afar Seremban, Hospital Port Dickson, National Heart Institute and UKM Medical Centre). The myHIX project will make discharge summary or clinical summary available online and be shared between these 6 facilities.

Simulation testing myHIX environment involving Putrajaya Health Centre, Hospital Putrajaya, Hospital Tuanku Ja'afar Seremban and Hospital Port Dickson from 26 – 29 October 2009 was successful. The testing included the sending of discharge summary from hospital's Hospital Information System to myHIX (at myLoca), verifying the data sent and retrieving the data from myHIX system.

## **CHALLENGES AND 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 specialization and sub-specialization 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, process, standard and guidelines for the specialty/subspecialty services to function optimally; retaining these personnel to 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 organizational 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 human resources and regulation of medical practices.



# 5

## Research and Technical Support Programme

## INTRODUCTION

The Research and Technical Support (R&TS) Programme, established since 1991, has four Divisions which carries out four main activities; Health Planning & Development; Engineering Services; Traditional and Complementary Medicine and Research. Its latest division, the Medical Devices Division, a spin off from the Engineering Services Division, was established in 2007 to further strengthen implementation of the activities under the Programme. Activities of the R&ST Programme are aimed at providing technical and support services to the other Programmes within the Ministry of Health. The Programme now consists of the following Divisions; the Health Planning & Development, Engineering Services, Traditional & Complementary Medicine, Medical Devices and the National Institutes of Health (NIH).

The Planning and Development Division focuses on several crucial activities such as the formulation of the National Healthcare Financing Mechanism, improvement of the data quality within the Health Information Management Systems (HIMS) and implementing development projects as planned in the Ninth Malaysian Plan (9MP). The Division also develops a framework for the evaluation of the 9MP towards the preparation of the 10th Malaysian Plan (10MP).

The Engineering Services Division of the Ministry of Health started as the Environmental Health and Engineering Unit under the Health Division in 1968. It consisted of the Public Health Engineering Unit and Radiation Protection Unit then. It was upgraded to being a Division in 1981 and today comprises of three different branches, namely, the Regulatory Branch, the Services Branch and the Planning Branch. The Division now boasts of a multi-disciplinary team of engineers and scientists. Its core business includes Public Health Engineering, Healthcare Facility Engineering and Radiation Protection and Safety.

With the role of regulating medical device and its industry players in Malaysia, Medical Devices Control Division has two important objectives which are to protect the public health in terms of safety, and to ensure that new technology is made available for use for patients in a timely manner while at the same time facilitating trade in the medical devices industry. A comprehensive regulatory control framework is currently being developed which comprise of various activities to regulate the medical devices industry. The Medical Device Bill has been drafted to provide the legal support for the control program and it is now being finalized before it is tabled in the Parliament.

The Traditional and Complementary Medicine Division (T&CMD) was gazetted under the Research & Technical Support Programme in February 2004. From December 2004, the division was divided into three sections - Administration & Finance; Policy & Development; and Practise, Registration and Training Section. In 2007, the division expanded into having a Research Unit and Inspectorate & Enforcement Section to coordinate surveillance activities in traditional and complementary medicine practices. T&CMD concentrated in its activities in regulating and registering TCM services and premises in ensuring that the delivery of T&CM services to the Malaysian public is safe and effective.

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) continue their activities in research, training, consultancy and diagnostics services in supporting the Programmes of the MOH. Each institute continues to focus its research to addresses the Ninth Malaysia Plan (9MP) Health Research Priority Areas as well as in the core research areas of each institute thus further strengthening their functions as Centres of Excellence for health research.

The NIH Secretariat continues to provide 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 main function of the Institute for Medical Research (IMR) is to conduct researches in order 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/advisory services.

Institute for Public Health (IPH) was founded on 1st July 1966, and is the foremost health institution in Malaysia where it covers health research, training and consultation services to the agencies in and outside the IPH. IPH is also involved in public health research that contributes to the improvement of management and provision of public health service. Among the major projects that have been carried out are National Health Morbidity Survey I (1986), II (1996) and III (2006), National Ear and Hearing Disorders Survey, Food Premise Survey (2008-2009) and National Iodine Deficiency Disorders (IDD) Survey 2008.

The CRC consists of six research units, which are the Clinical Epidemiology Unit (CEU), the Patient Registry Unit (PRU), the Healthcare Statistics Unit (HSU), the Clinical Trial Unit (CTU), One Stop Centre, and the Research Management Unit. As means to achieve the “*to improve patients’ health outcomes through ethical and quality clinical research*” mission, the CRC assists government clinicians in establishing research protocol, research project planning, project management and publication. The CRC also organizes research consultation clinics and conduct research-related training courses such as good clinical practice (GCP), research ethics and research methodology. Since its inception, the CRC has multiplied to 17 branches in all major public hospitals throughout Malaysia.

The core functions of IHM are research, training and consultation in health management. As such, the roles of IHM are to develop a strong and effective system in health research management, to develop a health management training program that is appropriate and current, capacity building in research and training in health management, to strengthen faculty members in the area of research methodology and training, to develop a comprehensive Reference Library of health management and related areas for the National Institutes of Health, to foster networking and smart partnership between individuals, institutions and organizations in the public and private sector for greater collaborative

efforts, and to build capacity in giving input, feedback, views and proposals to the Ministry of Health in strategic planning and evaluation of health plans.

The Institute for Health Systems Research (IHSR) was designated as a WHO Collaborating Centre for Health Systems Research in 1988. It was later upgraded into a WHO Collaborating Centre for Health Systems Research and Quality Improvement from January 2001 till the current period. The Institute's general area of research includes research in health care services, health outcomes, quality improvement, health policy, and health economics and financing.

IHBR has established beneficial research collaboration both outside and within the Ministry of Health Malaysia. The number of staff at the Institute for Health Behavioural Research (IHBR) increased significantly in 2009 in line with the growth and activities of the Institute. The majority of the permanent staffs are Health Education Officers, which were recruited to support various research projects carried out by the Institute.

## **ACTIVITIES AND ACHIEVEMENTS**

### **HEALTH PLANNING AND DEVELOPMENT**

#### **Policy and Health Plan**

The process of 9MP Evaluation was conducted to ensure the proposal for improvements is taken into consideration in the formulation of Tenth Malaysia Health Plan. The Evaluation utilized the triangulation methods comprising health documents review, focus group discussion, workshop and questionnaires. Officers from MoH and State Health Departments, hospital directors and district health officers were involved in this evaluation process. Questionnaires were distributed only to the private sector. In general, over 700 health indicators identified and analysed.

Several proposals for the 10MP included enhancement of the optimal use of resources e.g. increased public-private integration, equity for those in need and improvement in the health information management system. The role of the public health needs to be strengthened particularly in combating non-communicable diseases such as diabetes and hypertension.

#### **• Formulation of 10MP**

The 10MP was formulated in accordance to several circulars developed by the Economic Planning Unit (EPU), Prime Minister's Department. The formulation was also based on the 5 National Mission Thrusts:

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

Thrust 5: To strengthen the institutional and implementation capacity

In order to formulate the 10MP, the EPU developed several Mission Cluster Groups to discuss and deliberate on issues and challenges pertinent to each thrust as well as the way forward proposals.

The health sector directly involves with Thrust 4. Thus, three Key Result Areas were identified as main focus in the formulation of 10MP:

1. Health Sector Transformation Towards A More Efficient & Effective Health System in Ensuring Universal Access to Healthcare
2. Health Awareness & Healthy Lifestyle
3. Empowerment of Individual and Community to be responsible for their health.

A workshop to discuss the 10MP formulation process, framework and future directions was held on 10-12 November 2009 with the involvement of both public and private health stakeholders.

- **The Ministry of Health Policy and Planning Committee (*Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan, JDPKK*)**

JDPKK, the highest committee to approve policy proposals, had met twice in 2009. During the meetings, 3 papers were presented of which two were approved and one paper was granted conditional approval.

### **Health Facility Planning and Development**

In the 9MP, a development allocation of RM 10.176 billion was approved for the Ministry of Health (MoH) to finance the development of 1644 projects. However, MoH allocation was reduced to RM 10.016 billion in the Mid Term Review, prompting MoH to reduce its total number of development projects to 1073. The allocation was further reviewed in 2009 with the introduction of the second economic stimulation package (PRE2) on 10th March 2009 (MoH received RM 565.962 million) and an additional allocation of RM 134.274 million for Variation of Price (VOP) to support the cost increase in construction materials and petrol. Overall, the revised MoH allocation for the 9MP period is RM 10.716 billion (Table 1).

**TABLE 1**  
**HEALTH FACILITY PROJECT AND DEVELOPMENT ALLOCATION FOR THE 9MP**

Project Detail	Facilities	No. of Projects	Allocation (RM '000)	Percentage	Expenditure (RM '000)	Percentage
001	Training	25	1,103,718	10.30%	859,955	77.64%
002	Public Health	387	2,075,599	19.37%	1,045,836	50.39%
003	Upgrading of Hospital Facilities	167	2,275,454	21.23%	1,432,142	62.94%
004	New Hospitals	31	1,518,668	14.17%	1,142,103	75.20%
005	Research & Development (R&D)	2	175,000	1.63%	145,787	83.31%
006	Upgrading & Maintenance	5	508,500	4.74%	350,433	68.92%
007	Land Acquisition & Maintenance	1	450,000	4.20%	304,006	67.56%
008	ICT	15	782,980	7.31%	424,239	54.18%
009	Staff Facilities/ Quarters	96	550,389	5.14%	245,633	44.63%
010	Promotion	1	20,000	0.19%	14,963	74.82%
011	Equipment & Vehicles	343	1,256,613	11.73%	724,874	57.68%
<b>Total</b>		<b>1,073</b>	<b>10,716,921</b>	<b>100.00%</b>	<b>6,686,971</b>	<b>62.40%</b>

Source: Planning and Development Division, MoH

For 2009, MoH was allocated RM 2.566 billion which is about 23.95% of the total 9MP allocation. The total expenditure for 2009 was RM 2.539 billion, which accounted to 98.95% of the year allocation. The overall project expenditure for the 9MP (from 1 January 2006 to 31 December 2009) was RM 6.686 billion, that accounts to 62.40% of the total allocation for the 9MP (Table 2).

The year 2009 was a busy year as a number of major development projects had took off. Among the major projects that has moved into design development stage includes Ambulatory Care Centres (ACC) for Hospital Kuala Lumpur and Hospital Raja Perempuan Zainab II (Kota Bharu, Kelantan), the Obstetric Complex for Hospital Tengku Ampuan Rahimah (Klang, Selangor), and the Women and Child Complexes for Hospital Tuanku Jaafar (Seremban), Hospital Sultanah Nur Zahirah (Kuala Terengganu, Terengganu) and Hospital Ipoh (Perak). The upgrading projects of existing Cardiac Centres in eight hospitals throughout the country have also started. Besides that, the design development of the country's first National Cancer Institute has started in mid 2009, and building works is expected to begin in the third quarter of 2010.



**TABLE 2.**  
**DEVELOPMENT ALLOCATION AND EXPENDITURE FOR HEALTH FACILITIES PROJECT, 2009**

Project Detail	Facilities	Allocation (RM '000)	Percentage	Expenditure (RM '000)	Percentage
001	Training	289,532	11.28%	281,895	97.36%
002	Public Health	609,772	23.76%	605,517	99.30%
003	Upgrading of Hospital Facilities	743,456	28.97%	740,549	99.61%
004	New Hospitals	344,808	13.43%	343,820	99.71%
005	Research & Development (R&D)	33,415	1.30%	32,837	98.27%
006	Upgrading & Maintenance	50,661	1.97%	50,500	99.68%
007	Land Acquisition & Maintenance	5,733	0.22%	5,724	99.84%
008	ICT	87,104	3.39%	84,484	96.99%
009	Staff Facilities/Quarters	118,019	4.60%	117,063	99.19%
010	Promotion	6,600	0.26%	5,518	83.61%
011	Equipment & Vehicles	277,496	10.81%	271,839	97.96%
	<b>Total</b>	<b>2,566,596</b>	<b>100.00%</b>	<b>2,539,746</b>	<b>98.95%</b>

Source: Planning and Development Division, MoH

In an effort to overcome acute shortage of hospital beds in Sabah following the closure of the Queen Elizabeth Hospital's (QEH) main block in 2008, the Federal Government through MOH has taken the initiative to purchase the Sabah Medical Centre (SMC). The purchasing process was completed in September 2009 and the hospital is currently functioning as an extension of QEH specializing in Cardiac and Cancer treatment.

Besides that, new standard plans for 6 types of Health Clinics have been developed together with the Public Works Department (JKR). Inputs on the developed plans were also obtained from the end users and the relevant divisions in MOH during a one day interaction session to further improve the building plans. The detail design development process is expected to take place in 2010 as planned.

Several seminars and workshops were also organised in collaboration with the Public Works Department (JKR) for capacity building. Among them were a three-day workshop to develop a comprehensive Post Occupancy Evaluation (POE) questionnaires format for health buildings, and a one-day seminar on Hospital Design by Professor Dr Alan Delani, a renowned architect/medical planner from Sweden.

## Malaysia National Health Accounts (MNHA)

The first Malaysian National Health Accounts (MNHA) data was the result of a project that was completed in 2005 with estimation of six years national health expenditure (1997 – 2002). Subsequently three more cycles of MNHA data were produced for the years 2003 to 2006, and 2007 to 2008; all together resulting in a twelve year time series data (1997 – 2008). The establishment of the MNHA unit and regular estimations of health expenditure data has elevated the status of National Health Accounts (NHA) in the country from Level I to Level IV. The year 2009 also saw the beginning of major utilization of these data in national expenditure policy reviews and health planning for the nation especially in relation to health financing in the country.

In addition to the regular production of MNHA data, the country has been an active member in related international activities, both at regional and global levels. Among these activities include the annual NHA submission on country data to the World Health Organization (WHO) for the World Health Statistics (WHOSIS) on health accounts and expenditure, participation in the annual Technical Workshop and Regional National Health Accounts Meeting of NHA Experts in Asia-Pacific Region, consultative participation on the Review of the System of Health Accounts, participation in global projects such as Institutionalization of National Health Accounts and others. These activities involve agencies like WHO, Asia Pacific National Health Accounts Network (APNHAN), Organization of Economic Cooperation and Development (OECD), OECD-Korea, European Statistics (Eurostat), and World Bank.

## National Health Financing (NHF)

In 2009, activities related to planning the restructuring of the Malaysian health system were stepped-up.

- ***Planning the Restructuring of The Malaysian Health System***

Preparation of a comprehensive health care restructuring proposal continued from past efforts. In April 2009, the Honourable Minister of Health proposed that MoH develop a comprehensive plan to restructure the Malaysian Health System called ***1Care for 1Malaysia*** in line with the ***1Malaysia*** concept.

The Ministry of Health has formed a Coordinating Committee for ***1Care for 1Malaysia*** with NHF as the secretariat to conduct discussions and meetings with various Divisions of MoH, central agencies, professional organizations, NGOs and other stakeholders in order to get input and feedback in the planning process.

In July 2009, the Honourable Minister of Health decided that a cabinet paper regarding the proposed restructuring plan be prepared. Subsequently, the His Excellency the Prime Minister instructed that a concept paper on ***1Care for 1Malaysia*** be presented to the Economic Council (EC). At the initial presentation to the EC on 11 August 2009, the EC requested further information on stakeholders' opinion, financial projection and impact assessment.

- ***Related Studies for Restructuring Malaysian Health System***

Further researches were carried out based on the EC decision. With support from WHO, the Impact Assessment was conducted by NHF and international consultant, Prof. Soonman Kwon from Seoul National University, Korea and local consultant Mr. Chang Yii Tan from PE Research, Petaling Jaya, Selangor. Dr. Chris James from WHO, Western Pacific Region at Office assisted NHF in conducting 10 years Financial Projections on healthcare costs in Malaysia. Outputs from these studies were documented in two separate reports in December 2009 and used as input for the Economic Council feedback in 2010.

The Central Bank of Malaysia also assisted MOH through collaboration and discussion with NHF regarding the three areas of study requested by the EC.

- ***Consultancy***

In collaboration with the Medical Practice Division, NHF engaged Prof. Mehrun Siraj through UNDP support to review current laws and legislation pertaining to the health system in view of the proposed restructuring of the Malaysian Health System.

- ***Capacity Building***

Several seminars, workshops and discussions were conducted for capacity building of MOH staff and other agencies. On 16 December 2009, Dr. Robert Sparrow of Erasmus University presented research on providing Social Health Insurance for the poor and decentralised health spending in Indonesia. NHF also assisted the Family Health Development Division in conducting the ACG conference in November 2009 followed by primary health care workshop related to health sector reform.

To build up knowledge and skills in health care financing, social health insurance and health sector reform, several officers from NHF attended relevant courses such as:

1. Social Health Insurance, conducted by the International Training Centre, International Labour Organization (ITCILO) — 2 person
2. Flagship Course of Health Sector Reform and Sustainable Financing, conducted by World Bank Institute — 1 person
3. Strategic Purchasing for Social Protection, conducted by Chulalongkorn University, Thailand — 2 person

## **Health Informatics**

The Information and Documentation System (IDS) Unit was established in 1981, replacing the Medical Records and Health Statistic Unit, and the Operations Research Unit. Subsequently in 2007, Health Informatics Centre (HIC) was established under the 9MP to replace the IDS unit, as an entity to manage the national Health Information Management

System (HIMS). HIC are responsible to develop an integrated and uniform health information system in line with information technology advancement, in order to be the national health data warehouse.

In 2009, training modules for ICD10 coders in all MOH hospitals was developed and the first coding validation workshop, based on hospital discharge diagnosis recorded in the *Sistem Maklumat Rawatan Pesakit* (SMRP) and the PPT2, was organized. These activities were done as part of the monitoring and evaluation process of the data entry quality into the HIMS.

The HIMS E-Reporting was further strengthened and improved in 2009. HIC continues to produce several reports and annual publications such as the MOH Annual Report, Health Facts, Indicators for Monitoring and Evaluation for Strategy for Health for All, and HIMS reports by subsystem.

Focus was also given to the Health Informatics Standard development, and HIC has taken part in the annual WHO ISO/TC 215 meetings. ISO/TC 215 is the International Organization for Standardizations' Technical Committee on health informatics, which emphasized on the compatibility and interoperability between independent systems.

## **ENGINEERING SERVICES**

### **Project Implementation**

Under the 9MP, Engineering Services has played a major role in the implementation of several projects amongst others, the construction of new/ replacement hospitals/ clinics, renovation of hospitals and upgrading/ replacement of engineering systems. Among the projects managed are the construction of new Kluang Hospital and Permai Psychiatric Hospital (Johor Bahru), and the renovation of Penang Hospital which amounts to RM106 million. A total of 64 projects at an estimated cost of RM168 million was allocated to upgrade existing hospital buildings and facilities. In addition to that, a total of 87 projects at a cost of RM95 million have been implemented to build and/or replace clinics (KD2G) and new quarters throughout the country including Sabah and Sarawak. In addition, a total budget of RM200 million was spent on the repairs of the health clinics throughout the country.

### **Hospital Support Services (HSS)**

The Hospital Support Services (HSS) consists of five services, namely, Facility Engineering Maintenance Services (FEMS), Biomedical Engineering Maintenance Services (BEMS), Clinical Waste Management Services (CWMS), Cleansing Services (CLS) and Linen & Laundry Services (LLS). The HSS has been privatized in the hospitals and Ministry of Health institutions since 1 January 1997.

In 2009, the number of contract hospitals and institutions in the concession agreement increased to 148 from 127 hospitals and institutions in 1997 (year of implementation). Table 3 shows the comparison of asset numbers and contract cost for HSS for 1997, 2008 and 2009.

**TABLE 3**  
**NUMBER OF ASSETS AND CONTRACT VALUE FOR HSS 1997, 2008 & 2009**

Item	1997	2008	2009
Number of Hospital and Institution	127	148	148
Number of Beds	36,319	42,456	41,778
Floor Area (m2)	4,297,523	5,627,670	5,627,670
FEMS Asset	Estimate 250,000	384,393	405,848
BEMS Asset	Estimate 81,254	180,704	196,561
Contract Value	RM/million	RM/million	RM/million
FEMS	199.53	376.23	380.23
BEMS	100.69	243.78	268.41
LLS	62.73	156.07	166.53
CWMS	24.48	53.76	61.55
CLS	100.9	170.18	171.37
<b>Total</b>	<b>488.33</b>	<b>1,000.02</b>	<b>1,048.09</b>

Source: Engineering Services Division, MoH

### Rural Water Supply Program

One of the objectives of this program is to provide adequate safe water supply to rural community. The program incorporated simple technological principles that emphasized on simple design, construction and maintenance. The types of systems installed throughout the rural areas in Malaysia are gravity-feed system, sanitary well, sanitary well with house connection, and rainwater collection system. These systems produced untreated but wholesome water and therefore the rural residents are advised to boil their drinking water.

The development of rural water supply in the water supply and rural environmental sanitation program was planned according to the Five Year Malaysia Plan. A total of 4,887 of various types of systems were installed in 2009. These systems service 10,672 houses. The overall status of rural water supply coverage is about 96.36 % that represents 1,724,093 rural houses (Table 4).

### Sanitary Latrines Program

Sanitary latrine is to be constructed for every household in rural area. The most effective and cheap method for disposal of excreta in rural areas is by pour-flush latrine. The construction of sanitary latrines provided the means to initiate the effort to educate rural people on the use of more comfortable and hygienic method for disposal of excreta. It is hoped that after a period, the people will realise the benefits of such a practice and will construct their own latrines in the future when replacement is needed.

In 2009, MOH has constructed a total of 6,527 pour flush latrines. The coverage of sanitary latrines at the end of 2009 was 97.92% that represents 1,752,057 rural houses (Table 4).

**TABLE 4**  
**CONSTRUCTION OF RURAL WATER SUPPLY PROJECT BY MINISTRY OF HEALTH, 2009**

States	TOTAL HOUSES IN RURAL AREA	SANITARY WELL		SANITARY WELL WITH HOUSE CONNECTION		GRAVITY FEED SYSTEM		RAINWATER COLLECTION		JKR/KKM CONNECTION		TOTAL		TOTAL HOUSES SUPPLIED (CUMMULATIVE)	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	39,236	0	0	0	0	0	0	0	0	182	182	182	182	38,982	99.35%
Kedah	185,675	10	10	1	1	6	495	0	0	995	995	1,012	1,501	180,189	97.05%
Pulau Pinang	72,445	0	0	0	0	3	4	0	0	266	266	269	270	72,174	99.63%
Perak	152,256	3	11	12	18	9	421	21	21	293	293	338	764	149,126	97.94%
Selangor	109,358	0	0	0	0	3	56	0	0	0	0	3	56	109,306	99.95%
N. Sembilan	66,993	0	0	0	0	2	56	0	0	87	87	89	143	66,734	99.61%
Melaka	72,106	0	0	0	0	1	50	0	0	16	16	17	66	72,051	99.92%
Johor	145,559	2	2	0	0	2	45	14	14	61	61	79	122	144,915	99.56%
Pahang	139,047	17	60	12	87	20	566	7	7	287	287	343	1,007	137,172	98.65%
Terengganu	136,346	28	28	5	10	0	0	0	0	570	570	603	608	134,944	98.97%
Kelantan	263,327	0	0	185	239	11	142	0	0	1089	1089	1,285	1,470	223,115	84.73%
Sarawak	202,039	0	0	0	0	51	1763	279	1,106	0	0	330	2,869	194,965	96.50%
Sabah	204,810	150	909	0	0	16	534	171	171	0	0	337	1,614	200,420	97.86%
<b>Malaysia</b>	<b>1,789,197</b>	<b>210</b>	<b>1,020</b>	<b>215</b>	<b>355</b>	<b>124</b>	<b>4,132</b>	<b>492</b>	<b>1,319</b>	<b>3,846</b>	<b>3,846</b>	<b>4,887</b>	<b>10,672</b>	<b>1,724,093</b>	<b>96.36%</b>

Source: Engineering Services Division, MoH

## **Sullage and Solid Waste Disposal Programme**

In the early stage of the BAKAS program, the installation of sullage and solid waste disposal was given lower priority due to the more urgent needs for water supply and sanitary latrines. As the coverage of water supply and sanitary latrines is almost 100% achieved, the installation of sullage and solid waste disposal has now been given a higher priority.

In 2009, a total of 4,632 sullage disposal systems and 3,244 solid waste disposal systems were constructed and these represent a total household coverage of 62.56% (1,119,274) and 69.69% (1,246,979) respectively (Table 5).

## **National Drinking Water Quality Surveillance Programme (NDWQSP)**

The principal objective of NDWQSP is to raise the standards of health by ensuring the safety and acceptability of drinking water provided to the public falls 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 program ensures that public health and water work personnel will be alerted in time if the quality of drinking water deteriorates. This will enable them to take preventive or remedial measures before occurrence of any major outbreak of disease or poisoning (Table 6).

To further enhance the effectiveness of the program, a Quality Assurance Program (QAP) for NDWQSP was launched in December 1992 and implemented by all states in Malaysia in January 1993. Since 2004, the QAP standards are set based on five performance indicators; i.e. violation rates for residual chlorine, E-coli, combined residual chlorine and E-coli, turbidity and aluminium content. Table 7 shows the breakdown of the NDWQSP QAP performance for 2009.

## **Environmental Health Protection Program**

The PEKA program 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 is being monitored. All new projects requiring Environmental Impact Assessment (EIA) to be carried out will also be required to include studies on impact to public health through EHIA since it was introduced in 1997.

In 2009, the division initiated the development of a National Environmental Health Action Plan (NEHAP) to address major environmental health issues in the country. NEHAP presents strategies on improving environmental health within the country and defines the roles and responsibilities of various stakeholders. A draft consisting of a national framework, strategic plans and action plans has been formulated with close collaboration with the WHO.

**TABLE 5.**  
**CONSTRUCTION OF LATRINES, SULLAGE AND SOLID WASTE DISPOSAL SYSTEM BY MINISTRY OF HEALTH IN 2009**

States	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	39,236	149	39,105	99.67	60	24,402	62.19	105	26,206	66.79
Kedah	185,675	827	184,055	99.13	1020	121,329	65.34	1057	149,151	80.33
Pulau Pinang	72,445	98	72,304	99.81	425	55,954	77.24	89	67,028	92.52
Perak	152,256	284	149,669	98.30	1213	77,280	50.76	251	88,681	58.24
Selangor	109,358	140	108,419	99.14	437	103,640	94.77	45	101,845	93.13
N. Sembilan	66,993	44	66,426	99.15	210	51,420	76.75	216	49,213	73.46
Melaka	72,106	29	71,967	99.81	80	57,752	80.09	70	64,225	89.07
Johor	145,559	112	144,838	99.50	26	133,329	91.60	60	137,112	94.20
Pahang	139,047	570	136,553	98.21	394	96,888	69.68	399	94,575	68.02
Terengganu	136,346	289	136,346	100.00	404	71,252	52.26	274	86,693	63.58
Kelantan	263,327	849	260,070	98.76	121	81,336	30.89	34	132,830	50.44
Sarawak	202,039	1606	195,269	96.65	5	119,984	59.39	142	114,815	56.83
Sabah	204,810	1530	187,036	91.32	237	124,708	60.89	502	134,605	65.72
<b>Malaysia</b>	<b>1,789,197</b>	<b>6,527</b>	<b>1,752,057</b>	<b>97.92</b>	<b>4,632</b>	<b>1,119,274</b>	<b>62.56</b>	<b>3,244</b>	<b>1,246,979</b>	<b>69.69</b>

Source: Engineering Services Division, MoH



**TABLE 6.**  
**SUMMARY OF SAMPLING PERFORMANCE FOR 2009, MALAYSIA**

States	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	748	728	97.33	158	158	100.00	78	70	89.74	59	47	79.66	
Kedah	10,456	10,355	99.03	2,198	2,189	99.59	1,110	1,111	100.09	816	836	102.45	
Pulau Pinang	6328	3,757	59.37	1,326	579	43.67	775	286	36.90	496	151	30.44	
Perak	12,120	10,731	88.54	2,540	2,186	86.06	1,154	1,023	88.65	757	670	88.51	
Selangor	21,460	11,960	55.73	4,510	2,634	58.40	2,119	1,153	54.41	1,594	733	45.98	
FT KL	2,200	1,878	85.36	440	280	63.64	258	176	68.22	176	26	14.77	
FT Putrajaya	480	456	95.00	100	44	44.00	52	20	38.46	38	6	15.79	
N. Sembilan	8,056	5,137	63.77	1,666	1,021	61.28	920	498	54.13	634	308	48.58	
Melaka	3,952	3,855	97.55	872	749	85.89	466	441	94.64	315	313	99.37	
Johor	19,976	19,057	95.40	4,406	4,180	94.87	1,346	1,402	104.16	837	933	111.47	
Pahang	17,872	15,571	87.13	3,934	3,884	98.73	1,167	1,160	99.40	1,048	1,003	95.71	
Terengganu	6,556	6,223	94.92	1,418	1,400	98.73	540	500	92.59	364	276	75.82	
Kelantan	6,528	6,414	98.25	1,392	1,390	99.86	624	621	99.52	428	414	96.73	
<b>PENINSULAR MALAYSIA</b>	<b>116,732</b>	<b>96,122</b>	<b>82.34</b>	<b>24,960</b>	<b>20,694</b>	<b>82.91</b>	<b>10,609</b>	<b>8,461</b>	<b>79.75</b>	<b>7,562</b>	<b>5,716</b>	<b>75.59</b>	<b>130,993</b>
Sabah	10,568	10,175	96.28	2,210	1,991	90.09	1,138	966	84.89	839	728	86.77	
FT Labuan	488	480	98.36	98	85	86.73	58	60	103.45	39	40	102.56	
Sarawak	40,352	14,728	36.50	9,120	2,457	26.94	3,106	936	30.14	2,365	483	20.42	
<b>WEST MALAYSIA</b>	<b>51,408</b>	<b>25,383</b>	<b>49.38</b>	<b>11,428</b>	<b>4,533</b>	<b>67.92</b>	<b>4,302</b>	<b>1,962</b>	<b>72.83</b>	<b>3,243</b>	<b>1,251</b>	<b>69.92</b>	<b>33,129</b>
<b>Malaysia</b>	<b>168,140</b>	<b>121,505</b>	<b>72.26</b>	<b>36,388</b>	<b>25,227</b>	<b>69.33</b>	<b>14,911</b>	<b>10,423</b>	<b>69.90</b>	<b>10,805</b>	<b>6,967</b>	<b>64.48</b>	<b>168,140</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

**TABLE 7.**  
**PERFORMANCE OF QAP FOR NDWQSP IN 2009, MALAYSIA**

States	Residual Chlorine & E.coli (QAP < 0.3%)			E.coli (QAP < 0.4%)			Turbidity (QAP < 2.0%)			Residual Chlorine (QAP < 2.3%)			Aluminium (QAP < 10.2%)		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Perlis	576	6	1.04	576	9	1.56	576	3	0.52	576	36	6.25	122	37	30.33
Kedah	8,499	8	0.09	8,513	10	0.12	8,492	367	4.32	8,503	135	1.59	1,766	136	7.70
Pulau Pinang	2,827	1	0.04	2,829	4	0.14	3,282	1	0.03	3,280	8	0.24	569	19	3.34
Perak	9,733	0	0.00	9,739	5	0.05	9,650	259	2.68	9,753	122	1.25	1,993	137	6.87
Selangor	10,126	0	0.00	10,149	5	0.05	10,138	68	0.67	10,135	94	0.93	2,160	49	2.27
FT KL	945	0	0.00	945	0	0.00	953	0	0.00	953	0	0.00	132	5	3.79
FT Putrajaya	429	0	0.00	439	0	0.00	440	0	0.00	440	2	0.45	43	0	0.00
N. Sembilan	3,912	0	0.00	3,914	0	0.00	4,585	187	4.08	4,585	223	4.86	866	80	9.24
Melaka	3,527	8	0.23	3,536	14	0.40	3,530	7	0.20	3,529	30	0.85	674	28	4.15
Johor	16,284	14	0.09	16,309	51	0.31	16,418	104	0.63	16,391	485	2.96	3,614	331	9.16
Pahang	11,572	8	0.07	11,572	44	0.38	11,572	388	3.35	11,572	300	2.59	2,773	420	15.15
Terengganu	5,475	1	0.02	5,495	5	0.09	5,496	28	0.51	5,496	28	0.51	1,187	46	3.88
Kelantan	5,086	31	0.61	5,099	40	0.78	5,101	1,128	22.11	5,091	333	6.54	1,083	109	10.06
<b>PENINSULAR MALAYSIA</b>	<b>78,991</b>	<b>77</b>	<b>0.17</b>	<b>79,115</b>	<b>187</b>	<b>0.30</b>	<b>80,233</b>	<b>2,540</b>	<b>3.01</b>	<b>80,304</b>	<b>1,796</b>	<b>2.23</b>	<b>16,982</b>	<b>1,397</b>	<b>8.15</b>
Sabah	7,099	118	1.66	7,144	201	2.81	7,196	738	10.26	7,200	398	5.53	1,304	324	24.85
FT Labuan	301	1	0.33	344	3	0.87	266	10	3.76	323	42	13.00	63	18	28.57
Sarawak	9,108	16	0.18	9,683	59	0.61	7,256	168	2.32	10,245	395	3.86	1,749	509	29.10
<b>WEST MALAYSIA</b>	<b>16,508</b>	<b>135</b>	<b>0.72</b>	<b>17,171</b>	<b>263</b>	<b>1.43</b>	<b>14,718</b>	<b>916</b>	<b>5.45</b>	<b>17,768</b>	<b>835</b>	<b>7.46</b>	<b>3,116</b>	<b>851</b>	<b>27.51</b>
<b>Malaysia</b>	<b>95,499</b>	<b>212</b>	<b>0.22</b>	<b>96,286</b>	<b>450</b>	<b>0.47</b>	<b>94,951</b>	<b>3,456</b>	<b>3.64</b>	<b>98,072</b>	<b>2,631</b>	<b>2.68</b>	<b>20,098</b>	<b>2,248</b>	<b>11.19</b>

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

Source: Engineering Services Division, MoH

## Licensing under the Atomic Energy Licensing Act, Act 304

A total of 650 licences were issued to the private sector in 2009. It comprised of 64 new licences and 586 renewed licenses. Table 8 shows a total of 3,086 premises comprising 737 registered government locations and 2,349 private centres.

**TABLE 8.**  
**NUMBER OF LICENCES AND REGISTERED PREMISES, 2008 & 2009**

Type of Premises	2009		
	Govt	Private	Total
Hospitals	143	122	265
Health Clinics	167	0	167
Dental Clinics	367	975	1,342
Radiotherapy Centres	4	20	24
Nuclear Medicine Centres	5	13	18
Radiology Clinics	0	43	43
GP's/ Non X-ray/Specialist Clinics	0	1,001	1,001
Veterinary Clinics	3	45	48
Cyclotron Centres	1	1	2
Blood Irradiator Centres	2	3	5
Army Hospitals/Clinics	24	0	24
<b>Total</b>	<b>716</b>	<b>2,223</b>	<b>2,939</b>

Source: Engineering Services Division, MoH

There are a total of 5,483 irradiating apparatus in both government and private sectors. The total number of irradiating apparatus for the different modalities as of 2009 is shown in Table 9.

There are a total of 410 radioactive sources in both government and private sectors. The total number of sealed sources and unsealed sources in 2009 is as shown in Table 10.

**TABLE 9.**  
**TOTAL OF IRRADIATING APPARATUS BY TYPE, AS OF DECEMBER 2009**

Type of Premises	2009		
	Govt	Private	Total
General/Mobile X-ray/Veterinary	1,042	1,384	2,462
Dental (Intra oral/OPG)	588	1,224	1,812
Fluoroscopy/C-arm	178	244	422
Angio/Cath-Lab	21	64	85
CT Scanner/ CT Simulator	53	124	177
Mammography	58	110	168
Lithotripter/Bone Densitometer	13	65	78
Linear Accelerator	15	29	44
Simulator	7	13	20
Cyclotron	1	1	2
Gamma Camera/PET CT	2	8	10
<b>Total</b>	<b>1,978</b>	<b>3,265</b>	<b>5,243</b>

Source: Engineering Services Division, MoH

**TABLE 10.**  
**TOTAL OF RADIOACTIVE SOURCES BY TYPE, 2009**

Type of Sources	2009		
	Govt	Private	Total
Sealed Sources	27	261	288
Unsealed Sources	36	125	161
<b>Total</b>	<b>63</b>	<b>386</b>	<b>449</b>

Source: Engineering Services Division, MoH

### Monitoring & Enforcement under Act 304

This activity includes periodic visits, monitoring compliance with the quality assurance program requirements and enforcement of licensing activities. Enforcement activities were carried out on all government and private clinics/hospitals with ionizing radiation facilities to ensure maximum compliance with the Act 304. A total of 484 premises were inspected out of which 89 premises comprised government clinics and hospitals. In government sector, 73 (82%) clinics and hospitals complied with the safety regulations. In the private sector, 239 (60.5%) premises complied with the licensing requirements while 156 (39.5%) premises did not fully comply with all the licensing requirements.

## Engineering Support and Technical Advice

The Division undertakes to evaluate and assess the conditions of the hospitals and health clinics and identify the need in the Five Year Malaysia Plan for upgrading, refurbishment and replacement of the engineering systems and facilities. It also assist in the procurement of new and/or replacement of medical equipment. The Division also develops and establishes national policies, guidelines, legislation and standards in relation to environmental health engineering, healthcare facility engineering, medical physics and radiation health and safety, hospital and clinic support services.

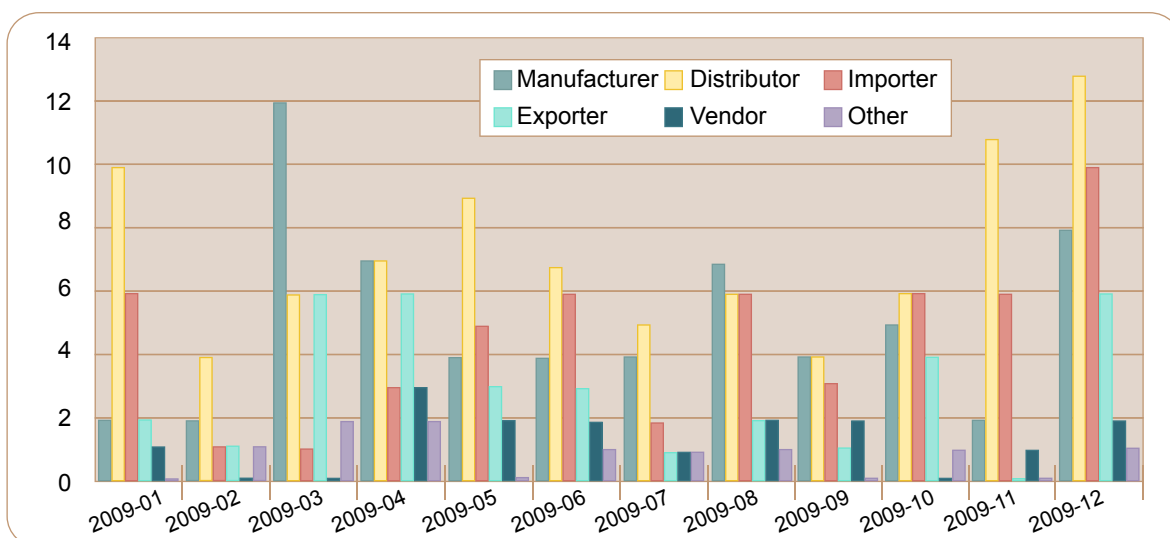
## MEDICAL DEVICES CONTROL

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

The voluntary registration scheme for establishments which deals with medical devices (MeDVER) has already been implemented since 2005. It is considered the most basic level of regulatory control of medical device in the market. This registration is implemented to familiarize all affected parties with the registration process, which also aimed to prepare a smooth transition into mandatory phase before the full enforcement of medical devices regulations and to gauge the readiness of medical devices establishments in conforming to the regulatory requirements.

By the end of 2009, 876 establishments dealing with medical devices participated in this scheme. The breakdown of registered establishments is as shown in Figure 1. Approximately 60,000 medical devices have been listed in MeDVER.

**FIGURE 1.**  
**MeDVER REGISTERED ESTABLISHMENTS ACCORDING TO ESTABLISHMENT, 2009**



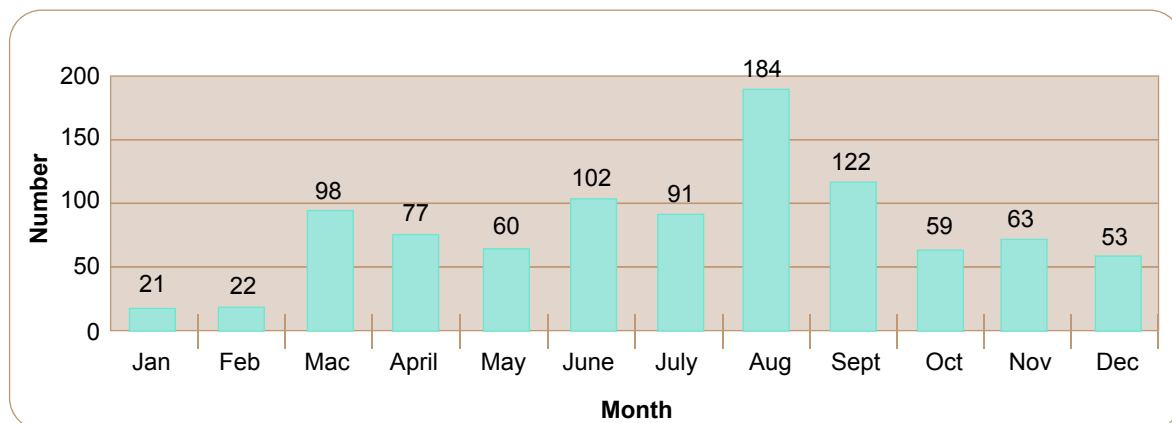
Source: Medical Devices Division, MoH

## Industry Assistance

Medical devices industry has been identified as an area for economic growth and has been given great emphasis in the Third Industrial Master Plan (IMP3). Medical Device Control Division is actively involved in the implementation activities to achieve the goals set for IMP3.

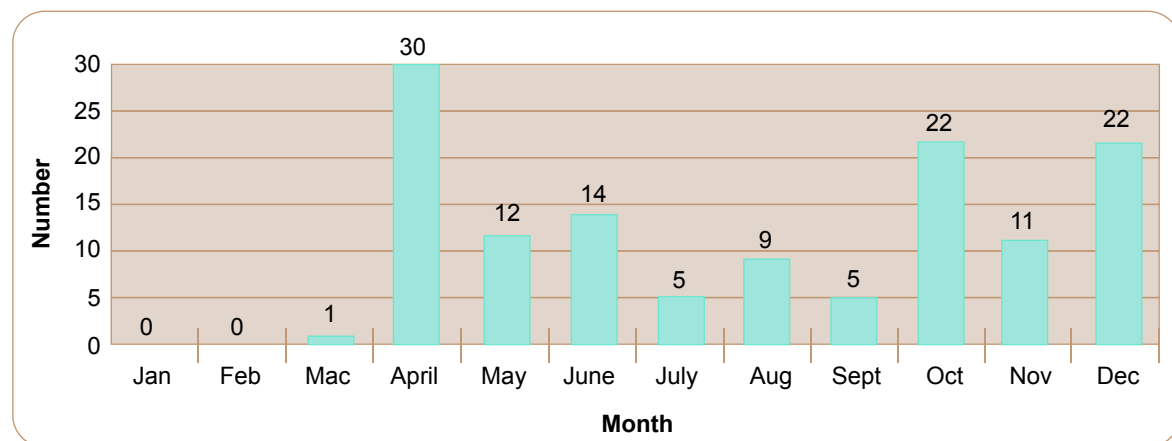
One of the activities undertaken by Medical Device Control Division is the issuance of manufacturing and free-sales certificates. The purpose of this activity is to facilitate local manufacturers to export their medical device products to other countries that require such certificates. In 2009 (as shown in Figure 2), a total of 952 certificate of Free-Sales and 131 manufacturing certificates (as shown in Figure 3) were issued to local manufacturers who exported their products to these countries.

**FIGURE 2.**  
**NUMBER OF CERTIFICATE OF FREE SALES (CFS) ISSUED IN 2009**



Source: Medical Devices Control Division, MoH

**FIGURE 3.**  
**NUMBER OF MANUFACTURING CERTIFICATE (MC) ISSUED IN 2009**



Source: Medical Devices Control Division, MoH

## **Post Market Surveillance and Vigilance**

Post market surveillance was introduced to monitor safety and performance of medical devices on the market. Surveillance and vigilance activities are mainly done through the monitoring of medical devices competent authorities' web page from US, Canada, UK, Australia, Hong Kong and Singapore that publishes and provides safety information such as alert, recall and field safety corrective actions on medical device products manufactured and sold in such countries. Vigilance activities are usually based on reports by manufacturers or complaints by users of the defective medical device or adverse incidents occurred during usage.

## **Audit Visit to Manufacturing Facilities**

One of the most important activities carried out by the Medical Devices Control Division is audit visits to local manufacturing facilities. The aim is to ensure medical device manufacturers comply with the standards for safety and performance of their products. The audit is also carried out to ensure continued performance and to identify issues and trends in order to highlight priority areas for the medical devices market. In 2009, the Division has visited a total of 9 local manufacturing facilities.

## **International Relations**

MoH has participated in various international organizations including the ASEAN Medical Device Product Working Group (MDPWG) and Asian Harmonization Working Party (AHWP). These organizations are working towards harmonization of medical device regulations in each region. Malaysia has been given the responsibility for the second time to chair the ASEAN MDPWG. They are now working on the development of a common submission dossier template (CSDT) for medical device product approval, and have also implemented the framework for post market alert system for defective and unsafe medical devices.

## **TRADITIONAL & COMPLEMENTARY MEDICINE (T&CM)**

There are three T&CM branches located in Peninsular Malaysia, and three more T&CM units were established in 2009; which were the Sultanah Nur Zahirah Hospital (Kuala Terengganu) for the east zone, the Duchess of Kent Hospital in Sabah and the Kuching General Hospital in Sarawak. All T&CM unit provide acupuncture and traditional Malay Massage for chronic pain and stroke. With the establishment of T&CM branches, T&CM activities such as registration, enforcement and surveillance will be enhanced. Other on-going activities include research, development of curriculum at diploma and certificate levels emphasizing on Spa & wellness, T&CM conferences (INTRACOM), exhibitions and national & international collaboration and networking.

To date, five (5) private universities/university colleges had received approval from MQA to initiate studies in T&CM modalities, including chiropractor, which will be the first to be taught in the ASEAN region. Internationally, T&CM Division had collaborated with World Health Organization (WHO) in various activities related to traditional medicines and Malaysia will play an active role in the development of integrative medicines in the region. Due

recognition was given to Malaysia in this field during the Traditional Medicine congress in Nanning, China in November 2009.

### **7<sup>TH</sup> INTRACOM, 2<sup>ND</sup> ICBWI & WIEX 2009**

The scientific conference and exhibition was held at the Putra World Trade Center (PWTC) on 23-26 July 2009. The combination of the 7th International Traditional and Complementary Medicine Conference and Exhibition (INTRACOM), and the 2nd International Conference on Biotechnology for the Wellness Industry (ICBWI) was a great success with exposure not only towards T&CM but also involvement of biotechnology on wellness approach. The theme "*wellness through the advancement in the holistic approach*" corresponded to the program activities.

Deputy Minister of Health, The Honourable Datuk Rosnah Shirlin binti Haji Abdul Rashid Shirlin inaugurated the conference with an excellent speech which catalysed the nation to promote T&CM. She emphasised the importance of evidence based approach towards patient care and safety. She advised T&CM practitioners to abide the ethics of healthcare practice while providing the best patient care. In this conference, Director General of Health, Tan Sri Dato' Seri Dr. Haji Mohd Ismail Merican delivered the conference's keynote address while the Deputy Director General of Health (Research and Technical Support), Dato' Dr. Maimunah A. Hamid delivered the welcoming remarks.

The involvement of international speakers in disseminating knowledge evolved a new dimension for T&CM practice. The local speakers divined their expertise to the local practitioners to improve the techniques according to the evidence based practice.

The seminar on biotechnology attracted many participants to attain information and knowledge on developing new dimensions related to herbal medicine. A total of 10 plenary and parallel symposiums on traditional and complementary medicine were held, which provided wide selections of information to the participants.

The programme was also overwhelmed with more than 100 exhibitors who introduced many types of traditional and complementary medicine practices, biotechnology and herbal products and introduction to traditional and complementary medicine programmes from the colleges and universities.

### **MS ISO 9001:2000 Conversion to MS ISO 9001:2008**

T&CM received the MS ISO 9001:2000 certification on 23rd November 2008. The scope of Quality Management System (QMS) was to monitor the practice of T&CM in Malaysia. 2 workshops on Appreciation & Documentation of ISO 9001:2008 Course were held in 2009; the first on 6-8 March 2009, and the later one on 13-15 of November 2009. 2 staffs were also sent to attend the Document Control Course on 13-14 July 2009.

Two internal audits were successfully conducted, and the management review meeting wrapped up our ISO 2009 diary on 28 December 2009, with areas to be improved. Efforts had been made to obtain the ISO 9001:2008 certification for 2010.



### **New Modalities in Integrated Hospital**

In total, there are six hospitals offering T&CM services, which are the Kepala Batas Hospital (Penang), Putrajaya Hospital, Sultan Ismail Hospital (Johore), Sultanah Nur Zahirah (Kuala Terengganu), the Duchess of Kent Hospital (Sandakan), and the Kuching General Hospital (Sarawak). Services provided are traditional Malay massage, acupuncture and herbal treatment as an adjunct therapy for oncology patients. The new postnatal care service was introduced in Putrajaya Hospital.

### **Local Practitioner Registration Briefing**

The Practice & Registration Section had conducted 21 registration briefings in Kuala Lumpur, Sabah, Sarawak, Penang, Johore, and Selangor. During the e-PENGAMAL registration briefing, practitioners were informed about the importance of registering either manually or through online registration (e-PENGAMAL). Subsequently, during the briefing on the Guidelines of the Local Practitioner Registration, practitioners were briefed about the registration guidelines and the requirements to register when the Traditional & Complementary Medicine Act is gazetted. The practitioners were also asked to fill up questionnaires regarding their practices.

### **Standard & Quality Activities**

- ***Development of Curriculum for Diploma in Malay Massage***

Initiative was taken to develop the curriculum for Diploma in Malay Massage programme through collaborative efforts with the Ministry of Higher Education (MOHE), Malaysian Qualifications Agency (MQA), Private Higher Education Providers and Malay Massage practitioners. T&CM has given the necessary technical input during series of meetings and workshops coordinated by the MOHE. The curriculum was approved during the Polytechnic Curriculum Advisory Board Meeting on 2–5 December 2009.

The first programme will be offered tentatively on July 2010. The programme for the pioneers is specially designed to produce future trainers or lecturers for future batches of Diploma Urutan Melayu (Training for Trainers Programme). For this first cohort, Recognized Prior Learning (RPL)/APeL concept (for students to gain credit exemptions) and the “Work Based Learning” concept will be applied. Entry requirement for the Training for Trainers programme includes experience in practicing Malay massage for at least 5 years. Future programmes for SPM graduates will be offered by polytechnic colleges, under the Polytechnic Division, Ministry of Higher Education.

- ***Development of Curriculum for Diploma in Islamic Medical Practice***

The development of the curriculum for Diploma in Islamic Medical Practice was started in January 2009. The draft was then handed over to the Cyberjaya University College of Medical Sciences (CUCMS) to complete the curriculum documents, and program implementation would be due in August 2010, pending MQA approval

- **T&CM Training in Malaysia**

All T&CM training centres are encouraged to register with the MOHE or Division for Skills Development (DSD of the Ministry of Human Resource. All T&CM training programmed should follow the training standards that can be obtained from the MQA or DSD. Institutions that have obtained approval or the provisional accreditation from the Malaysian Qualifications Agency to offer T&CM academic program are as shown in Table 11.

### Inspectorate & Enforcement Activities

Integrated enforcement activities such as inspection of premise and mapping of T&CM premises were carried out with co-operation and collaborations with other government agencies such as Pharmacy Enforcement Unit, Immigration Department and City and Local Governments Council. The Traditional and Complementary Medicine Bill is also ready to be presented in the Parliament.

**TABLE 11.**  
**LIST OF INSTITUTION GIVEN APPROVAL OR PROVISIONAL ACCREDITATION TO OFFER**  
**T&CM ACADEMIC PROGRAM, AS OF 31 DECEMBER 2009**

No.	Name of Institution	Training Programme Title	Programme Reference No.
1.	College of Complementary Medicine, Melaka	Diploma in Natural Medicine	KA 8655
2.	INTI International University College, Nilai	Bachelor of Traditional Chinese Medicine (Hons)	KA 8767
3.	Cyberjaya University College of Medical Sciences (CUCMS), Cyberjaya	Bachelor of Homeopathic Medical Sciences (Hons)	KA 9621
4.	Management and Science University (MSU), Shah Alam	Diploma in Traditional Chinese Medicine	KA 10021
5.	Management and Science University (MSU), Shah Alam	Bachelor in Traditional Chinese Medicine (Hons)	KA 10057
6.	International Medical University (IMU), Bukit Jalil	Bachelor of Science (Honours) Chiropractic	KA 9294

Source: Traditional & Complimentary Medicine Division, MoH

### Information Management Activities

The Information Management Unit is responsible in updating website to display the latest information regarding T&CM. Such information available on the T&CM website is T&CM information, activities and information of each Section, announcements, guidelines, ICT Corner, online system and web links.

## NATIONAL INSTITUTES OF HEALTH

### Institute for Medical Research (IMR)

In 2009, staff members of IMR were engaged in 107 projects and were involved in 123 presentations at local and international seminars. IMR also published 78 scientific papers and produced 19 reports which were generally prepared to meet specific requests made by various government departments and agencies.

- ***Allergy and Immunology Research Centre (AIRC)***

In 2009, the AIRC was engaged in the study of allergies, the frequency and nature of variant syndromes of autoimmune hepatitis (AIH), the effects of ostrich oil on an animal model of rheumatoid arthritis (RA) and chronic granulomatous disease (CGD). In Primary Immunodeficiency, the Dihydrorhodamine (DHR) test was established to determine the response in normal individuals. In addition the AIRC started a collaborative study with Universiti Sains Malaysia (USM) and Monash University to determine the genetic abnormality in a family with CGD. Research projects that were started in late 2009 includes; a study of B cell defects in PID; HRDNA typing of HLA-B in the Malay population; auto-immunity in patients with paraneoplastic syndrome, in women with foetal loss and coeliac disease.

- ***Cancer Research Centre (CaRC)***

The Haematology Unit of the CaRC conducted research in haematological malignancies and stem cell. In leukaemia research, study is focused on molecular classification of childhood ALL by gene expression profiling to study the underlying causes and mechanisms of relapse and drug resistance of the disease. This project also aimed to identify unique molecular signatures for specific subtypes of childhood ALL that can be used for disease-specific diagnostic test kits. In the area of stem cell research, characterization of the growth kinetics, proliferation rate, flow cytometry analysis, immunocytochemistry, karyotyping, differential potential into adipogenic and osteogenic tissues and RT-PCR of the dental pulp, umbilical cord and adipose derived mesenchymal stem cell lines is currently being carried out. Characterization of cultivated limbal epithelial stem cells had also been carried out and future study will be focused on gene expression and clinical trials for autologous cultivated limbal epithelial transplantation (CLET).

The Molecular Pathology Unit studied the role of several genes of the Epstein Barr Virus on nasopharyngeal carcinoma cells. In another study, metal compounds were found to potently and selectively kill cancer cells when compared to their non-cancer counterparts. A multi-institutional study on the clinical outcome of nasopharyngeal carcinoma, was carried out in collaboration with the Network of Clinical Research Centres at six hospital sites and the response of patients to treatment are being assessed. Members of the unit were also involved in the establishment of a biospecimen bank to collect specimens for research.

The Stomatology unit continues to conduct clinico-pathological research on oral cancer and precancer, jaw tumours, odontogenic cysts and other oral diseases. This year, the unit

carried out a retrospective study on osteosarcoma on the jaw bones.

- **Cardiovascular, Diabetes & Nutrition Research Centre (CDNRC)**

The Diabetes and Endocrine Unit current researches are on Metabolic Syndrome in Malaysia; Studies on *Labisia pumila var alata*, LPva, (*Kacip Fatimah*) extract with phytoestrogenic effects, and Biomarkers for Diabetic Nephropathy in Malay patients with Type II Diabetes Mellitus.

The Nutrition unit conducted researches in the area of functional food and analytical food chemistry. The current project is on the Malaysian Edible Bird's Nest nutritional values and its effect on certain important cells in the body. Other projects are on food safety this includes the utilization of commercial sanitizers, determination of biogenic amines levels and microbial contamination in local fish-based food and identifying best manufacturing practices to reduce biogenic amines levels and contaminants.

- **Environmental Health Research Centre (EHRC)**

The Environmental Health Research Centre (EHRC) research activities broadly encompass work on air, water and food quality. The following projects were conducted: qualitative microbial risk assessment of drinking water, assessment of private water supply, coastal recreational water quality, risk assessment of selected pesticide residues in food, air pollution modelling using remote sensing, environmental survey and quantification of carcinogenic pollutants, environmental and reproductive risk factors of breast and cervical cancers, and linkage of congenital anomalies to the environment.

- **Herbal Medicine Research Centre (HMRC)**

The Information Unit continues with the development of the 'Global Information Hub on Integrated Medicine (GlobinMed)'. A preliminary survey on traditional medicine practices of indigenous groups of Peninsular Malaysia was jointly carried out with the Traditional & Complementary Medicine Division of MoH, Department of Orang Asli Affairs (*Jabatan Hal Ehwal Orang Asli*) and MyIPO (Intellectual Property Corporation of Malaysia). The Phytochemistry Unit conducted research pertaining to phytochemical analysis of local medicinal plants and fungi. Research on the chemical constituents with potential pharmacological activities such as antimalarial, antidengue and antioxidant from *Lignosus rhinoceros* (*Kulat susu harimau*), *Carica papaya* and *Ficus deltoidea* (*mas cotek*) were conducted. The Toxicology & Pharmacology Unit completed general and in vitro toxicity studies on extracts of *Mitragyna speciosa* or *ketum*. Hepatotoxicity studies on the extracts are in progress. Toxicology studies on *Stichopus variegatus* and *Stichopus horrens* or *gamat* preparation were also conducted to determine the safety of the product.

- **Infectious Diseases Research Centre (IDRC)**

The Bacteriology Unit's main research focus was on tuberculosis, leptospirosis, and melioidosis using molecular techniques. The research on tuberculosis was directed at developing rapid detection of the bacteria and antibiotic resistance through the DNA biochip

and biosensor technology. The studies on brucellosis and leptospirosis were mainly to develop rapid diagnostic methods via molecular techniques.

The overall activities of the Entomology Unit were to support the development and evaluation of improved and innovative vector control methods for the prevention of vector-borne diseases such as malaria, dengue and chikungunya. These included basic research into vector biology and ecology as well as development of new and improved tools and field testing under real-life situations. In malaria vector research, study was conducted on long-lasting indoor residual spraying using deltamethrin, a currently used pyrethroid. In dengue vector research, the studies were on the oviposition preferences of *Aedes aegypti*; other possible methods of blood-feeding mosquito for mass colonization of transgenic *Aedes aegypti*; construction of a dengue outbreak predictive model; the effect of temperature on *Aedes aegypti* and *Aedes albopictus* was studied; semiochemicals secretions of male and female *Aedes aegypti* and possible dual infection of dengue and chikungunya virus in *Aedes* vectors were studied. Research in forensic entomology looked at carcasses submerged in river to determine the arrival time of flies as an indicator that can be used to determine the post mortem interval for cadavers found in ponds or rivers. The complementary method for the treatment of diabetic ulcers using *Lucilia cuprina* maggots produced by this Unit has been successful. Many government hospitals, as well as private hospitals are now using maggot debridement therapy for healing of diabetic ulcers. The antibacterial and/or bacteriostatic agents in the maggot secretions are being isolated and elucidated.

This year the Parasitology Unit established PCR diagnostic services for leishmaniasis and are actively performing parasitic cultures for diagnostic and research purposes.

In 2009, the Virology Unit was actively involved in investigating several outbreaks in Malaysia including chikungunya, dengue, enterovirus 71 and Influenza A (H1N1) pandemic. The Unit also carried out surveillance programme on circulating dengue virus serotype, Nipah, JE, influenza and hand, foot and mouth diseases for Ministry of Health. The dominant circulating dengue serotype for 2009 was still Dengue 3 and as for influenza, A/Perth/16/2009-like (H3N2) virus and B/Brisbane/60/2008-like strains were found to be the predominant strains for influenza A and B respectively.

- ***Specialised Diagnostic Centre (SDC)***

In 2009, the Biochemistry Unit has established and evaluated more complex and laborious biochemical genetic testing for the screening and diagnosis of Lysosomal Storage Diseases (LSD). The Unit has successfully set-up the enzyme assay for the screening of Fabry and Pompe disease using dried blood spot. Screening for 5 types of LSD using dried blood spot by Tandem Mass Spectrometry is also in progress. Total and free Urine sialic acid measurement for the diagnosis of sialic acid disorders has been successfully developed and evaluated. Method for Urine galactose measurement has also been completed. A new cheaper and easy method for total homocysteine measurement using ion-exchange chromatography has been established to replace the current expensive method. More private hospital and laboratories are sending samples to this Unit for the diagnosis of Inborn Error of Metabolism (IEM).

The Molecular Diagnostics and Protein Unit showed a marked increase in the workload due to the introduction of several new molecular diagnostics tests this year for genetic service in Malaysia. In 2009 the unit focused mainly on R&D towards molecular testing with the objectives of primarily developing more new molecular genetic testing for the confirmation of selected genetic diseases including IEM. This includes the involvement of nuclear genes such as SURFEIT 1 gene in mitochondrial disorders, gene rearrangement and large deletion study in Mitochondrial DNA. In a proteomics study, we advanced further in the CDG syndrome workfw, to differentially diagnose true Type 11 CDG from genetic variance. There is also an ongoing R&D on the Apo C III isotyping to differentially determine the two subtypes for CDG Type 11.

- **Medical Resource Research Centre (MRRC)**

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.

In addition to providing support for research, the centre was also involved in several researches, which are the investigation of chikungunya infection in the state of Kelantan; 5-year survival rate and mortality differentials for breast and cervical cancers; Malaysian epidemiological investigation of rheumatoid arthritis: statistical modelling of independent risk factors for rheumatoid arthritis; a longitudinal study on psychosocial factors, stages of smoking acquisition and susceptibility to smoking initiation and their relationship to adolescent smoking; development of immunodiagnostic technique for leptospirosis; leptospirosis in animal hosts and its relationship to leptospirosis in human; a collaborative research project on the feasibility of conducting screening programme using faecal occult blood test (FOBT) for colorectal cancer in Malaysia and a collaborative project on the health status of the *Orang Asli* in Peninsular Malaysia.

- **Diagnostic Services**

IMR has traditionally provided the latest clinical laboratory tests and tests that are possibly not done in other laboratories. In 2009, about 189 different clinical laboratory tests were provided by 11 units/laboratories where about 290,751 tests were performed. Some tests were decentralized to the hospital laboratories and a number of new tests were introduced. With these changes, the number of tests performed this year is reduced compared to 2008 (301,483). The H1N1 outbreak had substantially increased the number of samples and tests performed by virology unit where it conducted 1704 cultures and 54157 PCRs related to the outbreak. Nine of the laboratories are in the preparation for accreditation by National Association of Testing Authorities (NATA), Australia.

- **Consultative Services**

IMR staff provided advisory and consultative services to the Ministry of Health (MoH) Malaysia, other government departments, as well as international organizations. Most of the units within the Institute also served as referral centers to MoH laboratories throughout

the country. In 2009, 52 staff members provided consultative services at the national level, while 12 staff members provided such services at the regional and international level.

- ***Scientific and Technical Training Programs***

Training activities carried out by the Institute comprised of regular courses offered annually as well as ad hoc training programs 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 programs provide training opportunities for 283 scientists, medical doctors and allied personnel from other departments and local and foreign institutes. Of these, 172 were undergraduates from local tertiary institutions who received training through attachments at the various units of the Institute. The Institute also conducted 51 training workshops, 12 seminars and 7 courses during the year.

- ***Conferences and Staff Development***

A total of 133 staff attended 557 conferences, seminars and scientific meetings. 16 officers are studying for their Master degrees while another 24 are pursuing their PhDs.

### **Institute Of Public Health (IPH)**

At present, the main functions of the IPH are to provide training in various specialized fields, carry out research projects, dissemination of health information and provide consultancy in health. Since its inception, it has successfully trained various categories of health personnel at the basic and advanced levels. Table 12 and Table 13 summarises the researches and trainings conducted by the divisions in IPH.

**TABLE 12.**  
**RESEARCH CONDUCTED BY THE DIVISIONS IN IPH, 2009**

Division	Research Title
Community Health Development Division	i. National Ear and Hearing Disorder Survey
	ii. Barriers to Accessing Immunization Among Refugee Children Age Below 7 Years in Selected Clinics in Klang Valley
	iii. Validity Study of Adolescent Health Screening Tools
	iv. Development of Gender Module and Rights in Reproductive Health : Manual for a Learning Workshop
Disease Control Division	i. An Evaluation of the HIV/AIDS and Viral Hepatitis B Preventive Programmes in Selected Prisons and Drug Rehabilitation Centre in Malaysia, 2008
	ii. Evaluation of the Partner Notification, Contact Tracing and Case Holding of Human Immunodeficiency Virus (HIV) Positive Partners
	iii. To Determine the Proficiency of PL Microscopists Detecting Pulmonary Tuberculosis in Selected Primary Health Care Facilities
	iv. Surveillance of Fatal Unintentional Deaths in Malaysia
	v. Prevalence and Risk Factors of Depression, Anxiety and Stress in Type II Diabetics Attending Government Outpatient Facilities in Klang Valley and the Evaluation of A Stress Management Intervention Strategy for Depression, Anxiety and Stress Among These Patients
	vi. Smoking Behaviour Among Assistant Environmental Health Officer (AEHO) Trainees at the College of Allied Health Sciences, Sungai Buloh
	vii. Knowledge, Attitude and Practice of HIV/STI Among Secondary School Students in Malaysia
	viii. Evaluation of ILI Surveillance System in Government Health Facilities in Selangor and Kuala Lumpur Federal Territory
	ix. Estimating the Magnitude of Cigarette Smuggling into Malaysia and Government Tax Revenue Loss
Occupational Health Division	i. Status of Neurobehavioral Effects Among MoH Staffs Exposed to Neurotoxic Chemical in Vector Control Unit and Pathology Laboratory in State of Perak
	ii. An Exploratory Study to Assess the Implementation of the Occupational Safety and Health Committee (SHC) and the Perception of the SHC Members in the Healthcare Facilities
	iii. Employee Job Satisfaction Survey in the Institute for Public Health, Ministry of Health
Nutrition Research Division	i. National Iodine Deficiency Disorders (IDD) Survey 2008
	ii. Comparison of Child Growth Using WHO 2006 Standard and NCHS 1977 Reference With Clinical Assessment in Perak and Pahang
	iii. Food Premise Survey 2009 (North Zone)
	iv. National Health Morbidity Survey (NHMS) III –Nutritional Status
	vi. Nutritional Status and Food Practices of Breast Cancer Patients Before and After Chemotherapy Treatment In Selected Government Hospitals
	vii. Effectiveness Of Probiotic Usage In Cancer Patients With Pelvic-Radiation Induced Diarrhoea in Hospital Sultan Ismail, Johor Bahru
	Data Management and Information System Division

Source: Institute of Public Health, MoH



**TABLE 13.**  
**TRAINING CONDUCTED BY THE DIVISIONS IN IPH, 2009**

Division	Training
Community Health Development Division	i. Integrated School Health Program
	ii. Research Methodology in Primary Health
	iii. Quality Assurance in Primary Health
	iv. Update In Emergency Care for Primary Care Providers Setting I
	v. Family Planning – National Training for Trainers
	vi. National Workshop on Gender & Rights in Reproductive & Maternal Health
	vii. Adolescent Health and Counseling
	viii. Care of Elderly For Core Trainers
	ix. Primary Health Care
	x. Maternal and Child Health Care – Training of Trainers
	xi. Engaging the Adolescent Using HEADSS Framework
	xii. Integrated Screening Services and Health Risk Intervention
	xiii. Gender & Rights in Health Course for NAM Countries (collaboration with NIEW)
Disease Control Division	i. Managing Cancer Registry
	ii. MoH's Rules in Disease Control
	iii. ICD-10 Coder Training
	iv. TB Management for Family Medical Specialist and Medical Officer Laws and Regulations in Disease Control
	v. Epidemic Intelligent Program (EIP Malaysia 5th Introductory Course)
	vi. Diabetic Mellitus Diseases Control
	vii. TB Management for Assistant Medical Officer and Nurses
	viii. HIV/AIDS Management
	ix. ICD-10 Coder Training
	x. Laboratory Services in Tuberculosis Control Programme
	xi. Mental Health & Community Mental Health for Primary Care Personal
	xii. Situational Analysis & Scientific Writing Course - EIP Malaysia
	xiii. Substance Abuse Course & Addiction Course
	xiv. Management Dengue and Chikungunya Outbreak
Occupational Health Division	i. Identifying Research Priority Areas in Occupational Health
	ii. Occupational Lung Disease
	iii. MoH/ILO National Training Workshop and Seminar on Prevention of Pneumoconiosis
	iv. Occupational Skin Disease
	v. Risk Assessment At The Workplace
	vi. Re-Identifying Research Priority Areas (IRPA) in Occupational Health for 10th Malaysian Plan
Nutrition Research Division	i. Food Sampling Technique (South Zone)
	ii. Research Methodology in Nutrition
	iii. Research Methodology In Dietetics & Food Services
	iv. Research Methodology In Food Safety
	v. Training of Trainers for "Breastfeeding Promotion and Support: Revised, Updated and Expanded for Integrated Care"
	vi. Research Methodology in Dietetics Phase II & III (Data Analysis & Report Writing)
	vii. Food Sampling Technique (East Zone)
	viii. HACCP- (Hospital Kitchen)
	ix. Food Law & Regulation
	x. Nutritional Epidemiology

**TABLE 13.**  
**TRAINING CONDUCTED BY THE DIVISIONS IN IPH, 2009**

Division	Training
Nutrition Research Division	xi. Basic Microbial Risk Assessment In Food Safety
	xii. Breast Feeding Counselling (40 hours)
	xiii. Food Sampling Technique (Sabah/Sarawak)
Data Management and Information System Division	i. Intermediate Data Analysis Using SPSS
	ii. Advanced Data Analysis Using SPSS
	iii. Managing Your Data Smartly
	iv. Sampling Technique For Health Survey
	v. Data Analysis Using Complex Sampling Design
	vi. Effective Presentation Using Microsoft Powerpoint 2007

Source: Institute of Public Health, MoH

### Network of Clinical Research Centre (CRC)

2009 was a significant year for clinical research in Malaysia as CRC began setting up facilities for early clinical development studies. The first unit will be in the Ampang Hospital, which is currently undergoing IT, physical and clinical infrastructure upgrades. The Memorandum of Understanding between CRC and Veeda Clinical Research, a Contract Research Organization in Plymouth, UK is currently in the final stage. Veeda trained a consultant gastroenterologist and two pharmacists from CRC for three weeks on how to conduct a phase 1 clinical trial. They were also trained on project management, volunteer recruitment, quality assurance and quality control, IMP management, clinical aspect, study scheduling, and archival procedures. CRC Penang will be conducting training on the conduct of bioequivalence studies in 2010.

*Contract research updates:* The One-Stop Centre conducted 129 feasibility studies; and two CRC staff secured jobs in the contract research industry. Malaysia's clinical trial performance and potential was the highlight of the June 2009 issue of the Clinical Trial Magnifier, a clinical trial journal with over 22,000 subscribers worldwide.

*Investigator Initiated Trials (IIT) updates:* A cohort study on the proven efficacy of a biogeneric epoetin for the treatment of renal anaemia in patients with chronic kidney disease was published (Table 14). The study has economic implications as the use of a biogeneric to replace the original produce will reduce treatment cost, hence improving access to therapy.

*Clinical epidemiology updates:* Project Influenza A (H1N1) was launched in 2009. Its aim was to retrospectively retrieve data from medical records of hospitalised paediatric patients with pandemic 2009 influenza A(H1N1).

*Patient registry updates:* Eight of the registries produced reports in 2009. These were; 1) Malaysian Dialysis and Transplant Registry, 2) National Transplant Registry, 3) National Eye Database, 4) National Mental Health Registry (Schizophrenia), 5) Malaysian National Neonatal Registry, 6) National Trauma Database, 7) National Cardiovascular Disease Database (Percutaneous Coronary Interventions) and 8) Malaysian Registry of Intensive Care.

**TABLE 14.**  
**PUBLICATIONS OF INVESTIGATOR-INITIATED TRIALS CONDUCTED BY MOH, 2009**

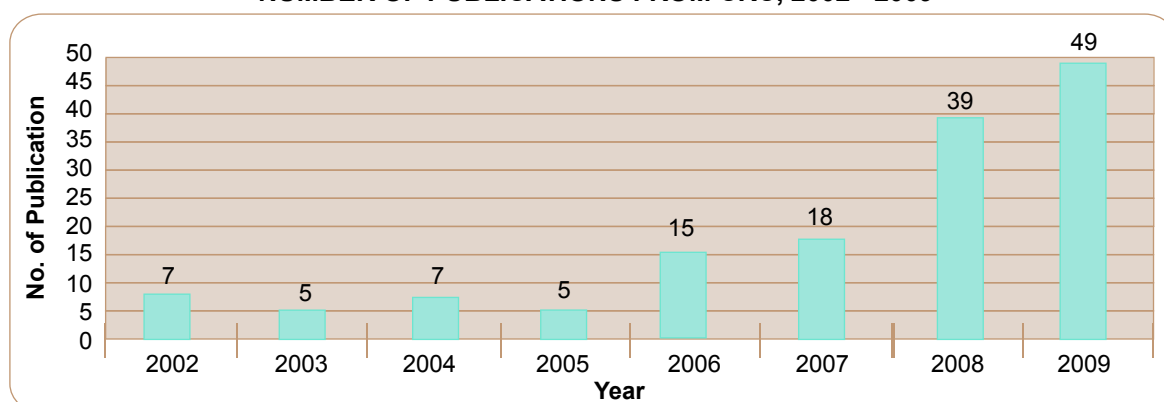
No.	Title of Paper	Journal
1.	An Observational Cohort Study to determine the long-term Safety and Efficacy of GerEPO for the treatment of renal anaemia in patients with Chronic Kidney Disease	Nephrology
2.	A multicenter study to determine the efficacy and safety of a generic atorvastatin	Medical Journal Malaysia
3.	A Randomized Prospective Study to Investigate the Electrolyte Abnormalities Associated with Oral Sodium Phosphate for Bowel Preparation of Patients for Colonoscopy	Medical Journal Malaysia

Source: Sivanandam S, Hon YK, Yuen S, et al. Investigator-Initiated Clinical Trials in Malaysia and the Role of the Clinical Research Centre of the Ministry of Health. *Med J Malaysia* 2010; 65 (Suppl.A: June 2010):138–142.

**National Healthcare Statistics Initiative (NHSI) updates.** This pioneer project was launched in 2009 and was a collaboration between CRC and Medical Development Division, Medical Practice Division, Family Health Development Division, Planning and Development Division, Pharmaceutical Services Division, National Pharmaceutical Control Bureau, Engineering Services Division, and Medical Device Bureau. This initiative, which is the first of its kind in Malaysia to enable web-based participation, has four healthcare surveys; National Medicine Use Survey (established in 2004), National Medical Device Survey (established in 2007), National Healthcare Establishment and Workforce Survey (established in 2009) and the National Medical Care Survey (established in 2009).

**Publication updates:** CRC published 49 papers in peer reviewed journals (Figure 4). Forty-percent of these were in journals with impact factor of more than 1. A paper on cumulative sum (CUSUM) was one of CRC's top papers 2009 (Table 15) as it was selected as the British Journal of Ophthalmology's Editor's choice article for April 2010. This research paper revealed the superiority of CUSUM compared to conventional methods of assessing surgical performance of cataract surgeons.

**FIGURE 4.**  
**NUMBER OF PUBLICATIONS FROM CRC, 2002 - 2009**



Source: Clinical Research Centre (CRC), MoH

**TABLE 15.**  
**CRC'S FIVE MOST PROMINENT PAPERS FOR 2009**

No.	Title of Paper	Journal
1.	Efficacy of Panobinostat in Phase II Study in Patients with Relapsed/Refractory Hodgkin Lymphoma (HL) After High-Dose Chemotherapy with Autologous Stem Cell Transplant	Blood
2.	Oral Diosmectite Reduces Stool Output and Diarrhea Duration in Children with Acute Watery Diarrhea	Clinical Gastroenterology and Hepatology
3.	Optimal cut-off levels to define obesity: body mass index and waist circumference, and their relationship to cardiovascular disease, dyslipidaemia, hypertension and diabetes in Malaysia	Asia Pacific Journal of Clinical Nutrition
4.	CUSUM: A Dynamic Tool for Monitoring Competency in Cataract Surgery Performance	British Journal of Ophthalmology
5.	Establishing learning curve for Tenckhoff catheter insertion by interventional nephrologists by using CUSUM analysis: How many procedures and in which situation?	Seminar in Dialysis

Source: Clinical Research Centre (CRC), MoH

The highlight in CRC's list of events has to be the National Conference for Clinical Research (NCCR). The NCCR 2009 (9 –10 July 2009; Pulau Pinang) which focused on "Expanding the Range of Clinical Research in Malaysia", where it presented and showcased clinical research in Malaysia with the latest update on ethics and regulatory matters and also touched on new developments in the industry. The conference was attended by 250 industry leaders and professionals.

The NCCR 2009 also initiated the "Continued Education on Research Ethics" cum Forum for the Ethics Review Committees in Malaysia (FERCIM) which presented and discussed the topics of best practices for IRB/IECs (Institutional Review Board/Independent Ethics Committee) and revisited the revised Helsinki Declaration. It also looked at the challenges faced by the ethics committee in Malaysia.

Another major event for CRC was the Registry User Seminar which was organized in collaboration with the Association of Clinical Registries, Malaysia (ACRM) and the World Health Organization (WHO). This 3-day event (27-29 October 2009) involved 144 participants, mainly doctors, clinicians, project managers and researchers from 32 registries. The speakers shared their experiences and participants were given insights into current and past registry work from their respective home countries.

Clinical Research Centre's Good Clinical Practice (GCP) workshops held across the country throughout the year is one of the most comprehensive and insightful with 12 workshops and a passing rate of 80% (566 were GCP-certified) Clinical Research Centre also conducted courses on basic, intermediate and advanced biostatistics, basic research methodology, critical appraisal, health/pharmaco-economics, clinical trial management and medical writing in 2009. The year ended with Clinical Research: The First Steps (15-17 December; Kota Kinabalu Sabah), a mini conference which gave participants an overview of different aspects of clinical research.

The Clinical Research Centre was one of the 500 booth exhibitors in the 45th Drug Information Association (DIA) Annual Meeting (21 and 25 June 2009; San Diego, US). In this first time participation for Malaysia, CRC had the opportunity to mingle with international regulators, industry professionals, academics, patients groups and exhibitors from more than 50 countries.

Closer to home, CRC participated in the first ever Clinical Trial Magnifier Conference (12–14 November 2009; Hong Kong). Dr Lim Teck Onn, Director of CRC was invited to speak on CRC. Plans were subsequently made for Malaysia to be the host of the 2010 conference and CRC to take on the role as co-organizer for this upcoming conference.

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

Among the activities that were carried out by IHM in 2009 were as follows:

- i. Visit by Minister of Health, Dato' Sri Liow Tiong Lai
- ii. Celebration for IHM *Quality Day*
- iii. Morning assembly
- iv. Visit from Hong Kong Nursing delegate
- v. Hosted *Hari Bersama Pelanggan*
- vi. Audit surveillance ISO
- vii. Receive visitors from Laos
- viii. Receive visitors from Vietnam
- ix. Visit from Iran Nursing delegate
- x. Bowling competition
- xi. Friendly Futsal match between the institutes of NIH
- xii. The Fitness test Day
- xiii. *Hari Raya Aidilfitri* open day
- xiv. Celebrating birthday of staffs
- xv. Knowledge sharing week
- xvi. Family day

- **Research**

Ongoing research projects carried out by the IHM shall be continued, while new research projects which have been listed below are proposed:

- a) Projection of Healthcare Human Resource Needs
- b) Housemanship Training and Work Stress
- c) Use of MoH Facilities for Training
- d) Feasibility study on Use of Private Healthcare Facilities for Training of Healthcare Professionals
- e) Assessment of The Competency Status of Healthcare Professionals
- f) Geographical Imbalance in the Distribution of Healthcare Workers
- g) Impact of Information Technology and Automation on Utilization of Human Resource in the Hospital

- **Training**

Over 60 training courses have been conducted by IHM throughout 2009. Among those courses are:

1. Epidemiological Intelligence and Management Programme
2. Credentialing for Hospital Director, District Health Officer and Dentist
3. Action Research Workshop
4. Healthcare Financing
5. Senior Executive Leadership

- **Consultancy Service**

Consultancy Services provided by IHM are as stated in Table 16.

**TABLE 16.**  
**CONSULTANCY SERVICES BY IHM, 2009**

No.	Consultancy Service
1.	<i>Penerapan Budaya Korporat dan Nilai-nilai Murni</i>
2.	MS ISO 9001:2000
3.	KMK Project Implementation
4.	Organization Management
5.	Health Payment and Economy
6.	Action Research Project Implementation
7.	Communication and Interaction Skill Improvement
8.	Knowledge Management
9.	Mathematical Modelling
10.	Biostatistic
11.	Basic Counselling Skills
12.	Cataloging
13.	Office Automation
14.	Nursing Leadership and Supervision
15.	Supervisory Leadership

Source: Institute for Health Management, MoH

### **Institute for Health Systems Research (IHSR)**

In 2009, the Institute has successfully accomplished the following activities – Research, Training, Consultancy, and Presentations and Publications.

- **Research**

- i. **Improving Patient Safety Projects**

- This three-year project which began in 2008 comprises 13 sub-projects, and currently in various stages of progress, from data management to report writing.

- ii. **Costing of Ministry of Health Putrajaya Health Clinic (COMPHEC)**

- COMPHEC is an activity-based costing study requested by the management of Putrajaya Health Clinic (PHC) in the late 2007. This study adopted and adapted a combination of the 'top-down' and 'bottom-up' approaches to costing, using retrospective data to costs out the services provided by the PHC. The primary goal of this study is to cost all primary health care services in a standalone electronic patient care facility.

**iii. Costing of Ministry of Health Primary Care Services (COMPRICASE)**

COMPRICASE is also an activity-based costing study requested by the Family Health Planning Division to look through the Teleprimary Care (TPC) clinics in Malaysia. Using the same approach as COMPHEC, this study was extended to TPC facilities in the state of Perlis, namely the Health Clinics of *Kangar*, *Beseri* and *Simpang Empat*. The specific objective of this study is to estimate the costs of primary care services within the settings of electronic patient care clinics in TPC. The current status of this project is to finalize the costs data.

**iv. Evaluation of Private Sector Involvement in the Delivery of Primary Care Services**

This project aims to provide information regarding the delivery of primary care services (both public and private) in Malaysia. It is also to evaluate the quality and process of primary care service and to obtain the primary care practitioners' perceptions and expectations regarding the possibility of introducing health care financing.

**v. Health Research System Analysis (HRSA)**

The main objective of this study is to describe the processes of producing, sharing and utilizing research area for better health and health equity and also to integrate the knowledge gained, at all levels of the healthcare system. Ten domains have been identified through extensive consultations and literature reviews and the domains are:

- a. Networking – with others who have a range of experience and skills;
- b. Funding – have a funding process which is based on merit;
- c. Career – recognition of work contribution;
- d. Communication – opportunities to present results;
- e. Work facilities – access to functional work spaces;
- f. Training – ongoing training opportunities;
- g. Information – access to various publications and information;
- h. Wage – adequate salary and benefits;
- i. Relevance – the topics or areas under investigation are priority areas for health research; and
- j. Collaborate – encourage of collaboration with others locally or abroad.

Data analysis has been completed and it is currently in the report writing phase.

**vi. Focus Consultation: An Insight into the Stakeholders' Views on the Proposed Concept of Malaysian Healthcare System Restructuring**

The objective of this consultation is to obtain the opinion of stakeholders regarding the proposed healthcare system restructuring (acceptability of the present system and new delivery and financing concepts). It is also to identify gaps between the current healthcare system and the proposed restructured system.



**vii. A Study on the Effectiveness of Clinical Practice Guidelines (CPGs) on Managing Selected Diseases and Dental Problems.**

- a. A Study on the Effectiveness of CPGs in the Management of Type II Diabetes Mellitus. The data collection phase of this project has been completed and it is currently in the data analysis and report writing phase.
- b. A Study on the Effectiveness of CPGs in the Management of Dengue Infection in Adults. It's currently in the analysis and report writing phase.
- c. A Study on the Effectiveness of CPGs in the Management of Dengue in Children. The data analysis of the first phase has been completed and the project is currently in the report writing phase
- d. The Effectiveness of the MoH CPGs on the Prophylactic Antibiotic Usage for Oral Surgery Procedures. This project has been completed and is in the report writing phase

**viii. Patients' Unvoiced Needs Study.**

The objectives of this study are to identify the extent of unvoiced needs during the patient-healthcare provider consultation at outpatient setting; to design an intervention measure to facilitate patients to voice their needs and to assess the interventional outcome that has been introduced. Using a controlled community trial design, a number of Ministry of Health healthcare facilities have been identified and selected for the study.

**ix. A Systematic Review on Patients' Unvoiced Needs**

A systematic review to explore the best methods to facilitate healthcare provider-patient consultation has been undertaken. The project is at the stage of data abstraction.

**x. Competency Matrix**

This project aims at developing a measure for the competency of health researchers. The pilot phase of this project has been completed. The researchers are currently in the process of developing a computerized system whereby all assessments and analysis are to be conducted electronically.

**xi. Evaluation of the Ministry of Health Quality Assurance Program**

MoH launched the QA Program in 1985 as an initiative to monitor and evaluate the quality of health services. The first evaluation was carried out in 1998 and a Strategic Plan for Quality was drafted based on the findings. The purpose of this current research is to re-evaluate the QA Program, focusing on closing the investigation loop when a short fall in quality (SIQ) occurs. Besides spear-heading the above listed research projects, the Institute also collaborated in several projects.

In addition, IHSR also facilitated more than 15 research projects as part of its on-going research methodology workshops and consultancy projects.

- **Training**

In 2009, IHSR conducted 18 training courses, of which were in the fields related to research methodology in HSR, Health Outcomes and Quality Improvements. In its' strive to enhance capacity building for research amongst MoH personnel, the Institute has successfully produced six standalone training modules for research methodology training.

The 5th National QA Convention was conducted on the 19-21 October 2009 as part of this training program. There were a total of 19 entries for the oral presentation category and 23 entries for the poster presentation.

- **Consultancy**

IHSR's technical staffs were actively engaged by the MoH and other external agencies to provide consultancies and technical assistance in matters related to health systems research, quality assurance/improvement, applied research methodology, statistical analysis, sampling designs, and research in the fields of health outcomes, health economics and health policy.

A 6-month consultancy service was provided by 6 senior technical officers of the Institute to the Muar Health District, to assist the staff in analyzing their routinely collected data. The consultancy was done through 4 workshops.

In strengthening its international collaborative works, the Institute provided 2 international consultancy services, namely:

1. QA Consultancy in Vietnam (20-25 June 2009)
2. QA Consultancy in 17 Pacific Island Countries (Papua New Guinea, 9-13 November 2009).

- **Presentations and Publications**

While research, training and consultancy remain the core activities of the Institute, the main output of these activities were the presentations and publications. In 2009, IHSR has taken part in 46 presentations at various national and international forums, and also achieved 56 publications in the form of journal articles, technical reports, research highlights and journal abstracts.

### **Institute for Health Behavioural Research (IHBR)**

IHBR conducted the following projects in 2009:

- Malaysian Mental Health Screening Inventory - MMHSI45
- Youth Behaviour Risk Factor Surveillance System (YBRFSS)

- Foreign domestic workers in Malaysia: exploring the intersection of gender, migration and health.
- Experiences and perceptions of public health staff on dengue control.
- 7 health education projects - Master program candidates
- Determinants of wellness among older Malaysians: a health promotion perspective.
- Assessment on acceptance on T&CM services amongst medical doctors in the Klang Valley & Putrajaya Hospital.
- Epidemiology of suicide: a psychological autopsy study
- The role of palm based Vitamin E in established diabetic vasculopathy.
- Online learning and diabetic care.
- Identification of non-compliance in patients with ischemic heart disease.
- Instrument development on general health literacy for Malaysia
- Effectiveness and sustainability of combination approach as a community based intervention in controlling dengue

IHBR continued to provide training on the Post Graduate Health Education Course and provided consultancy services in Risk Communication, Health Communication, Communication Skills, Public Speaking and Health Promotion.

## WAY FORWARD

The year 2010 is significant as it lies at the juncture between two Plans, the end of the 9th Malaysia Plan (9th MP) and the beginning of the 10th MP. It will be an active year with a hive of activities ranging from the completion of most research projects and programs, report writing, publishing, analyzing and evaluating performances, and also anticipating challenges and preparing for the next Malaysia Plan.

In the coming year, the Planning and Development Division would like to give emphasis on the activities leading to the Healthcare Financing Mechanism on crystallizing the concept of **1Care for 1Malaysia** and preparations to present the new research findings to His Excellency the Prime Minister and the Economic Council. Efforts will also be stepped up to improve the quality of data at HIC and MNHA Unit so as to meet global standards. Capacity building is crucial at all levels in order to meet the challenging service demand. The formulation of the 10MP is another upcoming task for the division.

In view of the expanding services in the provision of healthcare to the patients and public, and protecting the public health, the roles of engineers and scientists in the Engineering Services Division have become more prominent in assisting the medical team to realize the vision of the Ministry of Health. There is a need for a long-term commitment to continuously train the personnel to improve their knowledge, skills and competencies. A system for a fast, efficient and effective processing and delivery of information and services is necessary thus the Division will need to optimise the use of available infrastructure, equipment and technology in its daily work processes.

The Medical Devices Control Division has now become a major provider of Engineering and Scientific Support Services to the Medical and Health Programs of the Ministry of Health. The Division will continue to plan, implement, monitor and coordinate preventive health programs through the application of public health engineering principles and methods. The Division is committed to provide engineering support for the effective and proper functioning of building, equipment and engineering system, ensure reliability and efficiency of engineering installations and ensure all healthcare facilities are well maintained to appropriate standards. It will also continue to provide an effective and efficient control in the use of ionizing radiation in medicine.

The Traditional and Complimentary Medicine Division has successfully achieved all of its missions for the year 2009. There are lot of challenges predicted for the year 2010, and with the commitment from staff and top management the Division will be able to overcome it.

Among the key activities of all the institutes within the National Institute of Health will be to review the institutes' current strategies, evaluating the achievements of the past years or underperformance, identifying the gaps and remedial plans to take the institute to the next level and identifying new areas of growth. Capacity building for research in terms of more intensive staff recruitment, relevant skills training, acquisition of essential equipment, upgrading laboratory facilities and attaining compliance with Good Laboratory Practice and Good Manufacturing Practice certification will be the thrusts for continual improvement. Focus shall be directed at strengthening research management and evaluation to ensure efficient and effective utilization of resources and the delivery of expected outputs and outcomes.

The Institute for Medical Research shall continue to engage and leverage resources such as funding and expertise from outside the Ministry of Health for its research and other programs. For this to happen, existing ties with funding agencies, academia and research institutions locally and abroad shall be strengthened while new partnerships and networking shall be sought and established.

The Institute for Public Health attempts to be Center of Epidemiological Survey Research whose main function is Population Health Research, which focuses on Epidemiological Survey Research, including training and consultancy. It is the vision of the institute to be the authority and leader in epidemiological survey research, and it is also the mission of the institute to provide information on population health to stakeholders and policy makers for evidence-based policy making through:

- Leading in national epidemiological survey research
- Providing training related to epidemiological survey research
- Being a reference centre for epidemiological survey research
- Creating smart partnership and collaboration with national and international organizations.

The Clinical Research Centre (CRC) aspires to contribute to the development of the contract research outsourcing industry, which is one of the NKEA under the MoH, not only to strengthen the value of the ringgit but also to make our country the region's hub for clinical research. The Clinical Research Centre aims to enhance research culture among MOH staff and will continue to promote, facilitate and assist in the conduct of clinical research and publication of research findings. We hope that clinical research that is conducted will then applied to clinical practice and thus improve standard of healthcare in Malaysia. CRC is currently developing a Standard Operations Protocol for building a phase 1 unit and the training of its staff. From 2010 onwards, CRC will begin recruiting volunteers in order to create a satisfactory pool of skilled manpower. Veeda CR will also bring several bioequivalence studies to Malaysia.

The Institute for Health Systems Research will continue to forge and strengthen existing partnerships and collaborations with national and international organizations to reinforce its role and functions as the WHO Collaborating Centre for Health Systems Research and Quality Improvement. The institute's immediate future plans will be:

- To increase its capacity and capability in the field of Health Policy and Practice Research and Knowledge Translation;
- To enhance the utilization of research findings by identifying platforms and sharing of research findings at various technical meetings in the Ministry of Health;
- To develop capacity building in utilizing and the teaching of Systematic Reviews research methods; and
- To continue with the provision of consultancy services in the field of HSR and QA/QI at international level specifically in the Western Pacific Region.

The Institute for Health Behavioural Research (IHBR) is determined to be a leading institute in the field of health behavioural research and a health promotion training centre. In its quest for excellence, the Institute has put various plans in place including training its staff in specific fields such as research and training methodology, increasing the number of personnel in the relevant fields of expertise from time to time, collaborating with a wide range of organizations and sourcing consultations from various renowned local and international organizations.

## **CONCLUSION**

The Research & Technical Programme will continue to support all programmes and activities within the MoH and also other sectors towards achieving the best in all health related endeavors and play an important role in ensuring that MoH activities are 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.





# 6

## Oral Health Programme

## **INTRODUCTION**

In Malaysia, oral health care is provided through a dual system involving public and private sectors. Public service delivery is predominantly by the MoH which encompasses comprehensive oral healthcare at primary care level and its linkages with specialist oral health services and community oral health services. The Oral Health Division of the MoH, being at the forefront of oral healthcare for the nation, bears the responsibility of improving the oral health status of the population through the provision of preventive, promotion, curative and rehabilitative dental services, with special emphasis given to identified priority groups.

In its endeavour to fulfil the oral health needs of the population, the Oral Health Division undertakes the following roles:

- Formulation and development of policies related to the populations' oral health
- Management of oral health which includes planning, organizing, monitoring and evaluation of oral healthcare
- Promotion of oral health to ensure continual improvement of the population's oral health
- Enactment and enforcement of laws and regulations pertaining to the practice of dentistry

## **ACHIEVEMENTS AND ACTIVITIES**

### **PROFESSIONAL DEVELOPMENT**

Efforts have been undertaken by the Oral Health Division to continually strengthen the skills and knowledge of the oral health human capital both for personal development as well as for career advancement. Various initiatives have also been proposed to improve their career pathway towards better job satisfaction.

#### **Recognition of Post Graduate Dental Qualifications**

A proposal paper for the recognition of postgraduate qualifications, namely, Master of Dental Science (Paediatric Dentistry), University of Leeds, United Kingdom was completed for consideration by higher authorities in MoH. Besides this, a pioneer batch of fifteen Dental Public Health Specialists was gazetted in 2009.

#### **Post Graduate/Post-basic Training**

A total of thirty five scholarships were granted to dental officers for post graduate training programmes in various disciplines. Besides this, Post basic training in Periodontics for Dental Nurses was conducted from June to December 2009 at the Children Dental Centre and Dental Training College Malaysia in Penang. Twenty two candidates enrolled and completed their course. In addition, modules for post basic training in Restorative Dentistry for both Dental Nurses and Dental Technologists are in the pipeline.



## Career Pathways and Scheme of Service Improvement

Proposal papers for the Integrated Service Scheme for Dental Nurses and Dental Technologists (*Skim Perkhidmatan Bersepadu*) have been approved by the Human Resource Development Panel, Ministry of Health Malaysia and currently awaiting approval from the Public Service Department.

Besides this, proposal papers have been prepared with the objective of providing incentive allowances for District Dental Officers (without Dental Public Health qualifications) and also for Enforcement Officers. A proposal for on-call allowances for Dental Surgery Assistants is currently awaiting approval from the Public Service Department. Efforts have also been directed to incorporate Dental officers into the 'UD Scheme' together with all the provisions in the scheme as for Medical Officers. This paper has been forwarded to the Human Resource Division for further action.

## Continuing Professional Development (CPD)

In order to facilitate in-service training opportunities both locally and abroad, resources were allocated under the 9th Malaysian Plan whereby both Dental Professionals and Auxiliaries participated in various courses, seminars and training programmes (Table 1).

**TABLE 1.**  
**IN-SERVICE TRAINING FOR DENTAL OFFICERS AND AUXILIARIES, 2009**

In-Service Training	No. of Courses	No. of Dental officers & Dental Auxiliaries involved	Expenses (RM)
Local	95	3434	1,246,149.28
Overseas	17	27	850,000.00

Source: Oral Health Division, MoH

Besides this, integration of the CPD-PTK for dental professionals has started and verification of the on-line CPD system is being done through audit.

## FACILITY DEVELOPMENT

A total of 323 dedicated dental projects were approved under the 9th Malaysia Plan with a total cost of RM 165,814,000. By the end of 2009, 280 (86.7%) projects out of the 323 dental projects were completed.

A sum of RM 4,265 million under the new policy 2009 was used for upgrading the process of sterilization, upgrading the oral health programme for children with special needs, strengthening the water fluoridation programme, improving the provision of oral health specialist services and also for setting-up new Restorative specialist clinics and Oral Medicine/Oral Pathology specialist clinics.

Under the One-off Budget, a sum of RM 8.6 million was used for the procurement of dental unit cum chair and table top autoclaves, computers for HMIS e-Reporting system at state level, dental equipment for toddlers programme and the elderly programme at state level, dental equipment for specialist services at state level and also for strengthening the water fluoridation programme.

## **ORAL HEALTH PROMOTION**

### **Health Promotion Activities**

The Oral Health Division participated in various Health Promotion campaigns and exhibitions throughout the year in its continuous endeavour in empowering the public on the importance of oral health. The Division participated in Healthy Lifestyle Campaigns and took part in Smart Kids 2009, an education fair for children and parents at the Putra World Trade Centre Kuala Lumpur.

In addition exhibition booths were put up at the following events:

- The MDA/FDI Conference at Istana Hotel, Kuala Lumpur
- PERMATA Seminar – ‘Developing Human Capital Begins with Children’
- Launch of the *Kempen Kurangkan Penggunaan Gula*

### **Development and Dissemination of Oral Health Information**

*The following oral health promotion posters were produced and distributed to states:*

- *Langkah mudah pemeriksaan mulut sendiri untuk mengesan kanser mulut*
- *Gunakan ubat gigi berfluorida - Sayangi gigi anda*

*In addition, four pamphlets were also produced and distributed:*

- *Amalan berisiko tinggi untuk kanser mulut/Risk habits for oral cancer*
- *Nikmati makanan anda*
- *Use of fluoride in dentistry*
- *Gunakan ubat gigi berfluorida*

### **Training**

*Training sessions were conducted to enhance capacity building among personnel. Courses held are as follows:*

- *‘Enhancing Community Participation in Oral Health Promotion’*
- *‘Tobacco Cessation - Role of Dental Officer’*
- *Workshop on Digital Single Lens Reflex Photography*

## Monitoring and Evaluation of Oral Health Promotion Activities

Dental officers and dental nurses in the country carried out a total of 517,106 oral health promotion activities in 2009 (Table 2). Most activities show increased output notably community service, Dental health talks and role play activities.

**TABLE 2.**  
**ORAL HEALTH PROMOTION ACTIVITIES, 2005 – 2009**

Type of Activity	2005	2006	2007	2008	2009
Toothbrushing Drill	188,715	183,131	188,286	196,412	206,221
Dental Health Talk	177,379	174,373	178,597	202,654	238,548
In-service Training	718	683	344	525	497
Role Play	35,543	35,917	41,240	28,338	33,769
Puppet Show	2,478	2,658	1,954	2,770	3,036
Exhibition/Campaign	2,137	2,389	2,323	2,683	2,754
TV/Radio Programme (Mass Media)	746	497	148	122	44
Community Service	1,625	598	884	579	1,789
Others	5,251	10,129	10,109	16,728	30,448
<b>Total</b>	<b>414,592</b>	<b>410,375</b>	<b>423,885</b>	<b>450,811</b>	<b>517,106</b>

Source: Health Informatics Centre, MOH

Besides this, other activities monitored are:

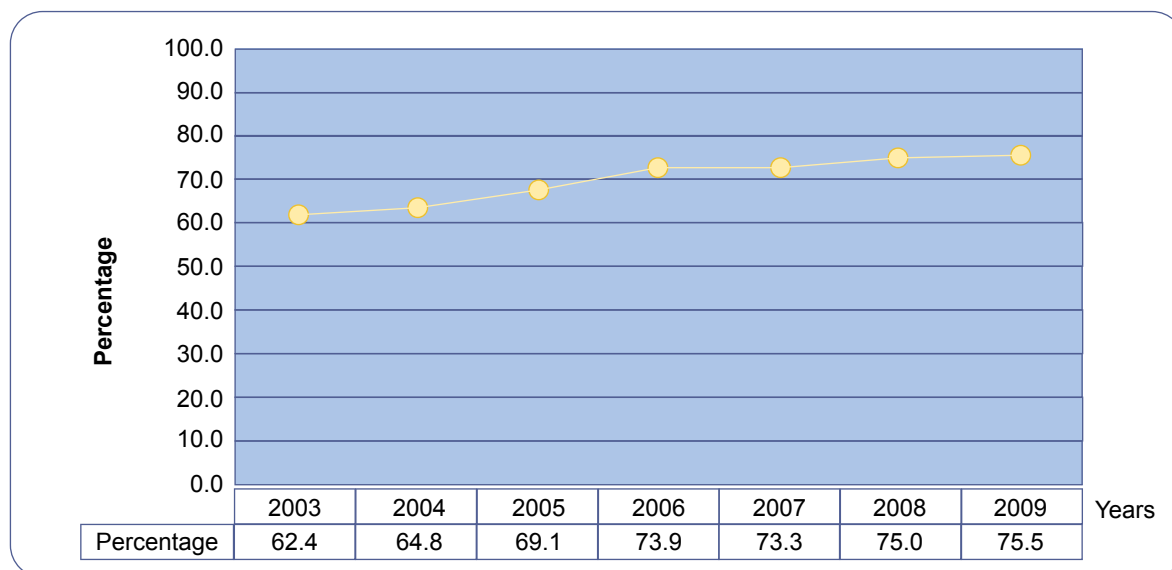
- Oral Health Seminars for Preschool Teachers
- Tobacco Cessation activities
- Oral health programme for trainee teachers

## COMMUNITY ORAL HEALTHCARE

### Water Fluoridation Programme

Water fluoridation has been considered as one of the contributing factors to the improved oral health status of schoolchildren and young adults in Malaysia. In 2009, generally about 75.5% of the Malaysian population received fluoridated water (Figure 1), an increase of approximately 0.5% compared to year 2008 (75.0%).

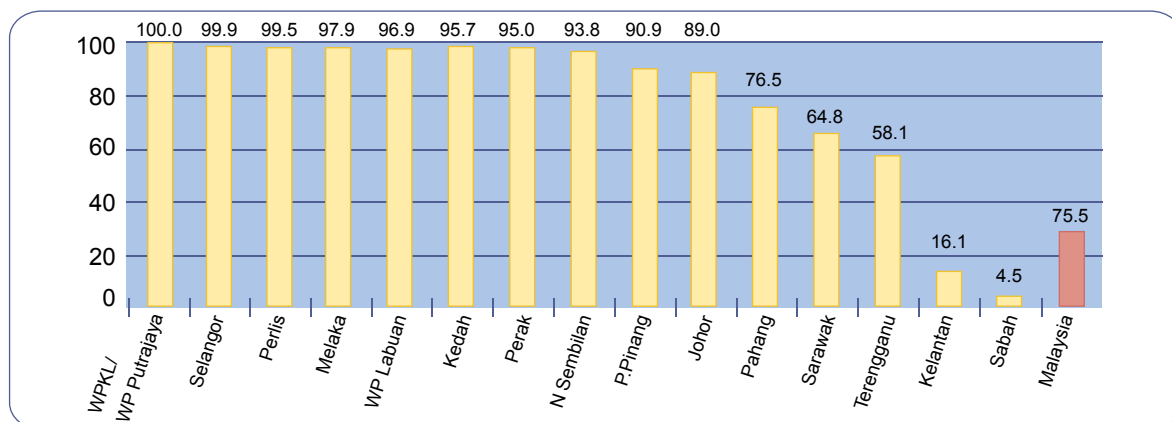
**FIGURE 1.**  
**POPULATION COVERAGE FOR WATER FLUORIDATION PROGRAMME, 2003 - 2009**



Source: State Oral Health Division, 2009

In most states more than 80% of the population received fluoridated water except for Pahang, Sarawak, Terengganu, Kelantan and Sabah. In Sarawak, about 65% of the population received fluoridated water. Approximately 16% of the population in Kelantan received fluoridated water while in Sabah it was less than 5% (Figure 2). In the year 2009, there was marked improvement in coverage of population benefitting from fluoridation of public water supplies in Terengganu, i.e. from 4.3% in 2008 to 58.1% in 2009. This was following the expansion of reinstatement of water fluoridation in district of Kuala Terengganu, Hulu Terengganu and Kemaman; after Setiu district resumed its water fluoridation programme in 2008.

**FIGURE 2.**  
**POPULATION RECEIVING FLUORIDATED WATER BY STATES, 2009**

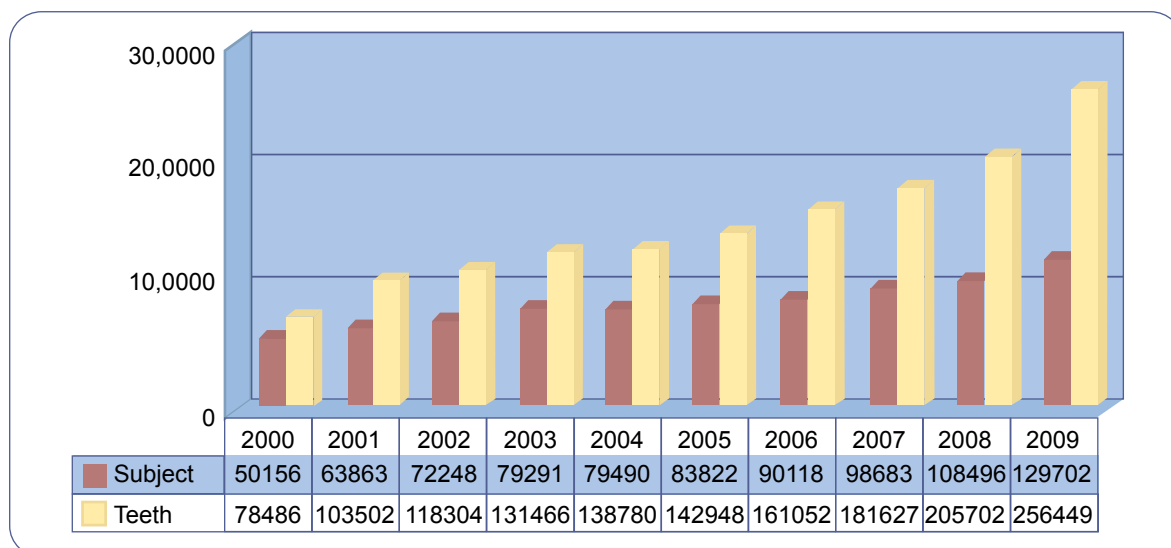


Source: State Oral Health Division, 2009

## School Based Fissure Sealant Programme

Pit-and-fissure sealants are used as part of a comprehensive approach to caries prevention on an individual basis for at-risk populations. School based fissure sealants programme has been shown to be effective in preventing dental caries. Generally, there is an increase in the number of subjects and teeth provided with fissure sealants since it was first implemented in 2000 (Figure 3).

**FIGURE 3.**  
**NUMBER OF SUBJECT/TEETH RENDERED FISSURE SEALANT, 2000 - 2009**



Source: State Oral Health Division, 2009

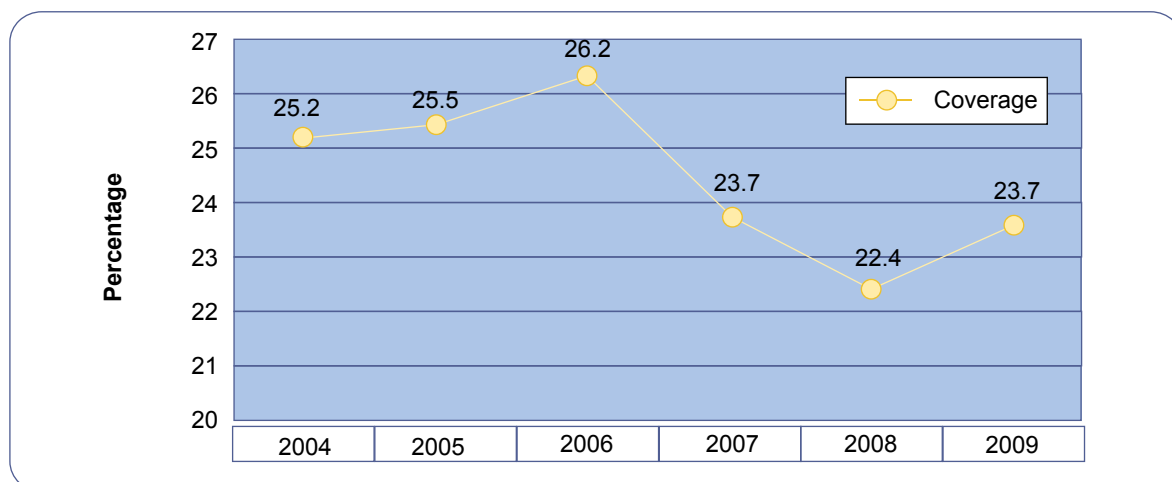
## Primary Prevention and Early Detection of Oral Precancer and Cancer Programme

Since cancer of the oral cavity is the sixth most common malignancy worldwide, the Ministry of Health Malaysia had decided that a high-risk strategy aimed at members of vulnerable communities, especially in estates augmented by opportunistic screening of patients in dental clinics, would afford the best approach towards reducing the incidence and prevalence of oral pre-cancer and cancer in the country. In 2009, a total of 7233 individuals were screened for mucosal lesions. In addition, 240 oral health promotion activities were conducted and 334 oral health talks focusing on oral cancer and pre-cancer were given to 7075 participants.

## PRIMARY ORAL HEALTHCARE

In general, 23.7% of the Malaysian population had utilized the primary oral healthcare services in 2009. It is a slight improvement compared to 22.4% in 2008 (Figure 4).

**FIGURE 4.**  
**PERCENTAGE OF POPULATION GIVEN PRIMARY ORAL HEALTH CARE, 2004 – 2009**



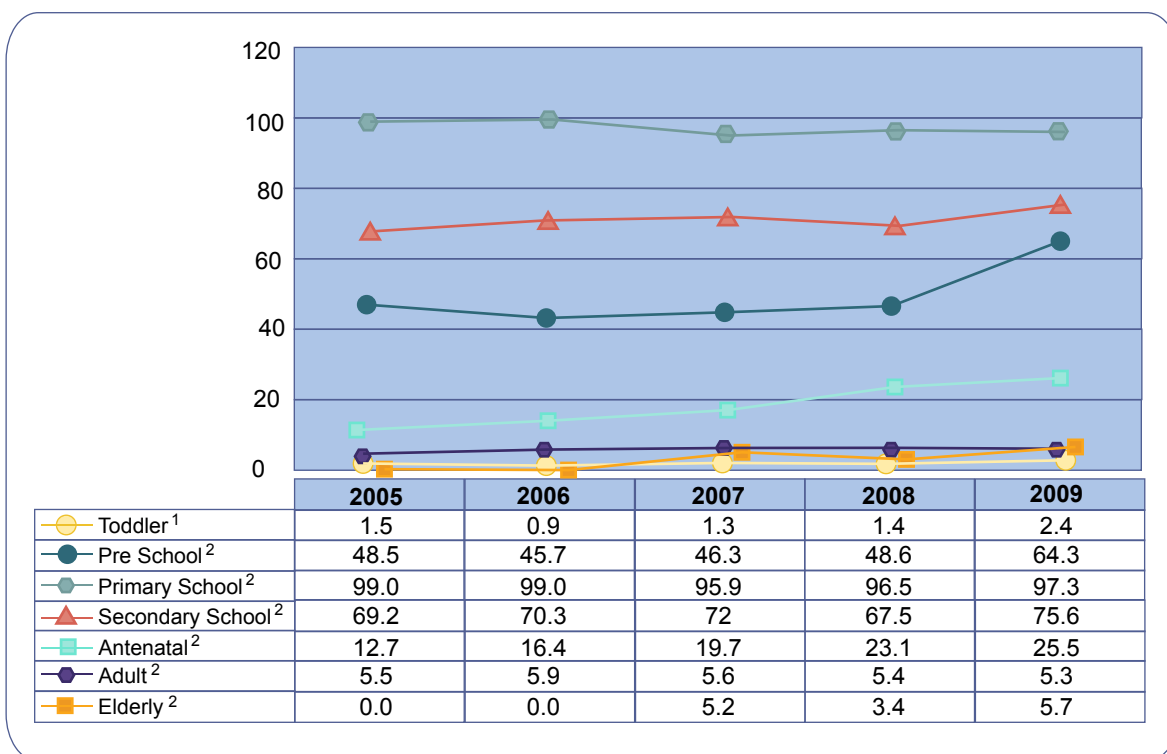
Source: Health Informatics Centre, MoH

Primary oral healthcare, the thrust of the oral health service, is provided to the population via structured programmes for identified target groups such as toddlers, preschool children, school children, children with special needs, ante-natal mothers, adults and the elderly. Figure 5 shows the utilization of primary oral healthcare by the various target groups.

The percentage of preschool, primary and secondary school children show an increasing trend, while the coverage of toddlers seems to be rather low as a structured programme for this target group started only in 2008.

Impact indicators reflect the oral health status of schoolchildren- 6 year-old, 12 year-old and 16 year-olds. There is an increase in the proportion of caries free mouths among the 12 year-olds and the 16 year-olds compared to previous years (Figure 6). However, there is still no improvement in the proportion of caries-free mouths among the 6 year-olds. Recognising this problem, the MoH has intensified its efforts in strengthening the oral healthcare for toddlers and preschoolers with the introduction of fluoride varnish application, in addition to the existing activities such as tooth brushing drill, role play, puppet show and dental health education.

**FIGURE 5.**  
**PERCENTAGE POPULATION BY CATEGORY OF PATIENTS GIVEN PRIMARY ORAL HEALTHCARE, 2005 - 2009**

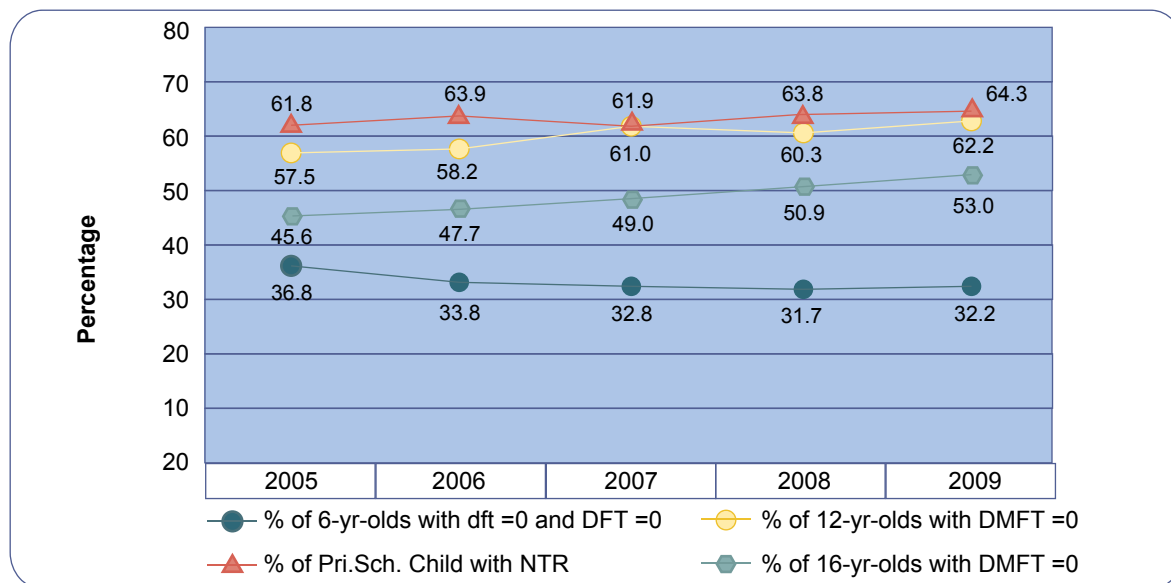


\*Revised Data

Source: <sup>1</sup>Oral Health Division, <sup>2</sup>Health Informatics Centre

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**FIGURE 6.**  
**IMPACT INDICATORS FOR SCHOOL DENTAL SERVICES, 2005 - 2009**



Source: State Oral Health Divisions, 2009

## SPECIALIST ORAL HEALTH CARE

### Dental Specialist Services

The clinical Dental Specialist disciplines available in the Ministry of Health are Oral Surgery, Orthodontics, Paediatric Dentistry, Periodontics, Oral Pathology & Oral Medicine, Restorative Dentistry and Forensic Odontology. Complementing the service delivery by clinical dental specialists are the Dental Public Health Officers who provide specialist services to the community mainly through the provision of clinical preventive care and management of oral healthcare programs. In 2009, the number of clinical dental specialists in the Ministry of Health had increased to 148 (Table 3) and the number of Dental Public Health Officers had increased to 129.

The proposal to set up Non-Hospital based Oral Health Specialist Centres, housing specialists from disciplines such as Orthodontics, Periodontics, Restorative Dentistry and Preventive Dentistry is still being pursued. The setting up of a National Oral Health Centre has been carried forward into the 10th Malaysian Plan, however capacity and capability building for the centre continues.



**TABLE 3.**  
**DENTAL SPECIALISTS BY DISCIPLINE IN MOH, 2004-2009**

Discipline \ Year	Number of Specialists					
	2004	2005	2006	2007	2008	2009
Oral Surgery	34	34	36	42	45	48
Orthodontics	31	28	26	31	30	33
Paediatric Dentistry	13	16	20	21	23	25
Periodontics	10	12	17	19	18	19
Oral Pathology & Oral Medicine	5	4	6	6	6	8
Restorative Dentistry	2	3	9	10	15	15
Total Clinical Specialists	95	97	114	129	137	148
Forensic Dentistry	0	0	0	0	0	1
Dental Public Health	124	120	118	118	123	129

Source: Oral Health Division, MOH

### Development of Clinical Practice Guidelines (CPG)

The following CPGs are in various stages of development:

- Management of Avulsed Permanent Anterior Teeth in Children (Review)
- Management of Severe Early Childhood Caries (Review)
- Antibiotic Prophylaxis for Oral Surgical Wound Infections

### In-service Training

To continually update knowledge, improve skills and remain current in their fields, Dental Specialists in the Ministry of Health are sent for additional training. Despite the slow economy in 2009, a total of 15 dental specialists were sent for various courses in the country and overseas (Table 4).

**TABLE 4.**  
**IN-SERVICE TRAINING FOR DENTAL SPECIALISTS 2007-2009**

Year	Oral Surgery	Oral Pathology/ Medicine	Orthodontics	Paediatric Dentistry	Periodontic	Restorative Dentistry	Total
2007	5	0	2	3	2	0	12
2008	6	1	2	1	1	0	11
2009	5	0	2	5	2	1	15

Source: Oral Health Division, MOH

## ORAL HEALTH EPIDEMIOLOGY AND RESEARCH

Various projects at national and programme level have been undertaken throughout the year. Besides this various training courses in Health Systems Research have also been conducted to enhance capacity and capability of the oral health personnel in undertaking research projects.

### Research Projects at National Level

- Patient Safety and Health
  - Cost for Provision of Optimal Instruments to Mobile Dental Squads
- Young Adults Survey
  - Oral Health Utilization Between Trainees And Employed Young Adults In Wilayah Persekutuan
  - Oral Health Knowledge, Perception and Behaviour Between Trainees And Employed Young Adults In Wilayah Persekutuan
  - Comparison of Young Adult's Oral Health Knowledge, Perception and Behaviour By Exposure To School Dental Programmes In Wilayah Persekutuan
- Collaborative Project on the *Orang Asli* Programme under *Jabatan Hal Ehwal Orang Asli* (JHEOA)
  - Primary School Incremental Dental Care for Orang Asli (2003-2007)
  - Oral Healthcare for *Orang Asli* adults at Dental Clinic, JHEOA Gombak (2003-2007)
- Collaborative Project with School of Dental Sciences, Universiti Sains Malaysia (USM)
  - Professional Well-being: Occupational hazards in Malaysian Public Sector Dental Practices
- National Healthcare Financing Mechanism (NHFM)
  - Costing Dental Restorations in Public Sector Dental Clinics.
- Collaborative Project under Research Dialog 2010 with the National Institutes of Health
  - An Evaluation of Diabetes Patients to the Dental Clinics in the Ministry of Health

## Research Projects at Programme Level

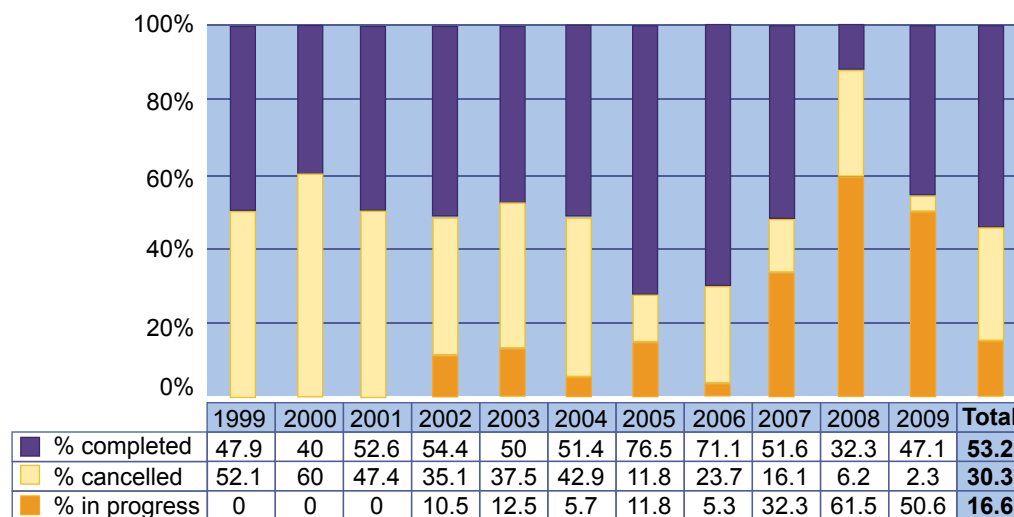
- National Oral Health Survey of Adults (NOHSA 2010)
- Study on “*High Incidence of Caries in Kelantan*”
- Study on “*Dental Practitioners’ Perception on the utilization of Dental Therapists in the Private Dental Practice in Malaysia*”

## Health Systems Research (HSR) for Oral Health

In its efforts towards inculcating a research culture in the organization, the following activities took place in year 2009 in the area of health systems research:

- a) *Monitoring of Health Systems Research (HSR) Projects*  
Monitoring of Health Systems Research Projects conducted by the States begun in 1999 and continued through the years (Figure 7).

**FIGURE 7.**  
**STATUS OF ORAL HEALTH RESEARCH PROJECTS, 1999 – 2009**



Source: Oral Health Division, MoH

- b) *Human Resource Development*  
The Epidemiology and Oral Health Research Unit carried out the following training activities towards capacity building for oral health research in 2009:
- “*Management of Complex Sampling Data*”
  - *STATA Training*
  - *Advanced Statistics Course*
  - *GRIPP (Getting Research into Policy and Practise) Course*

## **ORAL HEALTHCARE ICT**

In line with the MoH's target to support the goals of Malaysia's future health care system, numerous health-related information and communication technology (ICT) projects are being developed. There is close collaboration between the Oral Health Division and various agencies in the Ministry namely the ICT Division, the Telehealth Division and the Planning and Development Division in the pursuit of these endeavours.

### **Oral Health Clinical Information System (OHCIS)**

The project development and implementation kicked off in January 2008 with eleven dental clinics in the districts of Kuala Kubu Baru, Muar, Segamat, Kluang and Johor Bahru identified for the initial implementation of the OHCIS project.

The first year of project development focused on system development, data conversion, infrastructure setup (LAN, WAN and server installation), procurement, deployment and installation of hardware and application. This year the project continued into the testing phase whereby user acceptance tests (UAT), trail-runs and final acceptance tests (FAT) of hardware and software were conducted on-site. Training of end-users was conducted on-site at the clinics and centrally at the Information Management Division Computer Training Laboratory. The system went 'live' with an overall 99% of system implementation accomplished by the end of December 2009. Stabilizing of the system will continue into 2010.

### **Dental Practitioners Information Management System (DPIMS)**

In line with the government's policy to have a people oriented electronic delivery system in place, the Malaysian Dental Council together with the Oral Health Division and the Information Management Division formerly the Information Communication Technology (ICT) Division, Ministry of Health planned to have a Dental Practitioners Information Management System (DPIMS) with an online Annual Practicing Certificate application in 2008.

This project was delayed when the vendor appointed for the development and implementation of the system failed to deliver. The DPIMS project was given a new lease of life and is being developed in-house by the Information Management Division. The project kicked-off on the 1st July 2009. By year end the system interface design and module development was completed. The user acceptance test and end-user training for the system will be carried forward into the following year.

### **Oral Health Division Website**

The Oral Health Division Website is updated twice weekly. As of 11 February 2010, there have been a total of 111,744 hits. From January to December 2009 showed a total of 4,148 page loads. The majority of visitors were mainly locals forming 75% of the total followed by United Kingdom, Australia, New Zealand, USA and Taiwan. Visitors to the website have access to dental information, guidelines and pamphlets which may be downloaded in *pdf* formats. A link has also been added to the Malaysian Dental Association website.

## QUALITY ASSURANCE PROGRAMME (QAP)

The Quality Assurance Programme (QAP) is intended to improve the quality, efficiency and effectiveness of the delivery of services including oral health services. The National Indicator Approach (NIA) together with District/Hospital Specific Approach (DSA/HSA) have been used under the QAP of the Ministry of Health. These indicators were periodically reviewed to ensure relevance and appropriateness.

### National Indicator Approach (NIA)

Currently, the Oral Health Programme monitors six NIA indicators (Table 5). This is the third consecutive year where all indicators achieved the standards set for national level. However pockets of shortfall in quality still exist in some states.

All states achieved the standards set for “Percentage of repeat fillings done on posterior permanent teeth” and “Percentage of 16-year-olds free from gingivitis”.

Generally, all indicators except “Percentage of non-conformance to fluoride level <0.4 ppm at reticulation points” have shown a steady improvement in performance.

**TABLE 5.**  
**NIA INDICATORS, 2009**

Indicators	Standard	Achievement
Percentage of repeat fillings done on posterior permanent teeth	≤1%	0.22%
Percentage of primary schoolchildren maintaining orally fit status	≥55%	64.0%
Percentage of secondary schoolchildren maintaining orally fit status	≥70%	76.0%
Percentage of 16-year-olds free from gingivitis	≥85%	95.3%
Percentage of non-conformance to fluoride level <0.4ppm at reticulation points	≤25%	24.8%
Percentage of non-conformance to fluoride level >0.6ppm at reticulation points	≤7%	3.5%

Source: Oral Health Division, MoH

### District Specific Approach (DSA)

All states have developed their own DSA indicators. Indicators pertaining to the performance of ante-natal services are the most commonly adopted by all states except Johore and Sarawak. These indicators include percentage of attendance, treatment and dental health education given to ante-natal mothers. Other DSA indicators commonly used relates to oral health services for pre-school, primary and secondary schoolchildren.

- a) Perlis - percentage of children with special needs treated
- b) Sarawak – percentage of permanent anterior tooth loss due to caries
- c) FT Labuan – percentage of patients turning up for appointment but not treated
- d) Johor
  - percentage of fissure sealants rendered to primary schoolchildren
  - percentage coverage of private kindergartens
- e) Terengganu
  - Percentage of full dentures issued in two months
  - Percentage of preschool children and toddlers with fluoride varnish application.

### **MS ISO 9001: 2000**

In 2009, a total of 9 states have converted to MS ISO 9001:2008. Penang has expanded the scope of ISO certification to all districts and at the same time has converted to state wide multi-sites certification making a total of 14 out of 15 states with this unique top-down (state level) and bottom-up (clinic level) certification. Several other states have also expanded their scope to include more facilities. In 2009, Johore and Sabah have two new districts each included in their scope of certification. All 14 states with multi-sites certification achieved 100% coverage of districts (96 districts) and 90.1% of clinics.

Sarawak (with a total of 11 districts/divisions) is the only state retaining the original district certification approach. Nationwide, a total of 444 out of 503 dental clinics (88.3%) and a total of 104 out of 107 districts (97.2%) are ISO certified.

### **Other Quality Improvement Activities**

- ***Innovation***

Oral health personnel throughout the country have demonstrated their creativity through innovation projects. Several of these projects have received awards at state, zone and national levels (Table 6). Besides those, a Dental QA project on Improving Antibiotic Prescriptions in Dental Clinics, Larut Matang dan Selama, Perak won the Special Jury Award in the 5th National QA Convention, 2009.

- ***Key Performance Indicators***

Key performance indicators (KPIs) were used to measure efficiency and effectiveness of processes, human resource productivity and client satisfaction. In 2009, 19 KPIs were monitored in 11 domains (Table 7). Out of these, two did not achieve the target i.e. Utilisation of MOH oral healthcare facilities and Training Policy Compliance Index.

**TABLE 6.  
WINNERS AT STATE INNOVATION COMPETITIONS**

No.	Project	Convention
1.	Smart-V (Smart Vacuolizer), Johor	Quality Initiatives & 1st Johor Oral Health Research Conference 2009
2.	<i>Pameran Kesihatan Pergigian Berkumpulan (PKPB), Pahang</i>	Pahang State Quality Convention (Managerial Category)
3.	Eureka Safety Bin, Sarawak	<i>Anugerah Inovasi dan Kreativiti Setiausaha Persekutuan Sarawak</i>

Source: Oral Health Division, MoH

**TABLE 7.  
KPI DOMAINS FOR ORAL HEALTH PROGRAMME, 2009**

No.	Domain
1.	Utilisation of MOH oral healthcare facilities
2.	Comprehensive oral healthcare for school children
3.	Oral health status of schoolchildren
4.	Population receiving fluoridated water supply
5.	Client charter compliance index
6.	Waitlist for dentures
7.	Client satisfaction index
9.	Training Policy Compliance Index
8.	MS ISO certification of dental clinics
10.	Good financial management
11.	Employee satisfaction index

Source: Oral Health Division, MoH

## PROFESSIONAL DENTAL PRACTICE

### Laws and Regulation

Inspection of premises of the 39 registered dentists was undertaken at the end of the year for the purpose of renewal of the Annual Practising Certificate as required by Section 31(5) of the Dental Act 1971.

The registration of private dental clinic was undertaken as required under the Private Healthcare Facilities and Services Act 1998. In 2009, a total of 102 private dental clinics were registered. Until December 31st, 2009, there were about 1537 private dental clinic registered under this Act.

### Globalisation and Liberalisation of Oral Healthcare Services

Schedule of specific commitment in the liberalisation of private dental healthcare services for the 7th Package of commitment under ASEAN Framework Agreement on Services (AFAS) had been proposed and approved by the Ministry of Health and the Cabinet. In 2009, Malaysia had committed market access for Mode 1 (cross border services and outsourcing e.g. IT, etc), Mode 2 (consumption abroad e.g. health tourism), 51% foreign equity for Mode 3 (foreign equity allowed with joint venture) and limited to horizontal commitment (limited to 2 foreign dental specialists having additional qualifications) for Mode 4 (movement of dental professionals). Criteria on selection of private dental facilities for participation in dental health tourism had been proposed to the Policy and International Relations Division of the Ministry of Health

### Gazettement of Clinical Dental Specialists

Thirteen dental officers completed their postgraduate studies and were posted for attachment, each under the supervision of a Senior Consultant Specialist/Senior Specialist for a pre-gazettement period of not less than six months.

### Accreditation of Dental Degree programmes

Nine teams of assessment panels had been appointed separately to scrutinise database documents and visit Public and Private Higher Education Providers (HEP) sites for verification and validation for different levels of accreditation including approval of new dental programmes, monitoring progress of dental programmes, approval for intake of first cohort of students and for accreditation/reaccreditation status.

HEPs that had been visited by the Panel were:

- Asian Institute of Medicine, Science & Technology (AIMST) University, Semeling, Sg. Petani, Kedah
- *Penang International Dental College* (PIDC), NB Plaza Kepala Batas (2+3) in collaboration with VMRFDU India
- Kolej MAHSA-Trisakti Jakarta (5+0), Bandar Pusat Damansara, Kuala Lumpur



- Universiti Islam Antarabangsa Malaysia (UIAM), Indera Mahkota, Kuantan
- Universiti Sains Islam Malaysia (USIM), Pandan Indah
- MAHSA University College, Pusat Bandar Damansara, Kuala Lumpur
- Winfeld International College (WIC), Jln Tun H.S. Lee, Kuala Lumpur
- School of Dental Sciences, Universiti Sains Malaysia (USM), Kubang Kerian,

## **CHALLENGES AND WAY FORWARD**

In line with the direction of the 9MP, it is pertinent that we address prioritised areas of concern which focuses on prevention and reduction of disease burden and enhancing the delivery system.

### **Reduction of Disease Burden**

Emphasis has to be directed into consolidation of efforts to address the high levels of caries among preschoolers and toddlers. In addition to this, oral cancer has been identified as a new area of concern. Besides this, we need to ensure the sustenance and expansion of the water fluoridation programme. This is crucial as fluoridation is recognised as the most cost effective public health measure for control of dental caries from cradle to grave.

### **Improving the Healthcare Delivery System**

Efforts need to be directed towards improving the delivery of specialist oral healthcare services. This includes establishment of the dedicated facilities such as Non-hospital based Oral Health Specialist centres and National Oral Health centre. Added to this, the upgrading of existing health infrastructure and equipment in primary oral healthcare facilities is crucial towards the delivery of quality oral healthcare for the population. Besides this, oral health facilities also need to comply with the safety requirements at workplace.

### **Optimise Resources**

Our current incapability to produce enough numbers of teaching staff for oral health personnel that we capitalise on imminent future opportunities to address this urgent area of shortfall.

### **Enhance Research and Development**

Key research projects needs to be identified and carried out to provide evidence in policy decisions for improvements in oral healthcare.

### **Enhance Human Resource Development**

Competency of the oral health personnel in the delivery of oral healthcare is another area that needs to be addressed. This includes relevant training in identified areas of need for dental officers, specialists and auxiliaries.

### **Strengthen Health Information and Management System**

With advancing digital technology, it is timely to move into paperless patient health records documentation which is essential in creating a system of seamless care.

### **CONCLUSION**

The Oral Health Division is dedicated and committed in its efforts to realize its mission of delivering better oral healthcare service to the nation. We believe that with the concerted efforts of all our personnel, our vision of a population enjoying optimum oral health coupled with an enhanced quality of life will be a reality in the near future.



# 7

## Pharmacy

## **INTRODUCTION**

The Pharmacy Services were upgraded to become one of the Ministry of Health Malaysia (MoH)'s programmes since 2007. The Pharmacy Programme is responsible in ensuring all pharmaceutical and health products in the market are of quality, safe, efficacious and regulated according to relevant legislations, and used rationally. This programme comprises four main activities, namely Pharmacy Management, Pharmacy Regulatory (National Pharmaceutical Control Bureau, NPCB), Pharmacy Enforcement and Pharmacy Practice and Development.

Pharmacy Management is a new activity under the Pharmacy Programme since 1 January 2009. It ensures that pharmacy services strategic plan and policies are implemented accordingly, ensuring effective distribution of human resource, ensuring relevant and continuous trainings are carried out, ensuring the practice of quality system at all levels of services, and ensuring administrative and financial matters are according to rules and guidelines. Pharmacy Regulatory activities assure public health by establishing and implementing the national drug registration system for pharmaceuticals and health care products besides regulating the pharmaceutical industry through the NPCB that assures the quality of medicines in the country. Pharmacy Enforcement activities protect consumers from hazardous drugs, 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 the country. Through Pharmacy Practice and Development activities, drug therapies were optimised and comprehensive pharmaceutical care were provided by ensuring efficient selection, procurement, distribution of pharmaceuticals and promoting rational and cost-effective use of medicines through effective up-to-date clinical and professional pharmaceutical services in tandem with the current global development.

## **PROGRAMME RESOURCES**

The Pharmacy Programme is headed by a Senior Director. She is assisted by three Directors, who are in charge of the NPCB, Pharmacy Enforcement Division, and Pharmacy Practice and Development Division respectively, and Deputy Directors who lead the Pharmacy Management activities at both headquarter and state levels. The manpower for the Pharmacy Programme, MoH according to category and activity is shown in Table 1 and Table 2.

**TABLE 1.  
PHARMACIST MANPOWER, 2009**

Category / Activity	Grade	Number of Posts	Filled	Vacant	% Filled
Senior Director	JUSA A	1	1	0	100
Pharmacy Practice & Development	JUSA C	1	1#	0	100
	U54	16	9	7	56
	U52	83	45	38	54
	U48	182	113	69	62
	U44	391	158	233	40
	U41	2753	2729	24	99
Pharmacy Enforcement	JUSA B	1	1*	0	100
	U54	4	4	0	100
	U52	17	9	8	53
	U48	64	36	28	56
	U44	67	32	35	48
	U41	325	290	35	89
Pharmacy Regulatory (NPCB)	JUSA C	1	1	0	100
	U54	5	3	2	60
	U52	16	9	7	56
	U48	37	14	23	38
	U44	23	21	2	91
	U41	143	138	5	97
Pharmacy Management	U54	14	13	1	93
	U52	2	1	1	50
	U48	4	3	1	75
	U44	2	2	0	100
	U41	8	8	0	100
<b>Total</b>		<b>4160</b>	<b>3641</b>	<b>519</b>	<b>88</b>

# Post filled by Pharmacist Grade Jusa B (KUP): Director of Pharmacy Practice & Development

\* Post filled by Pharmacist Grade Jusa C (KUP): Director of Pharmacy Enforcement

Source: Pharmaceutical Services Division, MoH

**TABLE 2.  
PHARMACIST ASSISTANT MANPOWER, 2009**

Category / Activity	Grade	Number of Posts	Filled	Vacant	% Filled
Pharmacy Practice & Development	U40	12	10	2	83
	U38	37	34	3	92
	U36	96	89	7	93
	U32	441	381	60	86
	U29	2590	2227	363	86
Pharmacy Enforcement	U36	3	3	0	100
	U32	10	8	2	80
	U29	9	5	4	56
Pharmacy Regulatory (NPCB)	U36	2	2	0	100
	U32	8	7	1	88
	U29	70	59	11	84
<b>Total</b>		<b>3278</b>	<b>2825</b>	<b>453</b>	<b>86</b>

Source: Pharmaceutical Services Division, MoH

## ACTIVITIES AND ACHIEVEMENTS

### PHARMACY MANAGEMENT

#### Training and Continuous Professional Development Activities

- Allocation**

In year 2009, the Pharmacy Programme was allocated with a sum of RM 2,276,782.00 for the purpose of In-Service Training under the development expenses allocation of the Ninth Malaysia Plan. The distribution of allocation to states and institutions is as in Table 3.

**TABLE 3.  
DISTRIBUTIONS OF ALLOCATION FOR TRAINING, 2009**

Distribution	Allocation (RM)
Pharmaceutical Services Division (Headquarters)	759,732.00
States / Institutions	366,400.00
Overseas Training	1,150,650.00
<b>Total</b>	<b>2,276,782.00</b>

Source: Pharmaceutical Services Division, MoH

- Training**

- i. Local Training

A total of 205 courses, conventions and workshops were conducted in 2009.

ii. Overseas Training

In 2009, a total of 25 Pharmacists were sent overseas to participate in courses, workshops, and educational visits. The countries involved were United Kingdom, Singapore, Netherland, Australia, Belgium, Switzerland, Sweden, New Zealand and United States of America.

iii. Expenditure

The actual expenditure for organising the courses, conventions, and workshops in 2009 was RM 1,123,017.43 or 99.70% of the total training allocation (Table 4).

**TABLE 4.**  
**LOCAL AND OVERSEAS TRAINING EXPENDITURES, 2009**

Training	Allocation	Expenditure	Training Performance
Local Training	RM1,126,132.00	RM1,123,017.43	99.70%
Overseas Training	RM1,150,650.00	RM830,469.31	72.17%
<b>Total</b>	<b>RM2,276,782.00</b>	<b>RM1,953,486.74</b>	<b>85.80%</b>

Source: Pharmaceutical Services Division, MOH

### National Medicines Policy (NMP)

National Medicines Policy (NMP) or its acronym, *Dasar Ubat Nasional* (DUNAS) has been approved to become the country's Medicines Policy by the Cabinet in October 2006 with aims to promote equitable access to, and rational use of, safe, effective and affordable essential drugs of good quality to improve health outcomes of the people.

Four main components of NMP:

- i. Quality, safety and efficacy of drugs
- ii. Drug availability
- iii. Drug affordability
- iv. Quality use of drugs

Four supporting components of NMP:

- i. Human resource development
- ii. Research and development
- iii. Technical co-operation
- iv. Management of the NMP

The DUNAS Unit under Pharmacy Management is responsible in monitoring the implementation of NMP. For the year 2009, 22 background indicators, 41 structural indicators, 17 process indicators and one outcome indicator proposed by World Health Organization (WHO) were monitored. Besides these WHO indicators, beginning year 2010, the DUNAS Unit will be monitoring new indicators proposed during the NMP Mid-Term Review Workshop which was held on the 28-30 July 2009 at Sheraton Subang Hotel. This workshop was attended not only by the MoH officers but also representatives from various stakeholders such as universities, professional associations, non-government organisations and others. Four Technical Committees for the main components and one Technical Committee for the supporting components have been established to ensure the implementation of the action plans proposed during the workshop.

## **PHARMACY REGULATORY (NATIONAL PHARMACEUTICAL CONTROL BUREAU)**

### **Pharmaceutical Quality, Efficacy and Safety Assurance**

The National Pharmaceutical Control Bureau (NPCB) plays an important role as the Secretariat to the Drug Control Authority (DCA) and is responsible for ensuring therapeutic products that are approved in the market are of quality, efficacious and safe along with ensuring traditional and cosmetic products that are approved in the market are of quality and safe for consumers.

- ***Product Registration***

Since drug registration started in 1985, a total of 274,135 applications for product registration have been received (Table 5). A total of 266,173 products status were recorded until December 2009 due to backlog cases and from there, a total of 246,984 (92.8%) products were registered and 19,189 (7.2%) applications were rejected by the DCA for various reasons (Table 6).

A total of 40,377 applications for product registration and cosmetic notification were received in the year 2009. After the review of each submission, 1,765 products were registered and 37,308 cosmetics were notified by December 2009. Of these, the number of prescription products, non-prescription products and traditional products registered by the DCA were 412 (1.054%), 313 (0.801%) and 1,040 (2.662%) respectively whereas the number of cosmetic products notified (37,308) was 95.483% of the total.

In year 2009, a total of 342 product registration applications which included 121 (35.4%) prescription products, 84 (24.6%) non-prescription products and 137 (40.0%) traditional products were rejected by the DCA. Besides that, the registration of 60 products were cancelled by the DCA, which includes 9 (15.0%) prescription products, 11 (18.3%) non-prescription products and 40 (66.7%) traditional products, due to cancellation of agreement for contract manufacturing and adulteration issues. Apart from that, the registration of 6 products was suspended by the DCA due to various reasons. The statistics on product registration are as shown in Table 5 and Table 6.



The introduction of the online system for product registration and licensing by the NPCB marked a new chapter in the history of pharmaceutical regulatory development in Malaysia. Malaysia is one of the first regulatory agencies in the world to implement the online system for the application of product registration in 2002. This online system for product registration started with registration of cosmetic products and later extended in stages for the registration of products containing scheduled poisons (controlled items) and non-poison products (over-the-counter products) in July 2003 followed by traditional products in January 2004 and veterinary products in August 2007.

**TABLE 5.**  
**NUMBER OF APPLICATIONS FOR PRODUCT REGISTRATION, 1985-2009**

Year	Prescription Products	Non-prescription Products	Traditional Products	Cosmetics	Total	
					Yearly	Cumulative
1985-2000	13,972	9,963	20,291	1,729	45,955	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	27,179	172,340
2007	555	560	1,325	25,534	27,974	200,314
2008	604	483	1,120	31,237	33,444	233,758
2009	492	381	902	38,602	40,377	274,135
<b>Total</b>	<b>18,670</b>	<b>14,583</b>	<b>33,419</b>	<b>207,463</b>	<b>274,135</b>	

Source: Pharmaceutical Services Division, MoH

**TABLE 6.**  
**CUMULATIVE NUMBER OF REGISTERED PRODUCTS, 2005-2009**

Year	Prescription Products	Non-prescription Products	Traditional Products	Cosmetics	Total
2005	10,823	7,989	15,129	83,525	117,466
2006	11,356	8,685	16,858	108,240	145,139
2007	11,805	9,098	18,200	136,643	175,746
2008	12,214	9,370	19,153	167,174	207,911
2009	12,626	9,683	20,193	204,482	246,984

Source: Pharmaceutical Services Division, MoH

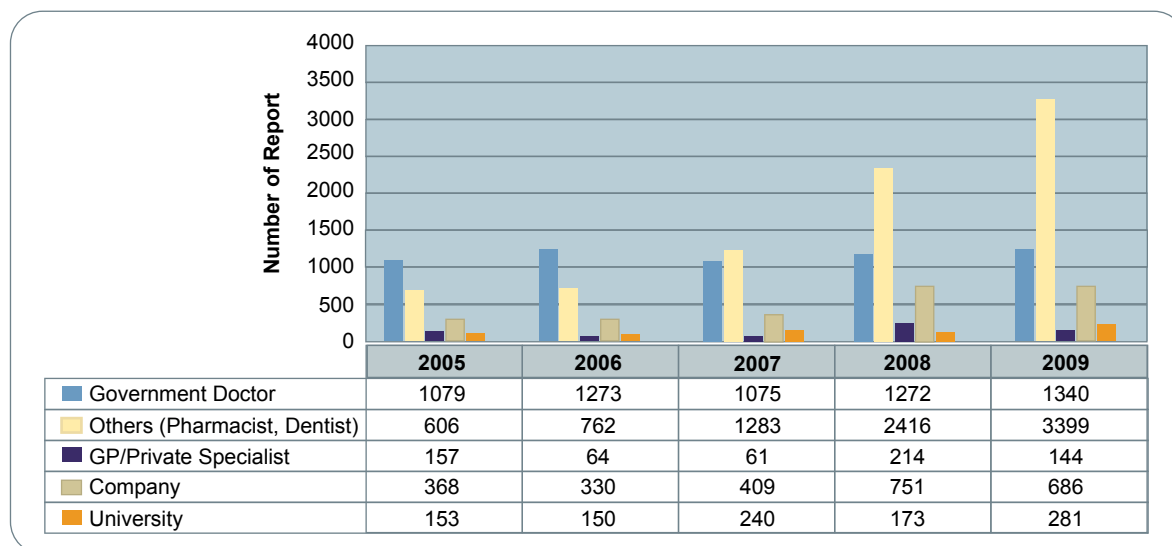
### • **Post Registration of Products**

The monitoring of registered products in the market is part of the regulatory process in order to ensure continued compliance to safety, efficacy and quality. Therefore, samples of registered products are subjected to testing under the Post Market Surveillance (PMS) Programme. For this purpose, a total of 2,656 registered products were sampled in the year 2009. Based on the outcome of laboratory testing, 107 product batches were subjected to Degree III Product Recalls (i.e. within 30 days) due to quality defects. The recalls involved 8 (7.5%) prescription products, 9 (8.4%) non-prescription products, 82 (76.6%) traditional products and 8 (7.5%) cosmetics. The registration of 8 products and the notification of 12 cosmetics were cancelled as the samples tested were found to be adulterated with scheduled poisons.

2,073 labels and package inserts were also checked under the surveillance programme. Warning letters were issued for 660 products which were found to be non-compliant with the labelling requirements. The NPCB also investigated 524 product complaints submitted by health professionals and the public which subsequently led to punitive actions taken such as the directive for product recalls.

A total of 5,850 adverse drug reaction (ADR) reports were received in year 2009 and this shows a 21% increase as compared to the previous year. Of this, 5,795 reports were evaluated and subsequently 5,750 reports were submitted to the WHO ADR Monitoring Centre in Uppsala, Sweden. An analysis of the submitted ADR reports showed that reports from pharmacists and doctors in the government sector contributed to about 81% of the reports (Figure 1).

**FIGURE 1.**  
**NUMBER OF ADR REPORTS BASED ON CATEGORY OF REPORTERS, 2005-2009**

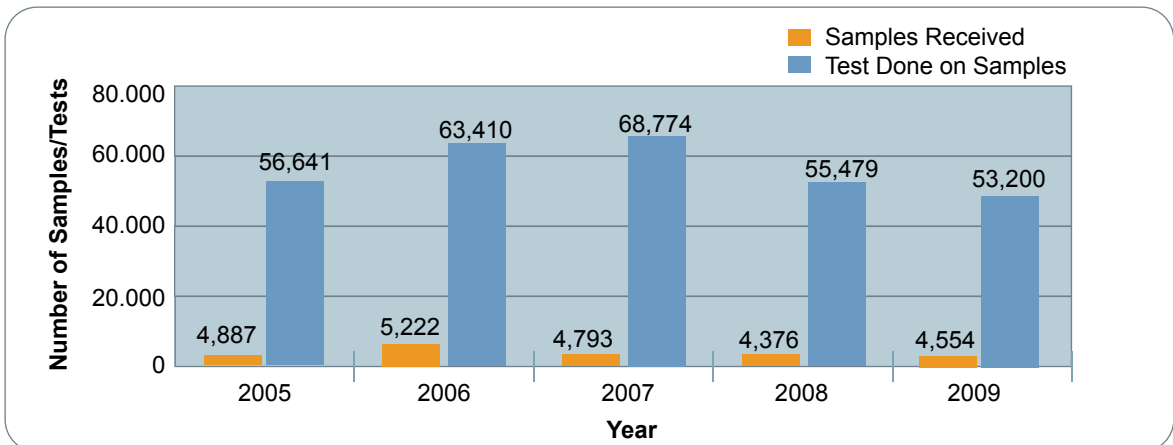


Source: Pharmaceutical Services Division, MoH

- **Quality Control**

On the aspect of quality control, a total of 53,200 tests were done on 4,554 samples received, from which 1,116 (24.5%) samples were for applications for registration, 2,236 (49.1%) samples from surveillance activities, 103 (2.3%) samples arose from product complaints and 1,099 (24.1%) samples were from enforcement activities (Figure 2).

**FIGURE 2.**  
**STATISTICS ON THE SAMPLE TESTINGS, 2005-2009**



Source: Pharmaceutical Services Division, MoH

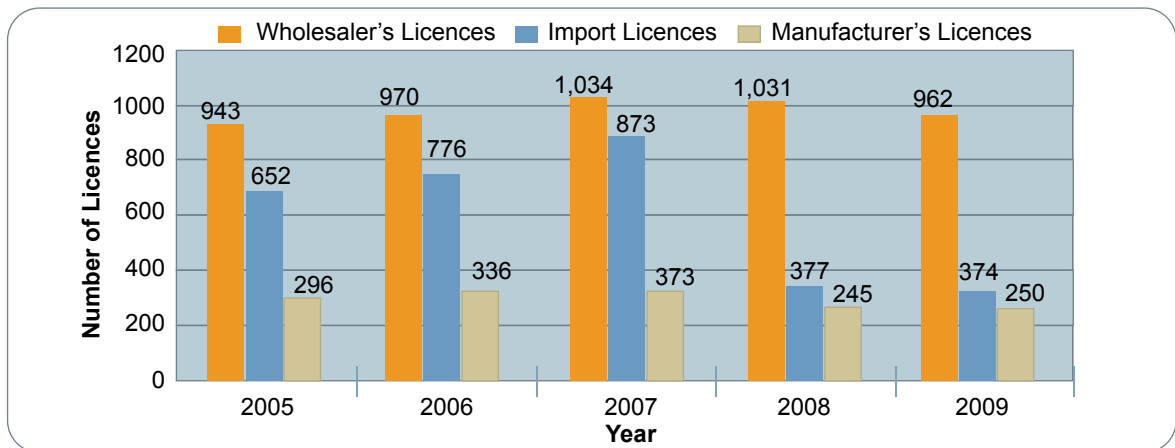
- **Compliance and Licensing**

In the year 2009, 250 manufacturer's licenses were issued of which 74 (29.6%) were for pharmaceutical manufacturers and 176 (70.4%) were for traditional manufacturers. Besides that, 374 import licenses were also issued, comprising of 224 (59.9%) for pharmaceutical products and 150 (40.1%) for traditional products. As for the wholesaler's licenses, 962 were issued of which 481 (50.0%) of these licenses were issued to wholesalers of products containing scheduled poison drugs and 481 (50.0%) licenses were issued to wholesalers dealing with non-poisons, traditional products and cosmetics (Figure 3).

### International Involvement

NPCB continues to play an active role in the harmonisation efforts through the ASEAN Consultative Committee for Standards and Quality (ACCSQ), Pharmaceutical Products Working Group (PPWG), ASEAN Cosmetic Committee (ACC) as well as the Traditional Medicines and Health Supplement Product Working Group (TMHS PWG). Other international involvements include Pharmaceutical Inspection Cooperation Scheme (PIC/s) activities, invitation by WHO to be part of the WHO Consultation on Regulatory Considerations in Evaluating Similar Biotherapeutic Products, which was held in Canada on July 2009, and the WHO Workshop on Implementation of Lot Release of Vaccines, which was held in China on December 2009.

**FIGURE 3.**  
**STATISTICS ON LICENSES ISSUED, 2005-2009**



Source: Pharmaceutical Services Division, MoH

### Visits and Training of Visitors from Overseas

Throughout the year 2009, NPCB received a total of 114 international visitors from various countries such as Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Korea, Laos PDR, Myanmar, Singapore, Sri Lanka, Sudan, Thailand and Vietnam. 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 pharmaco-vigilance and surveillance activities.

## PHARMACY ENFORCEMENT

### Operation and Investigation

- **Operation**

Raiding activities have been enhanced in order to curb the activities of distribution, manufacturing and importation of unregistered products, products adulterated with controlled Scheduled Poisons substances such as coffee & health supplements, counterfeit products and also the abuse and the diversion of psychotropic and other substances by the medical clinics and pharmacies. With the assistance of the State Pharmacy Enforcement Branches (CPF) and other enforcement agencies, in certain cases, the raiding activities were conducted continuously throughout the country (Table 7).

**TABLE 7.**  
**VALUE OF ITEMS SEIZED ACCORDING TO STATES, 2009**

States	Registered Products		Unregistered Products		Other Items		Total	
	No of Items	Value (RM)	No of Items	Value (RM)	No of Items	Value (RM)	No of Items	Value (RM)
PSD, MOH	36	322,526	40	204,716	0	0	76	527,242
FT Kuala Lumpur	201	368,780	782	2,980,564	0	0	983	3,349,344
FT Labuan	13	20,781	29	7,241	0	0	42	28,022
Johor	381	241,279	3,194	812,327	10	38,713	3,585	1,092,319
Kedah	383	209,615	337	105,546	0	0	720	315,161
Kelantan	33	10,892	1,063	764,836	0	0	1,096	775,728
Melaka	43	14,224	580	48,184	0	0	623	62,408
N. Sembilan	119	15,151	369	133,773	0	0	488	148,924
Pahang	17	45,355	309	38,791	0	0	326	84,146
Perak	137	416,181	695	295,986	1	313	833	712,480
Perlis	37	11,417	552	78,704	0	0	589	90,121
Pulau Pinang	457	144,648	1,833	239,436	3	350	2,293	384,434
Sabah	518	122,064	3,861	394,774	0	0	4,379	516,838
Sarawak	706	196,051	2,447	606,606	0	0	3,153	802,657
Selangor	218	2,330,251	3,002	3,509,747	19	175,743	3,239	6,015,741
Terengganu	37	25,945	671	173,406	0	0	708	199,351
<b>Total</b>	<b>3,336</b>	<b>4,495,160</b>	<b>19,764</b>	<b>10,394,637</b>	<b>33</b>	<b>215,119</b>	<b>23,133</b>	<b>15,104,916</b>

Source: Pharmaceutical Services Division, MoH

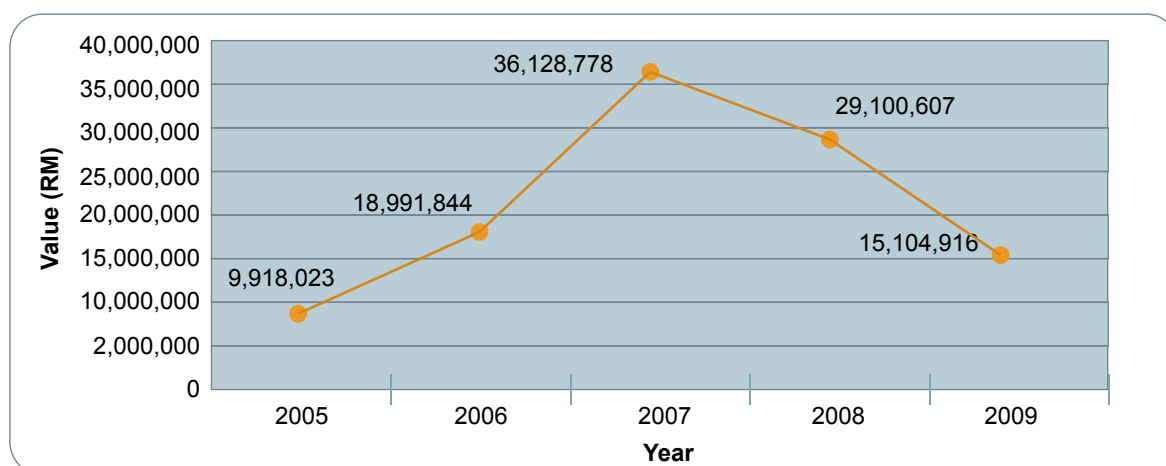
Such raiding activities were conducted by the Pharmaceutical Enforcement Officers following upon surveillance and inspections done by the officers, apart from complaints received from the public. Among the products seized were unregistered products, psychotropic substances and products adulterated with controlled Scheduled Poisons substances which included registered products and cosmetics and also traditional, slimming and sex stimulant products packed in the form of food based products such as coffee and health supplement (Table 8). With reference to Figure 4, it is noticed that there is a declining trend in terms of seized value since 2007, as intensive enforcement actions since then had successfully reduced the appearance of unregistered products in the local market significantly.

**TABLE 8.**  
**PERCENTAGE OF VALUE OF ITEMS SEIZED ACCORDING TO PRODUCT CATEGORIES, 2009**

Product Categories	Percentage (%)
Unregistered Traditional Products	32.92
Other Unregistered Products	16.99
Registered Traditional (T) Products	16.01
Registered Controlled (A) Products	10.57
Unregistered Controlled Products	10.57
Unregistered OTC Products	6.66
Registered OTC (X) Products	2.34
Unnotified Cosmetic Products	1.68
Chemicals	1.39
Notified Cosmetic (K) Products	0.84
Other Products	0.02
Veterinary Products	0.01

Source: Pharmaceutical Services Division, MoH

**FIGURE 4.**  
**VALUE OF ITEMS SEIZED, 2005-2009**

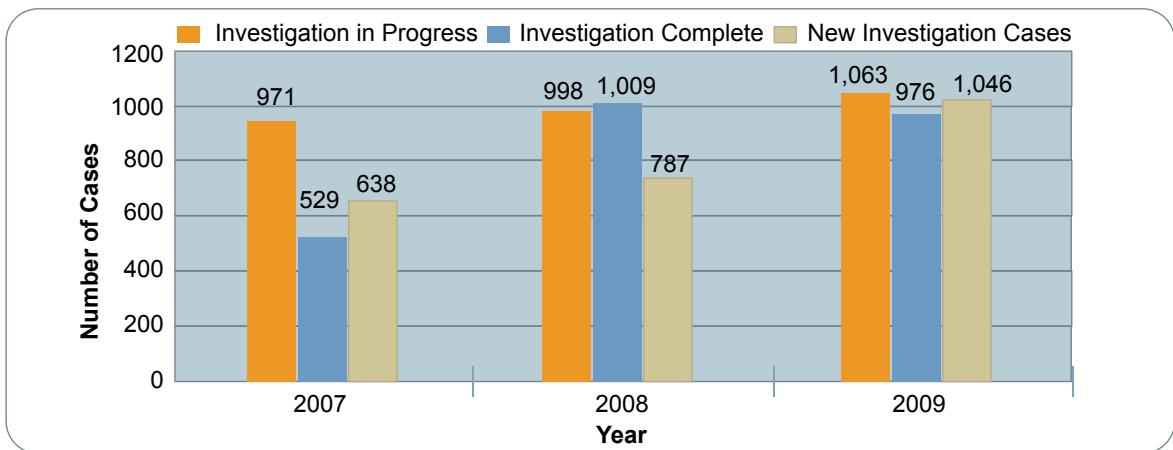


Source: Pharmaceutical Services Division, MoH

- **Investigation**

In 2009, apart from investigating new cases, focus was also given to increase the completion of backlog cases. Investigation on new cases such as products without hologram and the products with any drug in any package which bears or has attached thereto any false or misleading statements that can confuse the consumer was also conducted. There was an increase in new cases that were investigated in 2009 in comparison to 2008 and 2007 (Figure 5).

**FIGURE 5.**  
**STATUS OF INVESTIGATION CASES, 2007-2009**



Source: Pharmaceutical Services Division, MoH

## Licensing and Substances Control

- **Licensing**

The State CPFs are responsible for the issuance of the Poison Licenses for premises in the respective states. The breakdown of the licenses issued by each state in 2009 is shown in Table 9. Table 10 shows the types and number of licenses issued by state CPFs in 2007 till 2009.

**TABLE 9.**  
**LICENSES AND PERMITS ISSUED ACCORDING TO STATES (2009)**

State	Type A License	Type B License	Type D License	Type E License	NaOH Permit
Perlis	15	7	1	-	6
Kedah	146	92	5	-	52
Pulau Pinang	344	225	-	1	204
Perak	200	82	-	8	125
Selangor	907	417	-	1	493
FT Kuala Lumpur	421	84	-	1	44
Negeri Sembilan	82	47	-	-	95
Melaka	80	60	-	-	85
Johor	229	234	-	10	400
Pahang	67	47	1	-	128
Terengganu	9	18	-	-	20
Kelantan	89	20	-	-	18
Sabah	195	96	-	-	104
Sarawak	211	29	-	7	152
FT Labuan	5	26	-	-	5
<b>Total</b>	<b>3,000</b>	<b>1,484</b>	<b>7</b>	<b>28</b>	<b>1,931</b>

Source: Pharmaceutical Services Division, MoH

**TABLE 10.**  
**TOTAL NUMBER OF LICENCES AND PERMITS ISSUED, 2007-2009**

License and Permit	2007	2008	2009
Poison License Type A	3,005	3,055	3,000
Poison License Type B	1,674	1,554	1,484
Poison License Type D	9	8	7
Poison License Type E	16	18	28
NaOH Permit	2,166	1,937	1,931
<b>Total</b>	<b>6,870</b>	<b>6,572</b>	<b>6,450</b>
<b>Total Number of Pharmacy Premises (Retail, Retail &amp; Wholesale, Wholesale)</b>	<b>1,994</b>	<b>2,026</b>	<b>2,170</b>

Source: Pharmaceutical Services Division, MoH

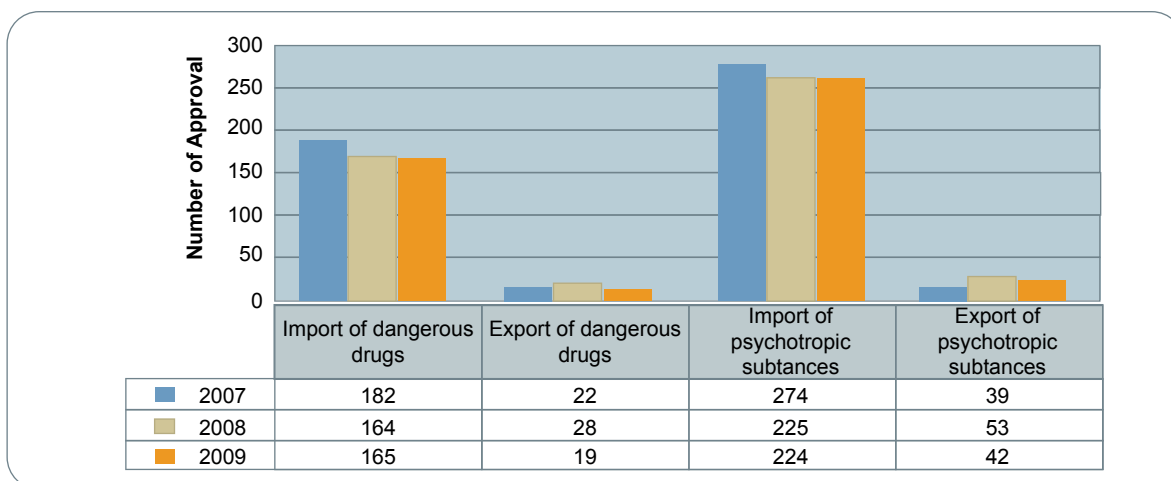
#### • **Control of Narcotics & Psychotropics**

PSD, MOH is the Competent Authority responsible for controlling the import and export of narcotic and psychotropic substances, controlled under the *Single Convention on Narcotic Drugs 1961* and the *Convention of Psychotropic Substances of 1971*. Locally, these substances are gazetted and controlled under the Poisons Act 1952. Besides issuing the import and export approvals for narcotic and psychotropic substances, Pharmacy Enforcement PSD, MOH is also responsible for collecting and reporting all the information



related to the import and use of the narcotic and psychotropic substances to the INCB. The number of approvals for import and export is as listed in Figure 6.

**FIGURE 6.**  
**NUMBER OF APPROVALS ISSUED FOR IMPORT AND EXPORT OF DANGEROUS DRUGS AND PSYCHOTROPIC SUBSTANCES, 2007-2009**



Source: Pharmaceutical Services Division, MoH

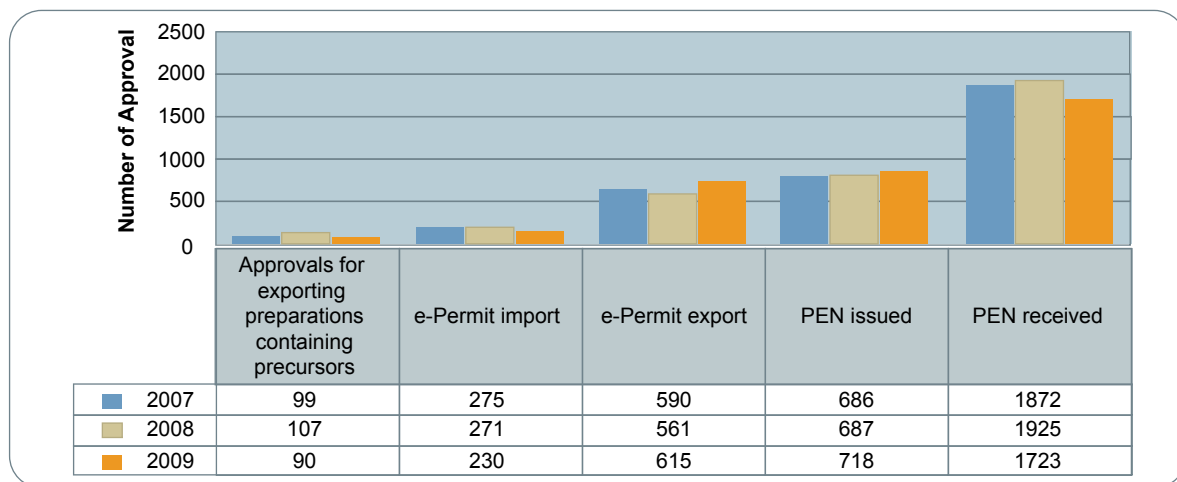
- **Control on Import and Export of Precursors**

PSD is the competent authority for precursor control under Article 12, the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988. Most precursors, besides being scheduled poisons, are also listed under the Customs (Prohibition of Import) Order and Customs (Prohibition of Export) Order.

In conjunction with international requirements, we practise a system of issuing PEN to the competent authority of the importing countries whereby these chemicals are only exported if there is no objection from the importing country (approval by way of acknowledgement). The PEN system is an online web based system provided by the INCB. Currently, Malaysia also receives PEN from exporting country who wishes to export precursor chemicals to Malaysia. PEN received are vetted for its authenticity and approval is given by way of PEN online.

Pharmacy Enforcement PSD, MOH is also responsible in the issuance of Approval permit (AP) to import and export through the e-permit system provided by the Customs Department in compliance to Customs (Prohibition of Import) and Customs (Prohibition of Export) Order. In 2009, there is an increase of 54 approvals of export permit as compared to 2008. The total number of PEN issued increase from 687 in 2008 to 718 in 2009 (Figure 7).

**FIGURE 7.  
NUMBER OF APPROVALS FOR IMPORT AND EXPORT OF PRECURSORS AND  
CONTROLLED CHEMICALS, 2007-2009**



Source: Pharmaceutical Services Division, MoH

• **Control on Diversion of Precursors**

Pursuant to the concern highlighted by INCB on the increased number of diversions of pharmaceutical preparation containing precursor chemicals such as Pseudoephedrine and Ephedrine, various investigations were carried out and revealed the following outcome:

- i. Diversions of precursor chemicals in pharmaceutical preparation were mainly committed by Doctors and Pharmacists.
- ii. In May 2009, about 40,000 tablets were diverted by a retail pharmacy in Kuala Lumpur.
- iii. In June 2009, about 100,000 tablets were diverted by a retail pharmacy in Tawau, Sabah.
- iv. In August 2009, a doctor diverted about 480,000 Pseudoephedrine tablets in Arau, Perlis.

In view of the increasing non-medical use of prescribed drugs containing psychotropic substances, pharmaceutical preparations containing Pseudoephedrine and Ephedrine as well as preparation containing Dextromethorphan (Nospan®), diversion audits were conducted at 145 registered clinics and pharmacies. As a result, 36 (24.8%) of these premises have been investigated for various types of offences under the Poisons Act 1952.

Pharmacy Enforcement always works together with other agencies in combating the diversion of precursor chemicals. In June 2009, six containers carrying tablets containing Pseudoephedrine were seized in West Port, Port Klang. This seizure is a joint effort

between the Pharmacy Enforcement PSD MOH, Royal Customs Office of Malaysia and the Ministry of Domestic Trade, Co-operatives and Consumerism. The value of the medicines seized is about RM6 million.

## Legislation

- **Prosecution**

A total of 646 cases were completely prosecuted in 2009 with the total collection of RM 1,689,720.00 in fines imposed on the accused. The breakdown of prosecutions completed within the period according to the Acts enforced and the respective states are tabled in Table 11.

The amount of fine collected for offences under the Sales of Drugs Act 1952 was the highest (RM 1,196,580.00) followed by offences under Poisons Act 1952 (RM 356,360.00). The high collection of fines under the Sales of Drugs Act 1952 is mainly due to the high penalty imposed under Section 12(1) of the Act with a maximum fine of RM 25,000.00 for individual offenders and under Section 12(2), with a maximum fine of RM 50,000.00 for corporate offenders. Furthermore, the total number of cases with complete prosecution under this Act was the highest with the total of 305 cases followed by 266 cases under the Poisons Act 1952.

The low collection in fines for offences committed under Medicines (Advertisement and Sales) Act 1956 was due to the fewer number of cases being prosecuted and the low penalty imposed by the Act, with a maximum fine of RM 3,000.00.

Selangor had the highest collection in fines with a total amount of RM 631,250.00 followed by Sabah with a total collection of RM 208,400.00 for the same period. Sarawak also gave a high figure in fine collection in 2009 with the amount of RM 172,150.00. Overall, there was an increment of total fine collected for the year 2009 (RM 1,689,720.00) as compared to the year 2008 (RM 1,296,290.00).

**TABLE 11.**  
**COMPLETED PROSECUTIONS ACCORDING TO ACTS AND STATES, 2009**

State		Poisons Act 1952	Poisons Act 1952 (Psychotropic Substances)	Sales of Drugs Act 1952	Medicines (Advertisement and Sales) Act 1956	Total No. of Cases	Total Fine Collected
Perlis	Case	6	1	8 (1 DNAA)	0	15 (1 DNAA)	RM33,100
	Fine	RM9,600	RM10,000	RM13,500	0		
Kedah	Case	4 (2 DNAA)	2	15	0	21 (2 DNAA)	RM41,100
	Fine	RM5,300	RM8,000	RM27,800	0		
Pulau Pinang	Case	10 (2 DNAA)	2 (1 DNAA)	20 (1 DNA; 4 DNAA)	1	33 (1 DNA; 7 DNAA)	RM80,000
	Fine	RM16,700	RM4,000	RM58,500	RM800		
Perak	Case	24 (2 DNAA)	4 (1 DNAA)	29 (2 DNAA)	0	57 (5 DNAA)	RM62,040
	Fine	RM15,910	RM4,880	RM41,250	0		
Selangor	Case	45 (2 DNA; 5 DNAA)	6	42 (2 DNA; 5 DNAA)	4	97 (4 DNA; 10 DNAA)	RM631,250
	Fine	RM100,650	RM15,800	RM504,300	RM10,500		
FT Kuala Lumpur	Case	28 (1 DNA; 2 DNAA)	7 (1 DNA; 2 DNAA)	22 (1 DNAA)	3	60 (2DNA; 5 DNAA)	RM97,550
	Fine	RM22,800	RM4,000	RM68,400	RM2,350		
Negeri Sembilan	Case	7 (1 DNAA)	3 (1 DNA; 1 DNAA)	14 (1 DNA; 2 DNAA)	0	24 (2 DNA; 4 DNAA)	RM46,200
	Fine	RM15,700	RM800	RM29,700	0		
Melaka	Case	3	5	15 (1 DNA, 1 DNAA)	6	29 (1 DNA; 1 DNAA)	RM82,500
	Fine	RM8,600	RM10,400	RM50,550	RM12,950		
Johor	Case	26 (3 DNAA)	6 (1 DNA; 2DNAA)	32 (2 DNA; 3 DNAA)	5 (1 DNAA)	69 (3DNA; 9 DNAA)	RM74,680
	Fine	RM21,350	RM4,600	RM45,130	RM3,600		
Pahang	Case	8 (2 DNAA)	2	10 (3 DNAA)	1	21 (5 DNAA)	RM23,700
	Fine	RM4,600	RM4,200	RM14,000	RM900		
Terengganu	Case	5	4 (1 Imprisonment)	14 (1 DNA; 1 DNAA)	0	23 (1 DNA; 1 DNAA; 1 Imprisonment)	RM55,050
	Fine	RM4,200	RM10,500	RM40,350	0		
Kelantan	Case	8	0	17 (6 DNAA)	0	25 (6 DNAA)	RM37,000
	Fine	RM8,500	0	RM28,500	0		
Sarawak	Case	25 (3 DNA; 2 DNAA)	2 (2 DNA)	34 (3 DNA; 6 DNAA)	0	61 (8 DNA; 8 DNAA)	RM172,150
	Fine	RM32,650	0	RM139,500	0		

State		Poisons Act 1952	Poisons Act 1952 (Psychotropic Substances)	Sales of Drugs Act 1952	Medicines (Advertisement and Sales) Act 1956	Total No. of Cases	Total Fine Collected
Sabah	Case	65 (4 DNA; 1 DNAA)	2	26 (3 DNA; 1 DNAA)	4 (1 DNAA)	97 (7 DNA; 3DNAA)	RM208,400
	Fine	RM86,800	RM9,500	RM103,100	RM9,000		
FT Labuan	Case	1	0	5	0	6	RM7,500
	Fine	RM500	0	RM7,000	0		
PSD, MOH	Case	1	0	2	5 (1 DNAA)	8 (1 DNAA)	RM37,500
	Fine	RM2,500	0	RM25,000	RM10,000		
<b>Total No. of Cases</b>		<b>266 (10 DNA; 22 DNAA)</b>	<b>46 (5 DNA; 7 DNAA; 1 Imprisonment)</b>	<b>305 (14 DNA; 36 DNAA)</b>	<b>29 (3 DNAA)</b>	<b>646 (29 DNA; 68DNAA; 1 Imprisonment)</b>	
<b>Total Fine Collected</b>		<b>RM356,360</b>	<b>RM86,680</b>	<b>RM1,196,580</b>	<b>RM50,100</b>	<b>RM1,689,720</b>	

Note: DNA - Discharge and Acquitted  
 DNAA - Discharge Not Amounting to Acquittal  
 Source: Pharmaceutical Services Division, MoH

#### • **Legislation / Publication**

New Pharmacy Bill is due for its tabling in Parliament at its session in June 2010. Doctors need a permit before they can replenish their stock of Methadone from the licensed wholesalers. This will take effect after the amendment of the Poisons (Psychotropic Substances) Regulations 1989. Classifications of 67 types of poisons into The Poisons List were done. On the other hand, the followings were published / issued:

- i. 4 Government gazettes
- ii. 89 Pharmacy Enforcement Cards
- iii. 89 Authorizations as Authorised Officer issued by the Minister under the Medicines (Advertisement & Sale) Act 1956
- iv. 91 Authorizations as Drug Enforcement Officer issued by the Senior Director of Pharmaceutical Services under the Poisons Act 1952
- v. 89 Authorizations issued by the Legal Advisor to prosecute under section 377(b) Criminal Procedure Code
- vi. 90 Authorizations issued by the National Registration Department to inspect identity cards

## Prevention and Consumer Protection

### • **Control of Advertisements**

The Medicines (Advertisement and Sale) Act 1956 provides for the control of advertisements pertaining to medicines, appliances, remedies and health services. The Act also provides for the formation of the Medicine Advertisements Board (MAB) which is responsible for regulation of the said advertisements. The Board has issued two guidelines to aid advertisers in devising advertisement formats which are deemed acceptable and suitable for publication in various media in the country. The objective of the guidelines is to ensure responsible advertising in promoting the sale of medicines, appliances, remedies as well as skills and services relating to medical and health services. Statistics on the applications for advertisement approval from MAB in 2009 are as shown in Table 12 whereas comparisons across years from 2007 to 2009 are as in Table 13.

**TABLE 12.**  
**APPLICATIONS FOR ADVERTISEMENT APPROVALS FROM MAB, 2009**

	Product Advertisements	Service Advertisements	Total
Applications Received	1,594	357	<b>1,951</b>
'Fast Track' Approvals	1,260	239	<b>1,499</b>
Non 'Fast Track' Approvals	156	57	<b>213</b>
Not Approved	32	8	<b>40</b>
Approval Not Required	33	17	<b>50</b>
Fees Collected	RM 159,400.00	RM 35,700.00	<b>RM 195,100.00</b>

Source: Pharmaceutical Services Division, MoH

**TABLE 13.**  
**ADVERTISEMENT APPROVALS, 2007-2009**

Descriptions	2007	2008	2009
Number of Applications*	1,980	1,607	1,951
Number of Approvals	1,619	1,374	1,712
Number of 'Fast Track' Approvals	1,306 (65.96%)	1,333 (82.95%)	1,499 (76.83%)
<b>Fees Collected</b>	<b>RM198,000.00</b>	<b>RM 160,700.00</b>	<b>RM195,100.00</b>

\*Total number of applications processed is not the same as total number of applications received because several applications were withheld or closed automatically if there is no response from the applicant after the given dateline

Source: Pharmaceutical Services Division, MoH

### • **Advertisements Monitoring**

The monitoring program involves scrutinizing all publications from the print media including newspapers both mainstream and vernacular, magazines in all languages, pamphlets and brochures meant for public consumption, promotional materials generated by direct selling companies and all advertisements in electronic media including radio, television and internet. Apart from this, the activity also depends very much on complaints received from

the public, advertisers, companies and some non government organizations. Warning letters are issued to advertisers and product owners when advertisement which is not approved by Medicine Advertisement Board (MAB) is published (Table 14). Court action is also taken for certain cases which contravene the Medicines (Advertisement and Sale) Act 1956. In 2009, RM 50,100.00 of fines was collected for those advertisement cases convicted in courts nationwide (Table 11).

**TABLE 14.**  
**NUMBER OF WARNING LETTERS ISSUED, 2008-2009**

Receivers of Warning Letters	Number of Letters Issued	
	2008	2009
Editors	2	6
Advertisers (Products and Services)	67	304
Editors & Advertisers	58	2
<b>Total</b>	<b>127</b>	<b>312</b>

Source: Pharmaceutical Services Division, MoH

- **Dialogue with Media**

Advertisement editors and mass media play a major role in protecting consumers from misleading advertisements by making sure that only advertisements approved by the MAB are published. A total of 18 dialogues were held in 2009 to ensure continuous cooperation from the mass media.

- **Consumer Protection**

Continuous educational activities were conducted for the public in both urban and rural area to empower consumers with knowledge and information towards rational use of medicines and cosmetics. Dissemination of information via electronic and printed media increased the knowledge and awareness of targeted groups. Public and private pharmacists were also given the awareness on the usage of hologram and decoder to identify the genuine medicines. A total of 1,700 private pharmacies were provided with the meditag hologram decoder for public use.

In 2009, with the co-operation from Drug Education and Prevention Unit, Ministry of Education, PSD was given talk and exhibition slots for secondary school students in whole Malaysia for every national level programme. Six talks were held and a total of 3,400 students, as representatives of schools nationwide, were given exposure and awareness on the usage of medicines. In 2009, PSD also co-operated with Ministry of Domestic Trades, Co-operative and Consumerism (MDTCC) in the program *Aktiviti Memperkasakan Pengguna dan Pengguna Bijak* in whole country. A total of 15 talks on quality use of medicines at national level were given to the government and non-government associations.

The number of talks, exhibitions and dialogues carried out in 2009 showed an increase with a total of 642 activities as compared to 525 activities in 2008 and 281 activities in year 2007 (Table 15).

**TABLE 15.**  
**ACHIEVEMENTS ON CONSUMER PROTECTION ACTIVITIES IN 2009**

Consumer Protection Activities	Jan - Dec 2009
Dissemination of Calendars	32,000 sets
Dissemination of Posters	80,000 pieces
Dissemination of Post Cards	20,000 pieces
Talks	227
Exhibitions	368
Dialogues	47
TV Appearance in TV3 Advertisement Slot	198 spots for 15 seconds

Source: *Pharmaceutical Services Division, MoH*

## PHARMACY PRACTICE AND DEVELOPMENT

### Malaysia Pharmacy Board

The Malaysia Pharmacy Board was established according to the provisions of Section 3 of the Registration of Pharmacists Act 1951. The Pharmacy Board is responsible in regulating the profession and pharmacy practice through the following activities:

- i. Registration and Removal from Register of Pharmacists
  - ii. Registration and Removal from Register of Body Corporate
  - iii. Registration of Provisionally Registered Pharmacist
  - iv. Recognition of Pharmacy Degree
  - v. Approval of training premises for Provisionally Registered Pharmacist
  - vi. Preparation of guidelines and standardization on issues related to recognition of pharmacy program and pharmacy practice
  - vii. Organizing Pharmacist Jurisprudence Examination
  - viii. Conducting investigation on reports of unethical practices by pharmacist
- **Registration of Pharmacist, Body Corporate and Provisionally Registered Pharmacist (PRP)**

In year 2009, a total of 705 pharmacists had been registered and this number had shown an increment compared to year 2008. Summary of the number of registrations by Pharmacy Board according to year is shown in Table 16.



**TABLE 16.**  
**NUMBER OF REGISTRATIONS BY PHARMACY BOARD, 2005-2009**

Description	Year				
	2005	2006	2007	2008	2009
Newly Registered Pharmacist	379	437	534	617	705
Provisionally Registered Pharmacist	420	529	614	722	813
Registered Body Corporate	87	107	98	43	48
Pharmacist Annual Retention Certificate	3,965	4,292	4,422	5,924	5507
Body Corporate Annual Retention Certificate	218	270	414	371	445

Source: Pharmaceutical Services Division, MoH

### Pharmacy Clinical and Technical

The pharmaceutical service in hospitals and health clinics under the MOH Malaysia aims to provide comprehensive patient-centred pharmaceutical care. Various activities and drug delivery systems have been introduced to minimise medication errors, promote patients' compliance and assist patients in getting access to their medications. The Clinical Pharmacy Services have been expanded to include Medication Counselling, Medication Therapy Adherence Clinic (MTAC), Methadone Dispensing and Counselling, Ward Pharmacy Service, Drug Information Service (DIS), Clinical Pharmacokinetic Service (CPS), Total Parenteral Nutrition (TPN) Service, Pharmacy Oncology Service and Nuclear Pharmacy Service. The Unit Dose System (UDS) was expanded to further ensure that patients receive medications in an individualised manner appropriate for their intended use. Five hospitals, namely Sultan Ismail Hospital Johor Bahru, Penang Hospital, Selayang Hospital, Kajang Hospital and Sultanah Nur Zahirah Hospital Kuala Terengganu, have implemented UDS in selected or all of their wards.

- **Sterile Pharmacy Services**

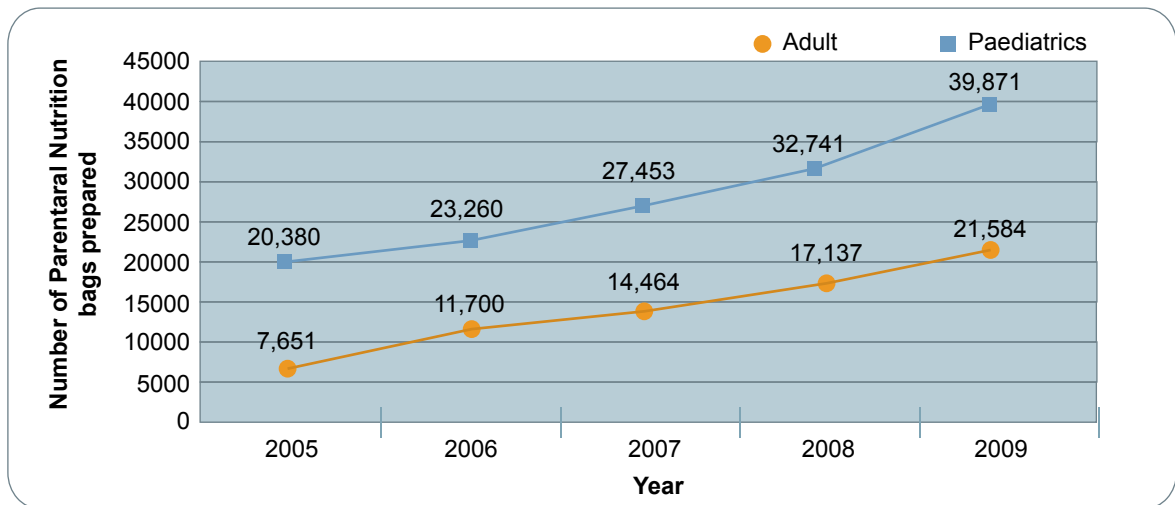
Achievements on Total Parenteral Nutrition (TPN) Services, Pharmacy Oncology Services and Intravenous Admixture Services are illustrated in Table 17, Figure 8 & Figure 9.

**TABLE 17.**  
**STERILE PHARMACY SERVICES ACHIEVEMENTS, 2009**

Services	Total Parenteral Nutrition	Pharmacy Oncology	Intravenous Admixture
Number of Hospitals	19	18	14
Number of Cases	11,054	58,716	41,065
Number of Preparations	61,455	162,505	152,080

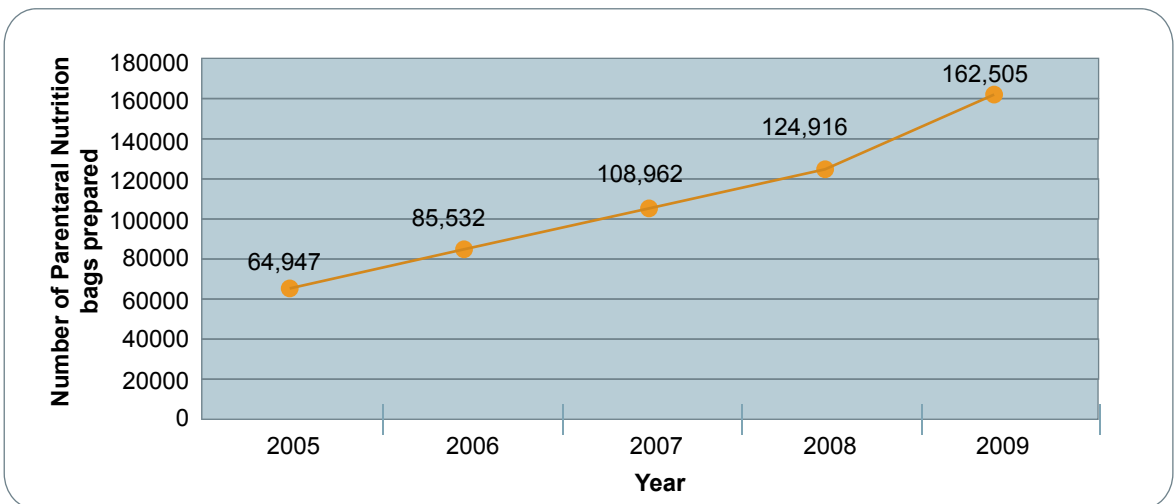
Source: Pharmaceutical Services Division, MoH

**FIGURE 8.**  
**NUMBER OF PARENTERAL NUTRITION BAGS PREPARED FOR ADULT AND PAEDIATRIC PATIENTS, 2005-2009**



Source: Pharmaceutical Services Division, MoH

**FIGURE 9.**  
**NUMBER OF CYTOTOXIC DRUGS RECONSTITUTED, 2005-2009**

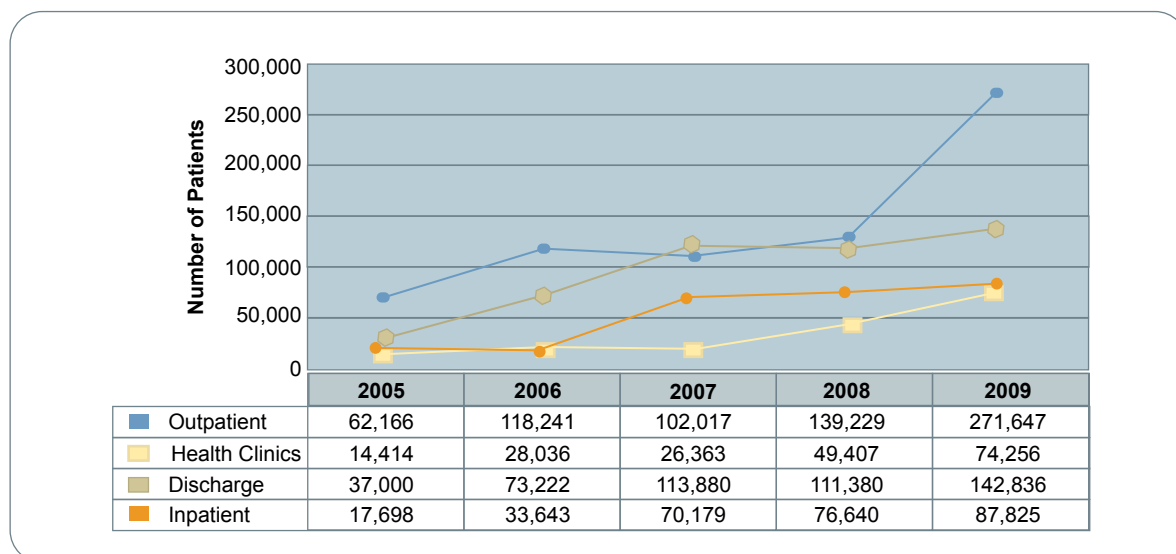


Source: Pharmaceutical Services Division, MoH

• **Pharmacy Ambulatory Care Services**

Individual and group session's medication counselling by pharmacists is conducted with the objective of helping patients to achieve intended health outcomes through better compliance and providing knowledge on adverse drug events that may arise due to their medications. A total of 576,564 patients received counselling on their medications in 2009, an increase of 53.07% compared to 2008 (Figure 10).

**FIGURE 10.**  
**NUMBER OF PATIENTS COUNSELLED, 2005-2009**

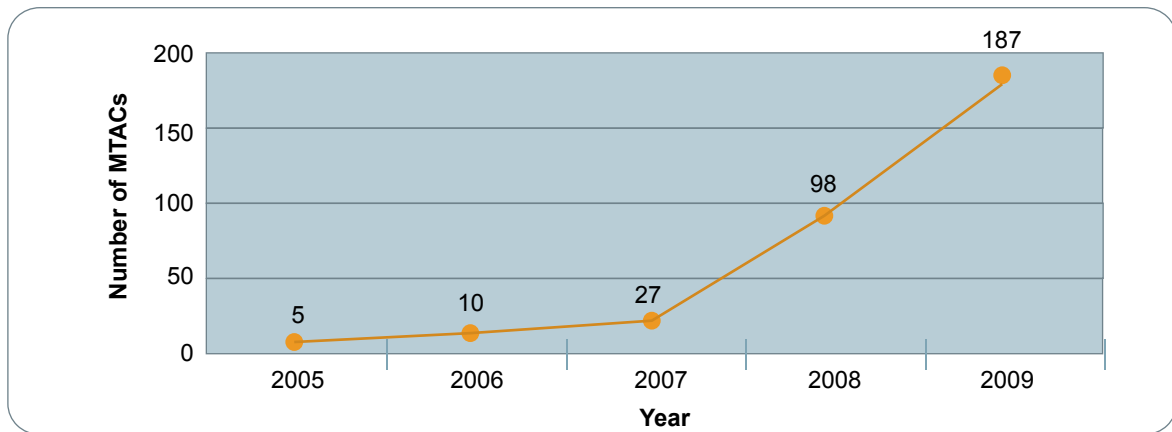


Source: Pharmaceutical Services Division, MoH

- **Medication Therapy Adherence Clinic (MTAC)**

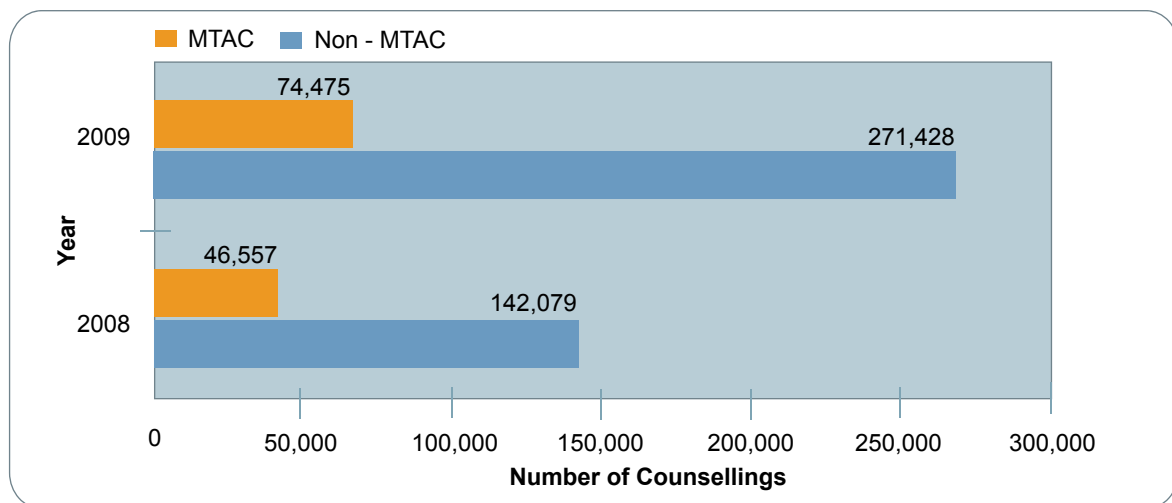
The main aim of MTAC is to optimise drug therapy in the management of chronic diseases such as Diabetes Mellitus, Retroviral Disease (RVD), Warfarin and Asthma. MTAC services are carried out in fourteen major hospitals. Other hospitals and health clinics are also encouraged to start other disciplines for MTAC services. From 2004 to 2009 a total of 187 MTACs were established. With the addition of 89 MTACs in the year 2009, it shows an increased of 91% in MTAC services compared to 2008 (98 MTACs) (Figure 11). Besides the 4 MTACs which have been established earlier, MTACs for Renal Transplant, Liver Transplant, Neurology, Rheumatology, Hypertension, Pain Management, Chronic Kidney Disease, Hepatitis and Psychiatry have also been initiated in various hospitals. In year 2009, 21.5% (74,475) from the total number of 345,903 counselling services conducted for outpatient in hospitals and health clinics were done through the MTAC services. This showed an increase of 60% in the number of MTAC counselling services compared to 2008 as a result of an increase in the number of MTAC services in year 2009 (Figure 12).

**FIGURE 11.**  
**CUMULATIVE NUMBER OF MTACs IN MOH HOSPITALS, 2005-2009**



Source: Pharmaceutical Services Division, MoH

**FIGURE 12.**  
**NUMBER OF MTAC AND NON-MTAC COUNSELLING SERVICES, 2008-2009**

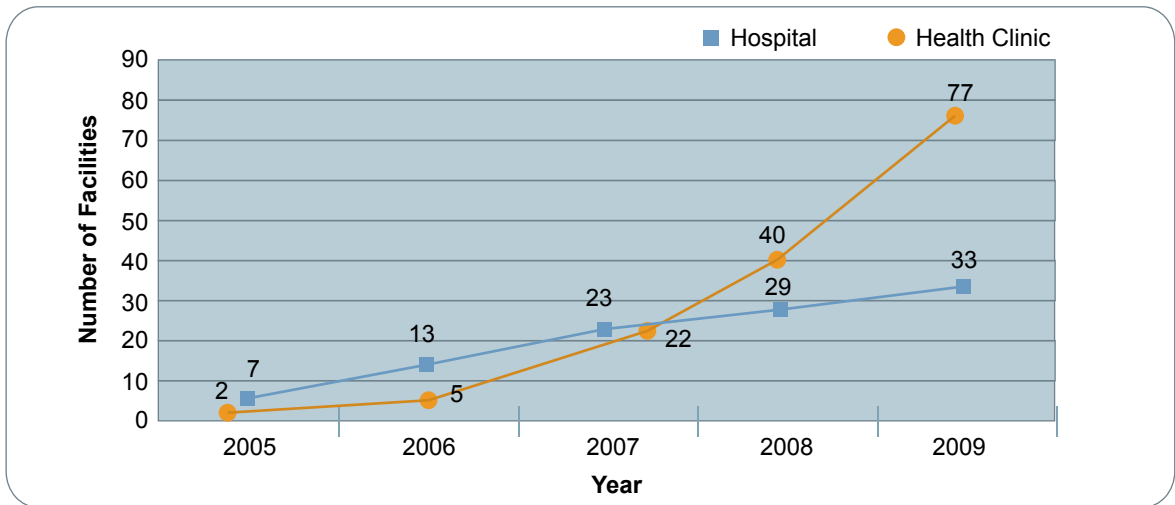


Source: Pharmaceutical Services Division, MoH

• **Methadone Dispensing and Counselling**

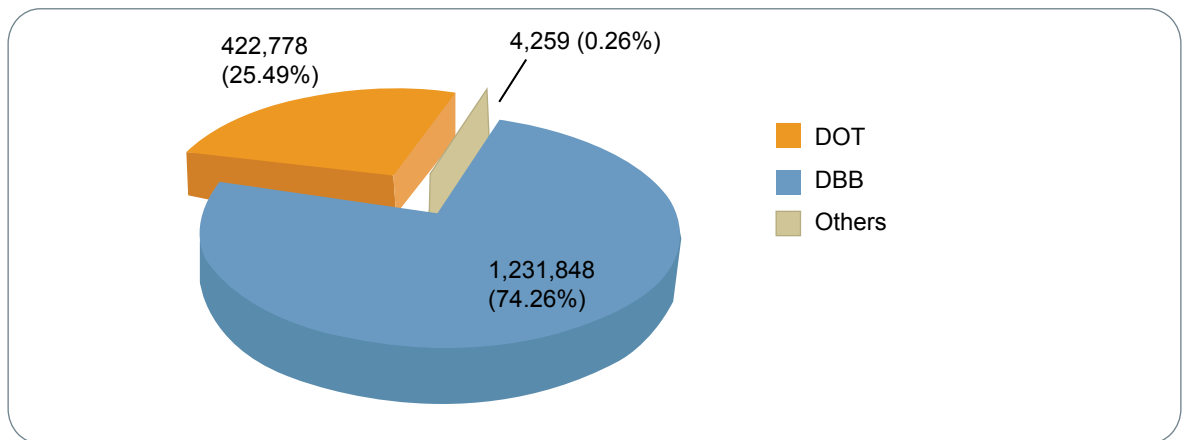
Up to 2009, a total of 110 pharmacy facilities (33 in hospitals and 77 in health clinics) under Ministry of Health are involved in the Methadone Maintenance Therapy Programme (MMT) in which the dispensing of methadone is done by pharmacists (Figure 13). In addition, methadone dispensing activities were also conducted in 14 District National Anti-Drug Agency and 12 prisons in Peninsular Malaysia. A number of 6,944 patients were active in the programme from the 10,046 of patients registered. A total of 1,658,885 methadone dispensing were done as shown in Figure 14. A total of 368 group counselling sessions for methadone patients were conducted throughout the country. Apart from dispensing, pharmacists also perform clinical pharmacy tasks in the Methadone Clinics (Figure 15).

**FIGURE 13.**  
**CUMULATIVE NUMBER OF METHADONE DISPENSING FACILITIES IN MOH INSTITUTIONS, 2005-2009**



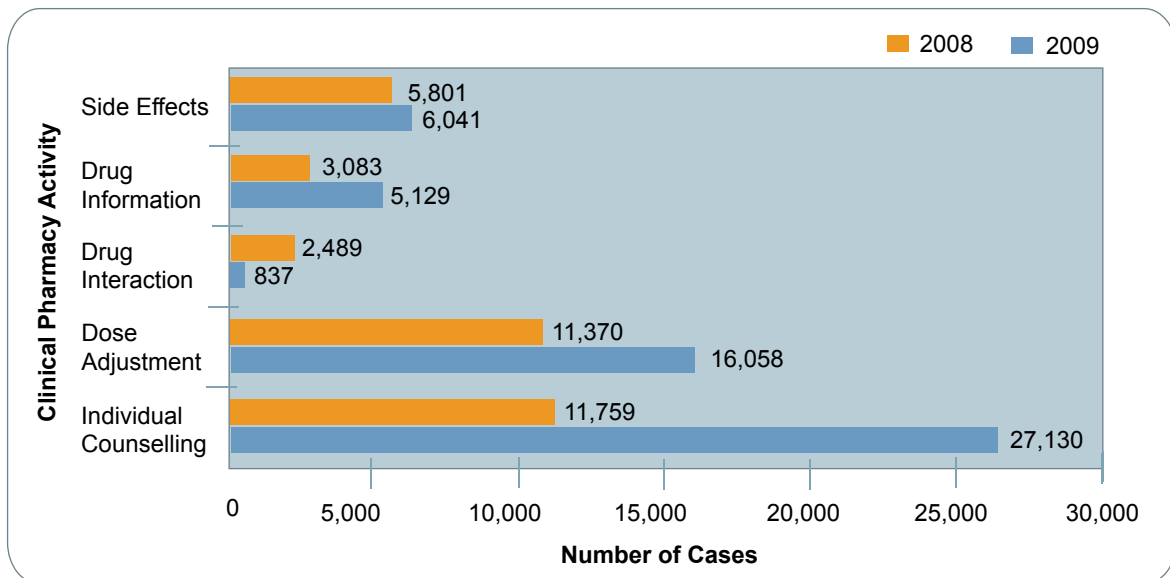
Source: Pharmaceutical Services Division, MoH

**FIGURE 14.**  
**PERCENTAGE OF PATIENTS TAKING METHADONE BY DIRECT OBSERVATION THERAPY (DOT) AND TAKE AWAY DOSES (DBB), 2009**



Source: Pharmaceutical Services Division, MoH

**FIGURE 15.**  
**NUMBER OF CLINICAL PHARMACY ACTIVITY CASES HANDLED BY METHADONE PHARMACISTS, 2008-2009**



Source: Pharmaceutical Services Division, MoH

#### • **Ward Pharmacy Services**

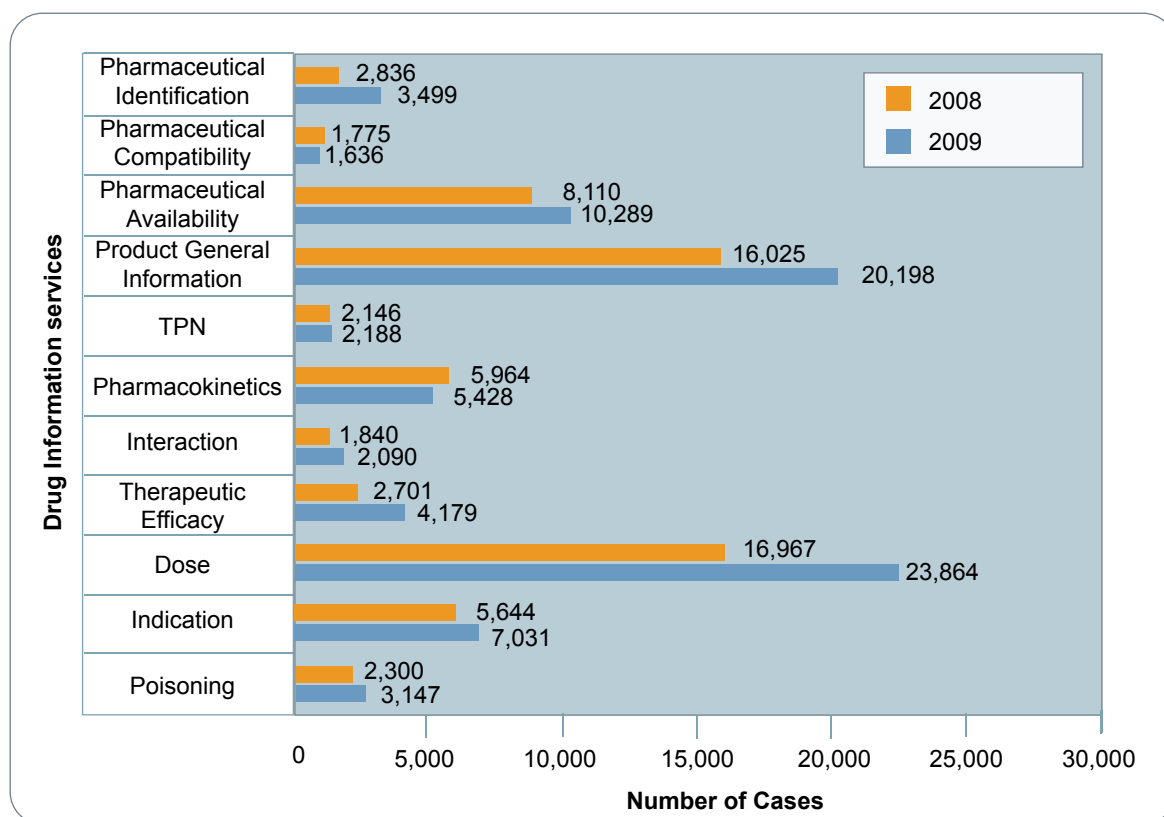
Clinical pharmacists are now based in various disciplines. They contribute actively by participating in ward rounds with doctors and other healthcare team members and aid in optimising drug therapy towards improving patient health outcomes. The number of full time pharmacists involved in ward pharmacy services in 2009 was 323 pharmacists out of 848 wards. In 2009, the percentage of medication history taken in the wards was 12.33% while 15.77% of patient's profiles focusing on medication were reviewed by clinical pharmacists. Clinical pharmacists also provide counselling to inpatients with the aim of increasing compliance to their medications (Table 18). Clinical Pharmacists also provide drug information and consultation on medication-related issues as well as conduct medication therapy monitoring (Figure 16).

**TABLE 18.**  
**INPATIENT COUNSELLING SERVICE FOR VARIOUS DISCIPLINES IN HOSPITALS, 2008-2009**

Inpatient	2008				2009			
	Individual		Group		Individual		Group	
	Bedside	Discharge	Total Sessions	Total Patients	Bedside	Discharge	Total Sessions	Total Patients
Adult	69,320	99,753	416	3,325	82,431	129,327	475	3,167
Paediatric	7,320	11,555	18	50	5,394	13,509	51	791
<b>Total</b>	<b>76,640</b>	<b>111,308</b>	<b>434</b>	<b>3,375</b>	<b>87,825</b>	<b>142,836</b>	<b>526</b>	<b>3,958</b>

Source: Pharmaceutical Services Division, MoH

**FIGURE 16.**  
**DRUG INFORMATION SERVICES HANDLED BY WARD AND INPATIENT PHARMACISTS,**  
**2008-2009**



Source: Pharmaceutical Services Division, MoH

- **Clinical Pharmacokinetic Services (CPS)**

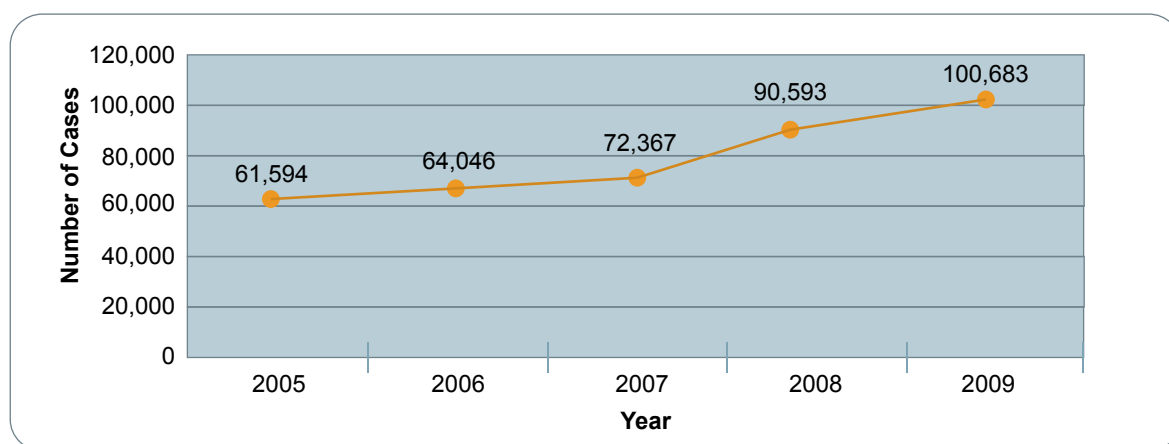
The Clinical Pharmacokinetic Service (CPS) is a major component of the clinical pharmacy services provided. In 2009, a total of 100,683 patients received individualized drug therapy through CPS provided throughout the country. This figure showed an increase of 11% compare to year 2008 (Figure 17). Through CPS, pharmacists provide consultations on appropriate dosing of 14 types of drugs, namely Gentamicin, Amikacin, Digoxin, Carbamazepine, Theophylline, Lithium, Phenobarbitone, Netilmicin, Vancomycin, Phenytoin, Valproic Acid, Cyclosporin, Methotrexate and Tacrolimus.

- **Pharmacotherapy of Infectious Diseases**

Through the National Infection Control and Antibiotic Committee (JKIA) of which the Pharmaceutical Services Division is the Secretary, the use of injectable antibiotics in the hospitals since the year 2001 have been monitored (Table 19). Antibiotic consumption has been reported using Defined Daily Dose (DDD) which is a unit of measurement that is specially designed for maintaining a stable system of drug consumption measurement. It can also be used to compare the trend in drug utilization within or across therapeutics

groups. DDD has been approved by WHO for drug studies and for comparisons independent of differences in prices, preparation and quantity per prescriptions. In 2009, 18 types of antibiotics have been monitored which includes Cefuroxime Injection (Inj.), Ceftriaxone Inj., Cefotaxime Inj., Cefepime Inj. Piperacillin/Tazobactam Inj., Tigecycline Inj., Ceftazidime Inj., Imipenem/Cilastatin Inj., Linezolid Inj., Polymyxin B Inj., Teicoplanin Inj., Cefoperazone/Sulbactam Inj., Vancomycin Inj., Ciprofloxacin Inj., Colistin Inj., Meropenem Inj., Pefloxacin Inj. and Cefoperazone Inj.

**FIGURE 17.**  
**NUMBER OF CPS CASES RECEIVED, 2005-2009**



Source: Pharmaceutical Services Division, MoH

**TABLE 19.**  
**TYPES OF ANTIBIOTIC MONITORED BY PHARMACEUTICAL SERVICES DIVISION, MOH (2001-2009)**

Year	Types of Antibiotic Monitored
2001-2004	4 types for all state hospitals (Inpatient only)
2005-2006	12 types for all state hospitals (Inpatient only)
2007 (collected in 2008)	13 types for all state hospitals (Inpatient only)
2008 (collected in 2009)	14 types for all state hospitals (Inpatient only), armed forces hospitals, university hospitals and private hospitals
2009 (will be collected in 2010)	18 types for all state hospital (Inpatient), armed forces hospitals, university hospitals and private hospitals

Source: Pharmaceutical Services Division, MoH



- **Nuclear Pharmacy Service**

The Nuclear Pharmacy Service has been introduced since year 2005 and aims to improve and promote the use of safe and efficacious radioactive drugs for treatment and diagnosis of diseases such as cancer, and certain organ function tests for the heart, brain and lungs. 14 pharmacists have since been trained in nuclear pharmacy and have been placed in hospitals designated to provide this service:

- Putrajaya Hospital – Six
- Kuala Lumpur Hospital – Four
- Penang Hospital – Two
- Sarawak General Hospital – One
- Sultanah Aminah Hospital, Johor Bahru – One

- **Pharmacy Practice in Primary Care Setting**

The scope for pharmacy services in primary care facilities includes Basic Pharmacy Services, Extended Pharmacy Services and Expanded Pharmacy Services. Basic Pharmacy Services include prescriptions screening, drug dispensing, patient counselling, procurement, health promotion, health education and drug information. Extension and expansion of pharmacy services provided in primary care setting include MTAC, Methadone Maintenance Therapy Programme (MMT) and Home Medication Review (HMR). Besides that, extended hours pharmacy services in line with the medical services are provided in 18 health clinics (KK) following the No. 8/2007 circular by the Director General of Health (Table 20).

**TABLE 20.**  
**HEALTH CLINICS INVOLVED IN EXTENDED HOURS PHARMACY SERVICES, 2009**

State	Health Clinics	State	Health Clinics
Perlis	KK Kangar	Johor	JPL Mahmoodiah
Kedah	KK Alor Setar		KK Bandar Maharani
Perak	KK Greentown	Pahang	KK Kuantan
Selangor	KK Anika		KK Mentakab
	KK Selayang Baru		KK Maran
FT Putrajaya	KK Putrajaya		KK Temerloh
Negeri Sembilan	KK Seremban	Kelantan	KKB Kota Bharu
Melaka	KK Peringgit	Sabah	KK Luyang
	KK Masjid Tanah	Sarawak	KK Jalan Masjid

Source: Pharmaceutical Services Division, MoH

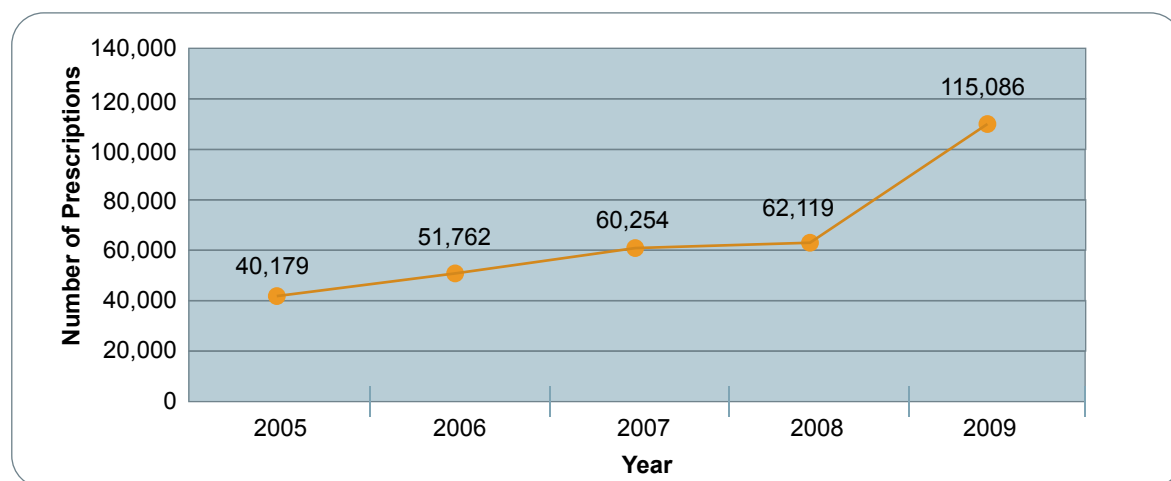
- **Integrated Drug Dispensing System (SPUB) and Drug Dispensing System through Appointment Basis**

The Integrated Drug Dispensing System (SPUB) was introduced in year 2005 to facilitate the supply of refill medicines to patients on long term therapy. Through SPUB, patients

can get their refill medications from any MOH facilities of their choice provided their first supply of medications were collected at the facilities where the medications were prescribed. Figure 18 shows the number of SPUB cases handled for a period of 5 years. Due to the increase in number of promotional and educational sessions for patients to understand the benefits of SPUB, there was a marked increase (85%) in the number of SPUB cases in 2009 compared to 2008.

Besides SPUB, other dispensing systems such as the Appointment Card System, Phone & Take System, SMS & Take System, Pharmacy Drive Thru System and Pharmacy Home Delivery System via Poslaju™ were introduced in 87 hospitals and 38 Health Clinics. These dispensing systems aim to reduce patient waiting time and facilitate patients on chronic therapy who received monthly supplies of their medications (Table 21).

**FIGURE 18.**  
**NUMBER OF SPUB PRESCRIPTIONS HANDLED, 2005-2009**



Source: Pharmaceutical Services Division, MoH

**TABLE 21.**  
**NUMBER OF FACILITIES PRACTICING DRUG DISPENSING SYSTEM THROUGH APPOINTMENT BASIS, 2009**

Appointment Systems	Number of Facilities	
	Hospitals	Health Clinics
Appointment Card	37	14
Phone & Take	26	2
SMS & Take	48	25
Drive Thru	2	0
Postage	1	0
Others	1 (fax, email)	0

Source: Pharmaceutical Services Division, MoH

- **Quality Improvement Activities**

- a. Clinical Pharmacy Services

- i. Four MTAC Protocols were prepared: Diabetes-MTAC, Warfarin-MTAC, Retroviral Disease-MTAC and Asthma MTAC Protocols
- ii. Hospital Serdang was identified as a new centre for Warfarin MTAC training attachment
- iii. Publication of a book entitled 'Handling of Inhaler Devices: A Guide for Pharmacists' as a reference book for pharmacist
- iv. Publication of books entitled '*Garispanduan Pendispensan Rawatan Terapi Gantian Methadon*' and '*Garispanduan Kaunseling Methadon*'

- b. Technical Pharmacy Services

Four guidelines have been prepared and published, namely:

- i. Requirements for The Development of Pharmacy Facilities in Hospitals, Health Clinics, and Other Facilities, Ministry of Health Malaysia, 3rd edition
- ii. Guidelines on Integrated Drug Dispensing System (SPUB), 3rd edition
- iii. Guidelines on Pharmacy Store Management System

- **Training**

For MTAC services, the Pharmaceutical Services Division (PSD) had sent 26 pharmacists to undergo short term attachment courses for 3 weeks at selected hospitals. Apart from that, the PSD had organised 6 courses for Methadone Dispensing and Counselling with collaboration from Perak, Johor, Selangor, Kuala Lumpur, Kedah and Terengganu State Health Departments. A total of 404 pharmacists were trained in Methadone dispensing and counselling during these courses. Hospitals established as training centres for pharmacotherapy in 2009 to train pharmacists in specialised fields were shown in Table 22.

**TABLE 22.**  
**TRAINING CENTRES FOR PHARMACOTHERAPY, 2009**

Training Centres	Pharmacotherapy Fields
Hospital Melaka	General Pharmacotherapy Respiratory Pharmacy
Hospital Selayang	General Critical Care Nephrology Pharmacy
Hospital Pulau Pinang	Infectious Disease (RVD) Endocrine (Diabetes melitus) Pharmacy
Hospital Putrajaya	Endocrine (Diabetes mellitus) Pharmacy
Hospital Sungai Buloh	Infectious Disease (RVD)
Hospital Serdang	Cardiology (Warfarin)

Source: *Pharmaceutical Services Division, MoH*

### • **Medication Safety**

Data on medication errors were collected and information on how to avoid similar medication errors from recurring was continuously disseminated. A total of 1,550 medication error reports were received during a pilot project in 2008. The number of medication error reports increased to 2,572 reports in year 2009. This was mainly due to a series of briefings and talks to the healthcare providers. A total of 4 briefings on the Medication Error Reporting System, 5 presentations on Medication Safety, 3 workshops on Root Cause Analysis in collaborations with Kelantan, Terengganu and Kedah State PSD and 4 workshops on Reporting of Adverse Drug and Vaccine Reactions according to Zone were conducted. The first Medication Safety Newsletter was published and posters on the need to report Adverse Drug and Vaccine Reactions were distributed to healthcare providers in both public and private sectors.

The Guideline on Medication Error Reporting was launched by the Director General of Health on 17 August 2009 at the Ministry of Health - Academy of Medicine Scientific Meeting (MoH-AMM). The aim is to improve patient safety through information obtained on medication errors. The implementation of the Medication Error Reporting System online will simplify and hasten reporting to this unit. Efforts to create awareness among the various categories of healthcare providers towards improving medication safety will be continued.

### **Formulary and Quality Use of Medicines**

#### • **MoH Drug Formulary Management**

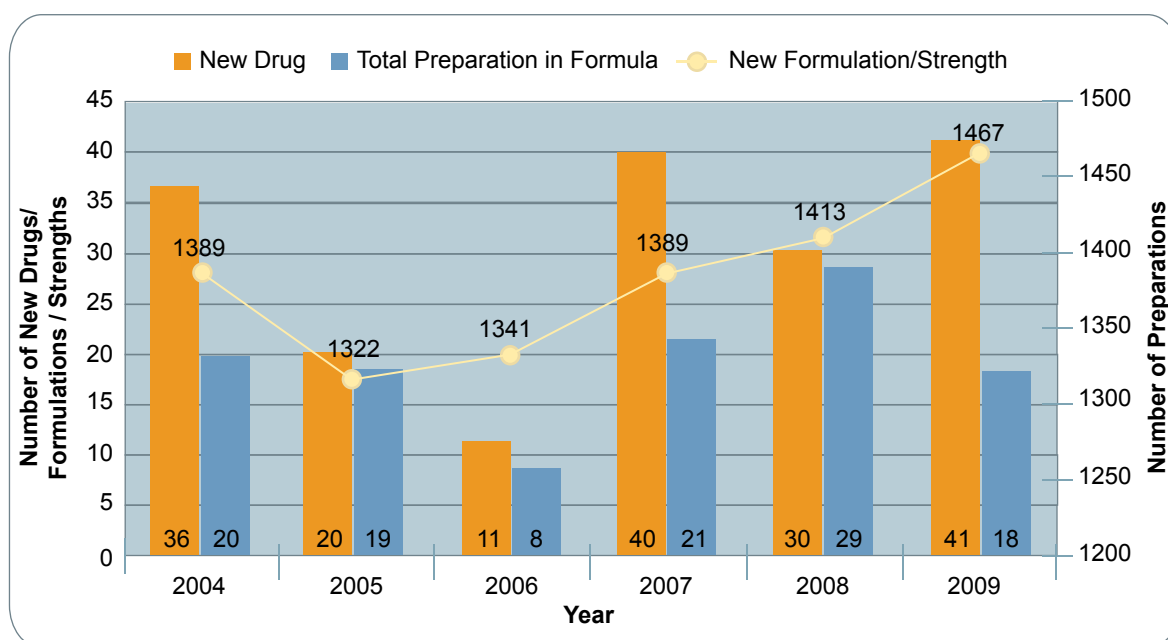
In year 2009, 123 pro forma were received. These pro forma were made up of 1 Pro forma A (proposal to delete a drug), 58 Pro forma B (proposal to add or alter the formulation, dosage form, dose, prescriber's category or indication), 63 Pro forma D (proposal to introduce a new drug) and 1 submission for disinfectant. Five drugs were deleted from the formulary while 59 drugs, including new formulations or strengths, were listed into the formulary. As a result, there are a total of 1,467 preparations in the MoH Drug Formulary at the end of year 2009 (Figure 19 & Table 23). Four circulars with the list of drugs

introduced and deleted from the MOH Formulary were issued by the PSD and the Sixth Edition of the MoH Drug Formulary was published in year 2009.

- **Malaysian Drug Code (MDC)**

The Malaysia Drug Code (MDC) is a code developed for a particular drug for identification purposes. The code is based on structure and principle of the Anatomical Therapeutic Chemical (ATC) Classification by World Health Organization (WHO). It is coded up to its product brand name. This standardized code can be used for drug utilization studies or drug consumption data which enable comparison to be made between institutions or countries. In 2009, a total of 7,669 products had been coded and all had been compiled into the MDC Book, Fifth Edition, which is available at PSD's website ([www.pharmacy.gov.my](http://www.pharmacy.gov.my)).

**FIGURE 19**  
**NUMBER OF DRUGS LISTED INTO MOH DRUG FORMULARY, 2004 - 2009**



Source: Pharmaceutical Services Division, MoH

**TABLE 23.**  
**MOH DRUG FORMULARY, 2005 – 2009**

Year	Pro forma Received	Number of Drug Review Panel Meetings	Number of Drug Circulars	Drugs Listed into Formulary		Drugs Deleted from Formulary
				New Strengths / Formulations	New Drugs	
2005	152	3	2	19	20	106
2006	197	3	4	8	11	4
2007	186	3	3	21	40	15
2008	159	3	2	29	30	36
2009	123	3	4	18	41	5

Source: *Pharmaceutical Services Division, MoH*

- **Good Governance for Medicine (GGM)**

The main goal of Good Governance for Medicine (GGM) is to raise awareness on the potential for abuse and corruption in the pharmaceutical sector. This goal can be achieved by promoting good governance, transparent systems, accountability and ethical practices among health professionals especially the pharmacy staffs. The GGM programme is carried out in three phases namely the national transparency assessment, development of framework on GGM and the implementation of the programme. In the year 2009, we had reached Phase Two of the GGM programme when the Framework for Good Governance was published. As a first step towards implementing the GGM programme, a workshop was held from 4-6 August 2009 to develop guidance on sponsorship, dealing with pharmaceutical company representative and academic detailing with healthcare professional. A module to be used for the promotion of awareness on transparent system and ethical practices among the pharmacy staffs was also developed.

- **Drugs Requested Through Special Approval**

Special approvals from the Director General of Health or Senior Director of the Pharmaceutical Services are needed to obtain and use the following drugs:

- Drug not listed in the MoH Drug Formulary whether registered or not registered with the Drug Control Authority (DCA)
- Drugs in the MOH Drug Formulary but intended to be used for indications not listed in the formulary
- Drugs in the MOH Formulary but no longer registered with DCA or no longer available in the local market

Such approval is required to ensure that patients can be treated with these drugs as the last resort after using all alternatives in the MoH Drug Formulary. In 2009, a total of 2,381 requests from MoH Institutions were given special approval to buy 452 types of drugs with an approximate value of RM 44,376,337.66. There is an increase of 22 requests (1%) compared to 2008 (2,359 requests), whilst the estimated value incurred increased by RM 2,395,774.22 (5.7%) compared to 2008 (RM 41,980,563.44) (Table 24).

**TABLE 24.**  
**DRUGS REQUESTED THROUGH SPECIAL APPROVAL BY MOH HOSPITALS /**  
**INSTITUTIONS, 2009**

Year	Number of Approvals	Value of Approvals (RM)
2005	914	23,281,590.00
2006	1,623	34,804,891.14
2007	1,980	38,229,972.02
2008	2,359	41,980,563.44
2009	2,381	44,376,337.66

Source: *Pharmaceutical Services Division, MoH*

- **Quality Use of Medicine-Consumer (QUM-C)**

The Quality Use of Medicine-Consumer (QUM-C) project is a strategy to support the fourth component of Malaysian National Medicines Policy (MNMP) which is Quality Use of Drugs. The main objective of QUM-C is to educate consumers on the rational use of medicine. In year 2009, the activities have been actively carried out at state level so that project impact can be spread out to each and every public stratum.

- a. Know Your Medicine Campaign

In year 2009 the Know Your Medicine campaign has been implemented actively and widely at the state level in order to ensure awareness activities and information on medicines are well disseminated to the public (Table 25). The Training of Trainers Workshop has been organized in every state since year 2007 to train and lead pharmacist of every state to carry out the activities in a standard and structured manner. Eleven training sessions have been conducted and 433 pharmacists were trained. Besides that, several new campaign kits have been designed and disseminated to public to promote Quality Use of Medicines. The newly designed campaign kits are umbrella, mug, flip chart, badge, car shading and bag.

- b. Publications

The following books were published in year 2009:

- i. Comprehensive National Project on QUM-C
- ii. A National Survey on the Use of Medicines (NSUM) by Malaysian Consumers

- **Drug Information Service (DIS)**

In year 2009, a total of 55,431 enquiries were received and 4,418 cases of Adverse Drugs Reactions (ADR) were reported to the Malaysian Adverse Drug Reaction Advisory Committee (MADRAC) (Figure 20). A total of ten educational materials were produced for the year 2009 which covers pamphlets, posters and health articles. The National Pharmacy Call Centre (NPCC), which is located in Hospital Kuala Lumpur, is established in view of improving the accessibility of accurate, unbiased and relevant information on drugs to all healthcare providers, patients and general public. Currently the responses and answers are provided through phone. The service is provided for 24 hours which include public holidays and weekends.

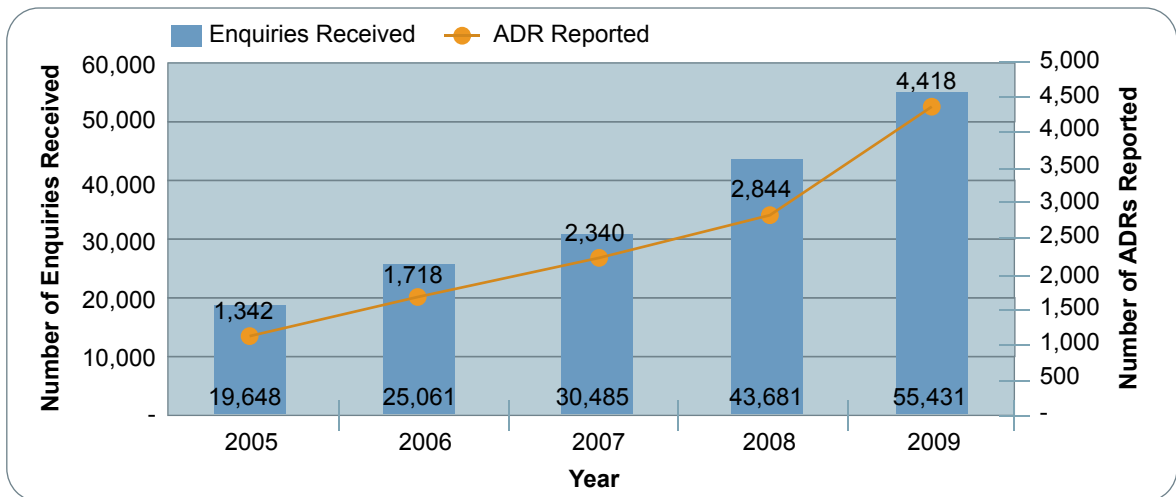
**TABLE 25.**  
**QUM-C ACTIVITIES AT STATE LEVEL, 2009**

Zones	QUM-C activities					
	Launching of Campaigns	Seminar	TOT	Exhibition	Radio Talk	Dialogue
East (Pahang, Terengganu, Kelantan)	2	49	1	41	4	0
North (Perlis, Kedah, Pulau Pinang, Perak)	0	94	1	86	10	5
Middle (Selangor, WP Kuala Lumpur, HKL)	0	52	2	53	4	4
South (N. Sembilan, Melaka, Johor)	0	146	5	207	3	5
East Malaysia (Sarawak, Sabah, WP Labuan)	1	87	2	109	7	4
<b>Total</b>	<b>3</b>	<b>428</b>	<b>11</b>	<b>496</b>	<b>28</b>	<b>18</b>
<b>Grand Total</b>	<b>984</b>					

Source: Pharmaceutical Services Division, MoH



**FIGURE 20.**  
**NUMBER OF ENQUIRIES RECEIVED AND ADR REPORTED, 2005 - 2009**



Source: Pharmaceutical Services Division, MoH

## Pharmaceutical Logistic

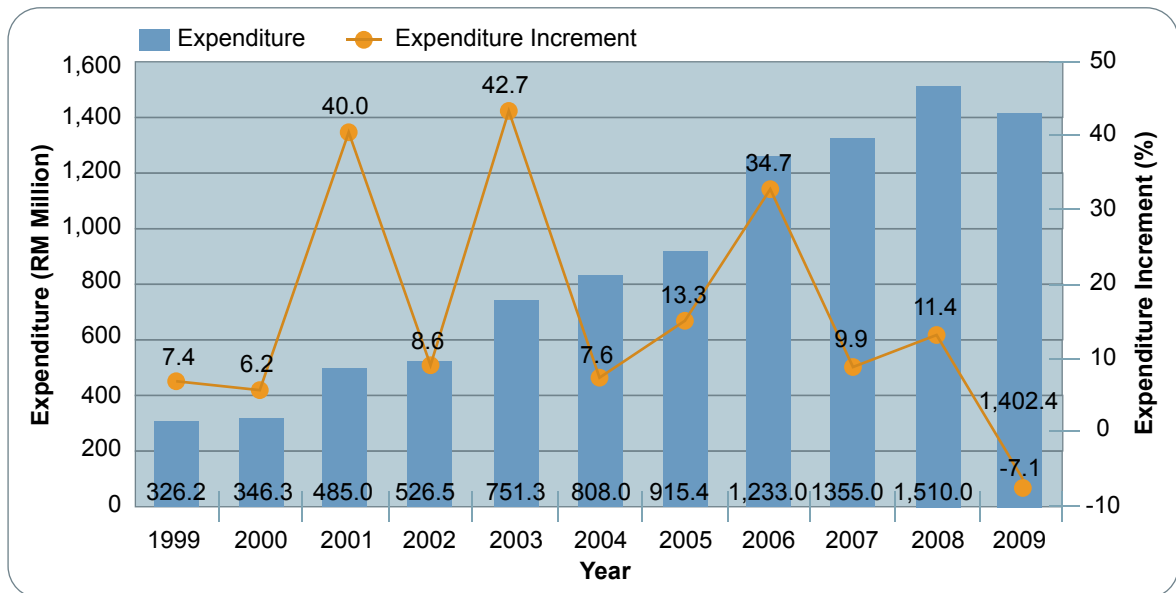
- **Pharmaceutical Procurement**

The total cost of drugs procured in 2009 for the use in hospitals and health clinics of the MOH was RM 1,402.35 million. This shows a reduction of 7.13% in drugs expenditure compared to in 2008, with a total expenditure of RM 1,510.00 million (Figure 21). In 2009, 35% of pharmaceutical products procurement in MOH institutions was done through concession companies, 24% through MOH tender and 41% was through direct purchase / quotation. In 2009, five Technical Specification Meetings on 128 drugs specifications to be tendered were conducted. The Drug Evaluation Technical Committee held 18 meetings to evaluate tender offers for 145 drugs, which involved 412 tender agents.

- **Antiviral Stockpile and National Influenza Pandemic Preparedness Plan (NIPPP)**

Based on the policy agreed by the Influenza Pandemic Technical Committee, the total quantity of antiviral stockpile should covered 10% of the Malaysian population. Therefore, 12 stockpile centres based on different regions were selected to coordinate the distribution of stockpile. The renewal of antiviral stockpile tender effective for the duration of 3 years was done in 2009. The total value of antiviral stockpile tender awarded was RM 115,511,280.00. Due to Influenza A H1N1 crisis in 2009, an additional of RM 19,000,000.00 was spent on Oseltamivir Phosphate 75mg Capsule.

**FIGURE 21.**  
**MOH DRUG EXPENDITURE, 1999 - 2009**



Source: Pharmaceutical Services Division, MoH

- **Medicines Price**

- i. **Medicines Price Monitoring Survey**

Throughout the year 2009, two phases of data collection of the Medicines Price Monitoring Survey had been conducted over a number of premises (Table 26). Types of medicines involved in this survey are as shown in Table 27. The list of monitored medicines will expand from time to time. The annual data analysis conducted since 2006 has been included and published in a series of bulletin namely My Medprice 2007, My Medprice 2008 and My Medprice 2009. These bulletins were distributed to related parties and they can be downloaded from the PSD web portal [www.pharmacy.gov.my](http://www.pharmacy.gov.my). In 2009, four road shows were conducted according to zones. They were held to provide information, especially to private pharmacies, on medicines price survey.

**TABLE 26.**  
**NUMBER OF FACILITIES INVOLVED IN MEDICINES PRICE MONITORING SURVEY, 2009**

Type of Premises	West Malaysia	East Malaysia
MoH Hospitals	22	22
Private Pharmacies	20	20
Private Hospitals	5	2
University Hospitals	3	-

Source: Pharmaceutical Services Division, MOH

### ii. Medicines Price Database

The Medicine Price Database is being developed. Currently, the medicines price data, comprising of categories as in Table 28, are continuously compiled and updated.

### iii. Review of the Changes in the Price of Newly Listed Medicines in the MoH Drug Formulary in 2009

Newly listed medicines in the MoH Drug Formulary are subjected to price monitoring. The review is done once a year continuously by obtaining feedback from MoH hospitals. In the event where the medicines price is more than the predetermined price in the MoH Drug Formulary, the related firm is obliged to provide explanation regarding this issue upon receiving such a letter. Several firms had provided explanation to PSD and undertook corrective actions such as credit notes provision or reimbursement in the form of medicines.

**TABLE 27.**  
**GROUPS AND EXAMPLES OF MEDICINE MONITORED, 2009**

Group	Medicines Monitored	Examples
1	34 types of prescription and non-prescription medicines which are commonly used to treat common diseases	Tab. Aciclovir 200mg Tab. Ranitidine 150mg Tab. Simvastatin 20mg Tab. Captopril 25mg
2	28 patented and newly registered medicines in Malaysia	Cap. Anagrelide Hydrochloride 0.5mg Tab. Levocetirizine 5mg Cap. Dutasteride 0.5mg Tab. Rabepazole Sodium 20mg
3	11 types of medicines for specific indications such as oncology and transplant medicines	Epirubicin Inj. 50mg Ifosfamide Inj. 1g Rituximab Inj. 500mg/50ml Fluorouracil Inj. 500mg/10ml
4	32 types of medicines among the top 40 of the most used medicines as reported by the National Medicine Use Survey (NMUS) (excluding those that had been monitored in Group 1)	Tab. Salbutamol 2mg Tab. Frusemide 40mg Tab. Atorvastatin 20mg Tab. Lisinopril 5mg

Source: Pharmaceutical Services Division, MOH

**TABLE 28.  
CATEGORIES OF MEDICINES IN THE MEDICINE PRICE DATABASE**

No.	Category	No.	Category
i.	Fee Act (Full Paying Patient / Fee Act) (Health)	vi.	National Essential Drug Price List (Public)
ii.	Private Retail Price	vii.	National Essential Drug Price List (Private)
iii.	Public Wholesale Price	viii.	Traditional Wholesale Price
iv.	Private Wholesale Price (Controlled Medicines)	ix.	Recommended Retail Price (RRP)
v.	Private Wholesale Price (OTC)	x.	Government Procurement (GP) Price

Source: Pharmaceutical Services Division, MOH

*iv. Cost of Medicines Price per Prescription Survey*

This survey aims to obtain the trend for the annual changes in the cost of medicines price per prescription in comparison against the total annual increment in terms of number of patients or prescriptions. For 2009, this survey was undertaken retrospectively on the second week in the month of July.

*v. Price Structure Study*

Consultation was held from 15-26 June 2009 and the terms of reference had been decided. The collaboration of WHO-Malaysia and the MOH Malaysia is for the purpose of:

- a. To study the existing price structure and mark ups at different levels of supply chain of the pharmaceutical distribution chain:
  - Ex-importer
  - Ex-manufacturer
  - Wholesaler
  - Retail outlets
  - Private medical practitioners and hospital
- b. To study the medicine affordability level in Malaysia
- c. To conduct capacity building as follows:
  - Expertise to undertake, analyse and report periodic price structure studies in Malaysia
  - Various models of price control and interventions successfully implemented in other countries
  - Skill to assess medicine affordability level in Malaysia

- d. To recommend suitable options for medicine pricing interventions and / or medicine price regulations and the mechanism for the implementation of such interventions in Malaysia
- e. To submit a Technical Report and Financial Report at the end of undertaking

A workshop entitled 'Ensuring Fair Access to Medicines - Pharmaceutical Pricing Policies and Regulations' had taken place from 30 November 2009 until 2 December 2009. The main goal of the workshop is to engage wide range of stakeholders on the challenges posed by rising costs of medicines and consult them about various policy options to maintain equitable access to essential medicines.

*vi. The 9th Malaysia Plan Health Research Project Report - National Medicines Expenditure Survey (NMES)*

The National Medicines Expenditure Survey (NMES), jointly undertaken by PSD, Clinical Research Centre (CRC), Kuala Lumpur Hospital (HKL) and National University of Malaysia (UKM) Pharmacy Department, was financed by a grant of RM500,000.00 from the National Institute of Health (NIH) MoH and was conducted for the period of two years (January 2008 to December 2009).

*vii. Project on National Medicines Use Survey (NMUS)*

PSD acts as the primary sponsor for National Medicines Use Survey (NMUS) while CRC functions as an important collaborating unit that provides research and statistical supports. NMUS is conducted continuously to study the utilization of medicines in the country that is expected to change over time. In order to capture data at various levels of the medicines supply and distribution system in the country (which include all government and private health facilities), NMUS has to conduct several surveys systematically.

The achievements of NMUS for the year 2009 are summarised in Table 29. As a result of the implementation of NMUS, three reports entitled Malaysian Statistics on Medicines (MSOM) have been published. The reports were for the year of 2004, 2005 and 2006. However, MSOM 2007 is expected to be published only in September 2010. Until then, data on nationwide drug utilisation throughout the year 2007 is still not available

**TABLE 29.**  
**ACHIEVEMENTS OF NMUS IN 2009**

Activities	Outputs	Achievements
Implementation of NMUS project in collaboration with CRC	Publication of the Malaysian Statistics on Medicines (MSOM)	MSOM 2006 : September 2009
		TraMSOM 2007 : Will be published in September 2010
Continuous funding for NMUS project	NMUS funding	NMUS Fund 2009 : RM 200,000.00
Posting of NMUS information on website www.crc.gov.my (in collaboration with CRC)	Uploading of NMUS reports into CRC website	Uploading of MSOM 2006
NMUS Governance Board / Steering Committee Meeting	Number of meetings: Once a year	Once (26 Mac 2009)
NMUS External Data QC Meeting		Once (3-5 November 2009)
Development of web application for medicines procurement by private hospitals to facilitate retrieval of medicines procurement data (in collaboration with CRC)	1 web application	In progress (initiated in July 2009)

Source: Pharmaceutical Services Division, MOH

## Pharmacy Development

### • Quality and Standards

#### *i. Quality and Standard Enhancement Efforts (Client Charter, QCC, Innovation, Star Rating System Assessment and KPI)*

The PSD is acting as the MoH Client Charter Coordinator and has created a Client Charter Working Committee consisting of representatives from various Programs and Institutions under MoH. A draft Client Charter for all MoH Front Liner services has been successfully created and will be further reviewed for future use as a Client Charter template for all MoH hospitals, health clinics and dental clinics. From six of the Health Minister's KPI, Pharmacy Practice and Development's activities contribute two KPIs which are 'Number of Hospital and Health Clinic Pharmacies Offering Choices of Obtaining Medications for Patients on Long Term Therapy' and 'Reduction of Medication Collection Waiting Time from Pharmacy Counter'. Throughout 2009, 20 pharmacy departments / units in MoH hospitals and health clinics have obtained 5S certification.

#### *ii. Reviewing the Indicators for Quality Assurance Program (QAP)*

All 16 QAP indicators for Pharmaceutical Care Activities created in 2004 have been thoroughly reviewed. As a result, four new QAP indicators have been presented and tabled in the National Technical QA Program Committee Meeting and approved for

implementation beginning January 2010. A QAP manual was prepared to ensure standardization of data collection and to monitor effectiveness of the QAP indicators. The new QAP Indicators and its manual will be introduced via a series of nationwide road shows beginning in early 2010.

*iii. Pharmacy Quality Convention 2009*

Pharmacy Quality Convention 2009 was held at the Summit Hotel, Subang USJ on 23-25 November 2009 and was attended by 326 participants. Talks related to quality initiative were presented by renowned speakers from MoH and other institutions such as UiTM, MAS, IPK and MPC. Forty eight research projects conducted by pharmacy personnel from different fields competed in the various categories such as Oral QA Presentation (12 entries), QA Poster (10 entries), Innovation (15 entries) and Quality Control Circle (11 entries).

*iv. Consulting Service on Standards of Sterile and Non-sterile Facilities for Pharmaceutical and Radiopharmaceutical Preparations*

Twenty six consulting services on standards of sterile and non-sterile pharmaceutical and radiopharmaceutical product preparation facilities have been given to relevant parties. These parties are representatives from hospital pharmacy departments, Public Work Department, Planning & Development Division of MoH, Engineering Services Division of MoH and construction firms involved in respective product preparation facilities construction projects.

*v. Standards*

Two guidelines on the development requirements of sterile pharmaceutical and radiopharmaceuticals preparation facility have been drafted and set for publication early 2010. The guidelines are:

- i. Guidelines for the Development of Radiopharmaceutical Preparation Facilities for Healthcare Establishments
- ii. Guides to the Development of Sterile Pharmaceutical Preparation Facilities for Healthcare Establishments

The drafting of a comprehensive Pharmacy Practice Internal Audit (PIA) Guide has begun in 2009 which will be further refined in 2010 before the publication and distribution to all states.

*vi. Pharmacy Practice Internal Audit (PIA)*

In 2009, in a move to support the existing Pharmacy Practice Internal Audit (PIA) which was initiated by the PSD, MoH (known as Central-PIA), PIA at the state level (State-PIA) was introduced. Every state appointed their audit teams to conduct audits on facilities and pharmaceutical care delivery service in hospitals, health clinics, drug laboratory and store in their own respective states. To support and guide the state auditors, an audit aide-memoire was issued. For 2009, 283 State-PIA and 7 Central-PIA had been conducted on hospitals and clinics nationwide.

*vii. Inspection of Clean Room Facility for Preparation of Sterile Products: Cytotoxic Drug Reconstitutions (CDR), Parenteral Nutritions (PN) and Intravenous Admixtures (IV Ad)*

In 2009, seven pre-qualification inspections, three routine inspections and six technical inspections of clean room facilities were conducted to ensure that the operations fulfil the requirements set out in the Pharmaceutical Inspection Cooperation Scheme (PIC/S) Good Preparation Practice (GPP). To date, there are 19 qualified sterile preparation facilities (12 for CDR products and 7 for Non-CDR Products).

*viii. Training on Quality and Standards*

The following training activities for quality and standards were carried out throughout 2009:

- i. Continuous Pharmacy Education (CPE) entitled *Manual Prosedur Kerja dan Fail Meja (MPK & FM)* was given by a representative from MAMPU on 6 March 2009.
- ii. New mission and vision for PSD was established in the Mission and Vision Workshop.
- iii. Good Preparation Practice (GPP) Workshop 2009 was held on 29-31 July 2009 to introduce GPP requirements for production of sterile products to pharmacy officers involved with preparation of CDR, PN and IV Ad.
- iv. Pharmacy Practice Internal Audit (PIA) Workshop 2009 was conducted on 14-16 October 2009 to train the newly appointed auditors to conduct PIA at state level.
- v. An officer from PSD, MoH has represented Malaysia in the PIC/S Joint Visit Programme: Training for Auditors held in The Hague, Netherlands on 26-29 October 2009.

• **Pharmacy Research and Development (R&D)**

*i. National Medical Research Register (NMRR) Talk*

A talk on NMRR was conducted on 11 August 2009 at Crystal Crown Hotel, Kuala Lumpur. One pharmacist from each state was appointed as liaison officer and is offered to join this talk together with the member of Jawatankuasa Kerja R&D Farmasi. The purpose of this talk is to give exposure to pharmacist regarding the needs to register all research publications with NMRR and the needs to get publishing approval from the Director of General before published / public view.

*ii. Pharmaceutical Economics & Decision Making (PEDM) Workshop*

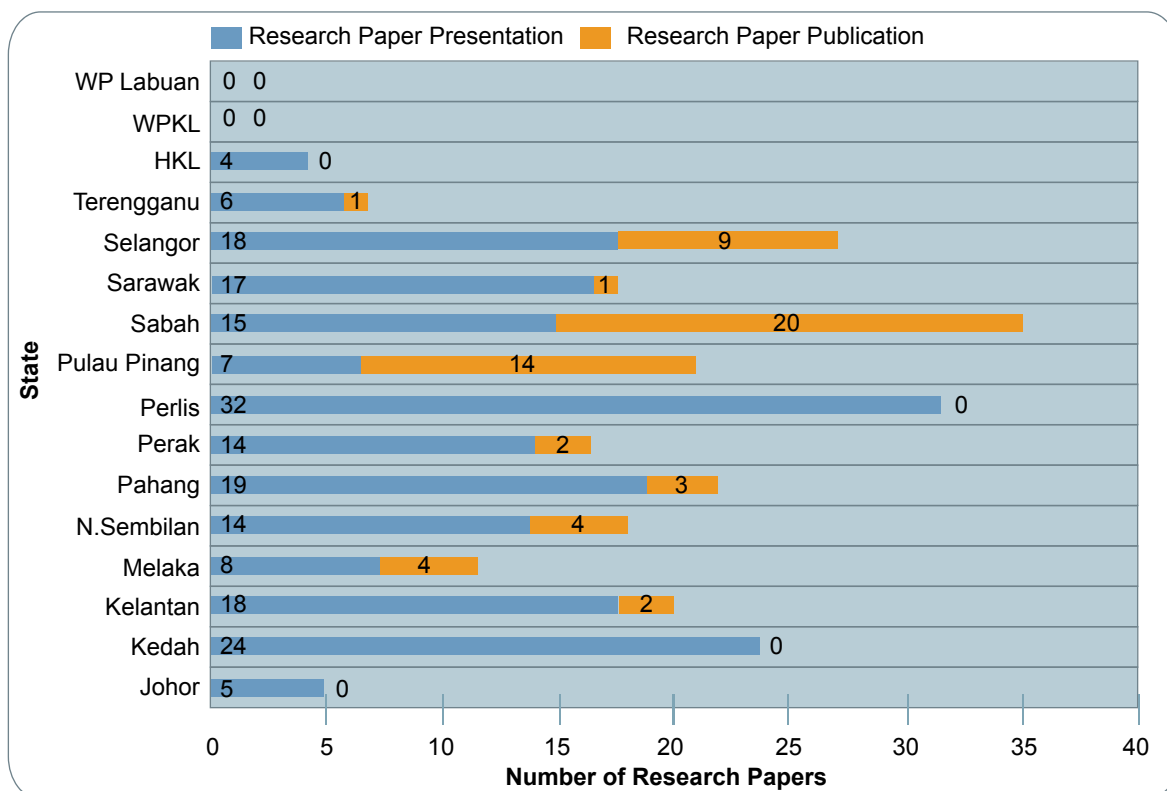
The PEDM Workshop, a beginner level workshop, was conducted on 1-3 October 2009 at Bayview Hotel, Melaka, with the objectives to understand the basic principles of economic evaluation, develop skills in understanding and critical appraisal of economic publications and understand the importance of using evidence and application of economic principles in hospital practices. The following intermediate level workshop will be conducted in year 2010.



### iii. Research Papers

Figure 22 shows the number of research papers presented and published by each state in year 2009.

**FIGURE 22.**  
**NUMBER OF RESEARCH PAPER PRESENTATIONS AND PUBLICATIONS, 2009**



Source: Pharmaceutical Services Division, MOH

#### • Private Pharmacy

The locum guideline and locum application form was updated and enforced on 1 September 2009. The guideline was stringent to ensure that locum will not abrupt officer's duty focus and smoothness of work as well as resulting in conflict of interest. The number of approved locum applications in 2009 (119 applications) is higher as compared to 2008 (104 applications) as more officers value the importance of enhancing their knowledge and skill in the field of community pharmacy.

The PSD also collaborates with the Malaysian Pharmaceutical Society (MPS) in the development of geo-mapping system which shows the location of community pharmacies and related healthcare providers in Malaysia. Up till now, the system comprises all community pharmacies and government hospitals in Malaysia plus some private general practitioners and private dental clinics (the Penang Island only). Other related healthcare providers locations will be updated regularly. This system will become available for public access at the MPS official website when fully completed in future.

## **WAY FORWARD**

### **Pharmacy Management**

With the implementation of compulsory service for Pharmacists beginning 2 September 2004, the number of Pharmacists throughout the country has increased thus enabled the expansion of pharmacy services in new fields while improving existing services. Therefore, restructuring of the Pharmacy Programme in line with the increasing number of Pharmacists is necessary to fulfil the government's desire to deliver efficient and effective healthcare services to the nation. In year 2010, focus will be given on the preparation of organisational restructuring plan based on a comprehensive career platform of the Pharmacy Programme and Ministry of Health Malaysia. In addition, the facilities development and human resource needs projection up to year 2020 will be planned.

In developing the pharmacy profession and career, every year, a number of Pharmacists will be selected to receive the Ministry of Health Federal Training Scholarships to pursue their postgraduate studies either in Master or PhD courses. The development of the pharmacy profession was further strengthened by giving recognition and acknowledgement to Pharmacists having specialisation and expertise in certain areas. This recognition enables Pharmacists to provide consultations to patients and other healthcare professionals. A Pharmaceutical Services Division Credentialing and Privileging Committee will be formed to study and create a detail framework on pharmacy specialisation areas. The need for human resource and training in fields of specialisation is being planned before the implementation. New critical skill areas have been identified to enhance the development of pharmacy services.

The Malaysian National Medicines Policy (MNMP) steers the direction for ensuring quality, safety, efficacy, availability, affordability and quality use of medicines as well as setting a platform for human resources development, research and development, and also international cooperation in relevant fields. DUNAS will provide the direction for all involved in the pharmaceutical sector to plan and implement the respective health activities and unify all efforts towards improving the health status and quality of life of all Malaysians.

### **Pharmacy Regulatory (NPCB)**

NPCB is in the process of implementing the active pharmaceutical ingredients (API) regulatory control which will be carried out during the registration process of new products. This will be implemented prospectively for new product applications according to a timeline. The formulated work plan involves establishment of an API core team, continuous training, establishment of a technical working group (TWG) to draft the guidance document for control of API, preparation of an online module system for registration, preparation of a definition and awareness programme and public notification. This work plan will start comprehensively from year 2010 to year 2014.

The Centre for Quality Control in NPCB plans to widen the accreditation scope of ISO 17025 to include tests on mercury limits in traditional and cosmetic products in 2010 as well as detection and quantification of Lovastatin in traditional products containing red yeast in

2011. Inclusion of microbial contamination test, Hydroquinone and Tretinoin content detection in cosmetic products is also being planned.

In line with the government's aspiration to expand the biotechnology industry in Malaysia, the Drug Control Authority (DCA) has prepared guidelines for registration of biosimilar products in Malaysia. This guideline is expected to spur the growth of the biotechnology in areas such as research and development.

### **Pharmacy Enforcement**

In 2010, more audits will be carried out to stem the misuse of narcotic drugs and psychotropic substances by healthcare practitioners for purposes other than the legitimate medical purposes. Greater effort will be spent in combating the diversion of medicines containing precursor chemicals especially Pseudoephedrine and Ephedrine from being used in clandestine laboratories locally or outside the country. In addition, more dialogues will be conducted with the healthcare practitioners, in order to create greater awareness of the diversion of narcotic drugs, psychotropic substances and precursor chemicals for illicit trade.

Detractors of the control of medical advertisements have argued that strict controls of healthcare advertisements deprive consumers of exposure to adequate health information available. Such an issue is inevitable and despite measures implemented by the PSD, advertisers continue to omit facts, obscure risks, publish unsubstantiated claims and mislead consumers. Such tasks have become increasingly cumbersome due to the information technology revolution that allows advertisers to target consumers at an unprecedented volume. Therefore, consumers must be more aware and mindful of information supplied to be able to make more rational decisions in judging the true efficacy of healthcare services and medical products.

MoH is hoping to achieve self-regulation of healthcare advertisements in the near future and it is only with the cooperation and compliance of all stakeholders (advertisers / advertising agencies / media / related regulatory bodies) together with increased self-awareness among consumers that this can be accomplished in a meaningful manner.

With enforcement actions alone, it is impossible to fully eradicate all the individual or corporate activities infringing against the existing legislations that have been committed for the purpose of making profits. Materialism will continuously provoke diversion, taken for granted on weakness in legislations enforced and exploitation of consumers. Thus, enforcement has to be complemented with activities of demand reduction for counterfeits and doubtful products. To achieve the objectives, a special activity, Prevention and Demand Reduction, will be established to reinforce activities to strengthen consumer education and awareness.

To further enhance pharmacy enforcement activities, strategic planning will be undertaken to ensure more effective punitive actions against those who fail to comply with legislation. It is envisaged that steps taken to address and strengthen legislation together with rational

and innovative administrative measures will provide good results and at the same time, achieve one of the objectives of *National Key Results Area (NKRA)* which is to reduce the crime, from the aspect of eradication of the phenomenon of drug addiction that comes from the diversion of psychotropics for medical treatment.

### **Pharmacy Practice and Development**

The Pharmacy Practice and Development is geared towards improving and upgrading the quality of pharmacy practice. The restructuring and creation of more posts is to strengthen as well as to improve the service in tandem with the dynamic global pharmacy practice and need.

The greatest challenge in years to come is the issue on the increase of health care cost due to the increase in the number of patients seeking treatment from the public facilities. With the existing resources, effort and innovations are utilized to the fullest to ensure quality pharmaceutical care service is rendered to patients. A&P will continue to ensure that drug expenditure is at the optimal economic level and quality medicines are available at the point of need through effective and efficient drug management and supply system.

Many activities have been implemented and planned to ensure the provision of comprehensive and patient-centred services. The expansion and improvement in clinical pharmacy activities in hospitals enhanced the role of pharmacist in a multidisciplinary healthcare team delivering care to patients. The clinical activities will be extended to health clinics to ensure patients with chronic diseases benefit from comprehensive pharmaceutical care services.

Improvement in the awareness and knowledge of medicines among the public will augment the efforts to ensure the safety and quality use of medicines. Strategies and efforts will be intensified to provide public with information on the quality use of medicines and pharmaceuticals products. Greater involvement of the media and increase utilization of information and communication technology would be looked into as strategies in improving public education in pharmaceuticals and related matters.

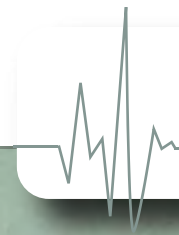
Geared towards improving the quality of pharmacy service, various strategies have been outlined including the utilization of quality tools such as Key Performance Indicators, Quality Assurance Programme and Pharmacy Practice Internal Audit at various level of service. The introduction of value added services to provide flexibility to patients in obtaining pharmaceutical services will be expanded further. Selected patients will be able to benefit from receiving their medicines by post next year.

The proficiency of the pharmacy personnel will be continuously upgraded through Continuous Professional Development programme, specialization training in various disciplines and attachments at relevant sites. Proposals for more scholarships to be awarded to pharmacist for postgraduate training will be continuously pursued to ensure highly qualified and competent workforce will be produced to ensure patients would benefit from the pharmaceutical services.

## CONCLUSION

The increase in the number of pharmacists in the public sector through the implementation of compulsory service had successfully improved the pharmacy services to grow stronger. In line with the government's effort to render an excellent service to the nation, several new and enhanced pharmacy services are introduced while the standard and quality of existing services are continuously improved. Pharmacy services have now been directed towards patient-centred services in order to enhance the quality of health care. Several other services to improve the government healthcare delivery system have also been initiated. Apart from that, the agenda to ensure that drugs are available and affordable to the public will continue to be implemented. The enforcement and registration activities will be strengthened in ensuring only quality, safe and efficacious pharmaceutical and health products are available in the market.





# 8

## Nursing

## INTRODUCTION

Nursing Division is responsible for the governance of the nursing profession in Malaysia through statutory regulation. This is to ensure that nursing is performed by capable, effective, competent, skilful and highly knowledgeable nurses to provide safe and holistic nursing and midwifery care. The Division has taken various efforts and measures to improve service delivery and one of the efforts taken is to ensure that the Division has a well organized structure with optimum number of productive and quality personnel. This will enable the Division to implement its activities efficiently and effectively towards improving the delivery of nursing services in the country. The Division was restructured into 2 sections namely Practice and Regulatory. Both sections are sub-divided into a total of eight units as follows:

### A. Nursing Practice.

1. Research and Quality
2. Nursing Practices - Hospital and Public Health Services
3. Public Health Practice Services
4. Professional Development.
5. Private Practice Surveillance

### B. Regulatory Section (Comprising The Nursing Board And The Midwives Board In Accordance With The Nurses Act 1950 And The Midwives Act 1966)

6. Curriculum
7. Examination (Nursing and Midwifery)
8. Registration
  - Annual Practicing Certificate (APC)
  - Temporary Practice Certificate (TPC) and retention of names

## ACTIVITIES AND ACHIEVEMENTS

### Nursing Practice

#### *1. The Research and Quality Unit*

This unit plans and develops strategies to improve nursing services through research and nursing audits. Other functions include reviewing and updating the Nursing Practice Guidelines, promoting creativity and innovations in nursing practice, and enhancing competency through accreditation. The National Nursing Audit had audited the four main



Indicators which were (1) Administration of Oral Medication, (2) Administration of Intravenous Infusion, (3) Aseptic Wound Dressing, and (4) Blood and Blood Component Transfusion. A Standard Conformance was set at 90% upon agreement, made during the National Nursing Audit Committee Meeting, held on 11 March 2010. Corrective measures were done pertaining to results. Quality care were reinforced and improved via Technical Meetings with State Matrons, and the auditing results were sent to the Health Administrators, Hospital Administrator, State and Hospital Matrons. Hospitals with achievements below the intended target were then called for meeting. Continuous monitoring with scheduled and ad hoc supervisions was carried out. Tables 1 to 4 listed below shows the results of the National Nursing Audit Conformity regarding the four indicators carried out in the sixteen state hospitals throughout the year 2009.

**TABLE 1.**  
**ADMINISTRATION OF ORAL MEDICATION**

No.	Element	Total of Samples	Conformity	Shortfall In Quality
1.	Overall Performances	11,531	86.5%	13.5%
2.	Soft Skills	11,531	92.6%	7.4%
3.	Technical Skills	11,531	92.2%	7.8%

Source: Nursing Division, MoH

**TABLE 2.**  
**ADMINISTRATION OF INTRAVENOUS INFUSION**

No.	Element	Total of Samples	Conformity	Shortfall In Quality
1.	Overall Performances	15,000	84.7%	15.3%
2.	Soft Skills	15,000	94%	6.0%
3.	Technical Skills	15,000	87.7%	12.3%

Source: Nursing Division, MoH

**TABLE 3.**  
**ASEPTIC WOUND DRESSING**

No.	Element	Total of Samples	Conformity	Shortfall In Quality
1.	Overall Performances	7,853	82.9 %	7.1 %
2.	Soft Skills	7,853	90.8 %	9.2 %
3.	Technical Skills	7,853	89.3 %	10.7 %

Source: Nursing Division, MoH

**TABLE 4.**  
**BLOOD AND BLOOD COMPONENT TRANSFUSION**

No.	Element	Total of Samples	Conformity	Shortfall In Quality
1.	Overall Performances	2,638	89.6 %	10.4%
2.	Soft Skills	2,638	95 %	5.0%
3.	Technical Skills	2,638	92 %	8.0%

Source: Nursing Division, MoH

## **2. Nursing Practices in Hospital and Public Health Services**

The main functions of this unit are to enhance the nursing service delivery by addressing issues related to nursing including practice, ethics, facilities and human resources. A total of 25 Nursing Practice Guidelines comprising of Ophthalmology, ENT, O&G, Haematology, Plastic Surgery, Nephrology, ICU, Oncology, Perioperative, Urology, Psychiatry, Neuromedical, Burns, Geriatric, Cardiothoracic, Neurosurgery, CSSU, Orthopaedic, Dermatology, General Surgery, General Medicine, Neonatology, CCU, Paediatric and Generic were developed and distributed to all public hospitals.

This unit also carried out monitoring and surveillance to hospital and health facilities to improve quality of nursing care services provided to the clients to ensure that nursing care providers comply to the policies and procedures and the Standard Guideline issued by the hospitals which adheres to the Nurses Acts 1950 and the Midwifery Acts 1965. Table 5 lists all visits and supervision carried out to hospitals and clinics in 2009.

**TABLE 5.**  
**TIMETABLE OF VISIT AND SUPERVISION DONE BY THE DIRECTOR OF NURSING,**  
**MALAYSIA (2009)**

MONTH	STATE VISITED	HEALTH FACILITIES	
		HOSPITAL	HEALTH CLINICS
January		Accompany visit with Health Minister	-
February		Accompany visit with Health Minister	-
March		Accompany visit with Health Minister	-
April	Sarawak	Hospital Miri	KK Miri
	Sabah	Hospital Sibul	PKD Sibul
	Terengganu	Hospital Ulu Terengganu	PKD Ulu Terengganu
Hospital Dungun		PKD Dungun	
May	N.Sembilan	Hospital Jelebu	KK Titi
		Hospital Tuanku Ampuan Najihah, K.Pilah	KD Air Mawang
		Hospital Tuanku Jaafar, Seremban	-
	Hospital Jempol	KK Jempol	
Melaka	Hospital Jasin	PKD Jasin	
June	Pahang	Hospital Raub	PKD Raub
		Hospital Kuala Lipis	PKD Kuala Lipis
		Hospital Hajjah Sultanah Kalsom	KKIA
		Hospital Cameron Highlands	KK Cameron Highlands
	Kelantan	Hospital Tumpat	-
		Hospital Tanah Merah	-
July	Perak	Hospital Grik	KK Grik
		Hospital Selama	KK Selama
		Hospital Parit Buntar	KK Parit Buntar
	P.Pinang	Hospital Pulau Pinang	PKD P.Pinang
		Hospital Balik Pulau	KK Balik Pulau
August	Selangor & Kuala Lumpur	Hospital Putrajaya	KK Jinjang
		Hospital Kuala Kubu Bharu	KK K.Kubu
		Hospital Tanjung Karang	KK Tanjung Karang
		Hospital Tengku Ampuan Jemaah, Sabak Bernam	KK Sabak Bernam
		Hospital Banting	PKD Banting
September	Johor	Hospital Mersing	PKD Mersing & KK
		Hospital Kota Tinggi	PKD Kota Tinggi
		Hospital Muadzam Shah	KK Muadzam
	Pahang	Hospital Pekan	PKD Pekan & KK
October	Kedah	Hospital Kulim	PKD Kulim
		Hospital Sultan Abdul Halim, Sg. Petani	KK Sg. Petani
		Hospital Langkawi	KK Langkawi
	Perlis	Hospital Tengku Fauziah	KK Mata Air
November	Selangor & Kuala Lumpur	Hospital Ampang	KK Ampang
		Hospital Selayang	KK Selayang
		Hospital Kuala Lumpur	-
		Institut Perubatan Respiratori	-

Source: Nursing Division, MoH

### 3. The Professional Development Unit

- **CPD Credit Points**

As the Division emphasized on the need for continuous enhancement of knowledge and skills (competency) for all Nursing personnel, the CPD Credit Points system was established as a mandatory requirement for application of the Annual Practicing Certificate by all nurses in the public and private sectors.

The objective of this unit is to plan and organize training programs, conferences, seminars and workshops (Table 6). The unit also awards CPD points to all participating nursing institutions that organize training for their nursing personnel and also training the trainers.

**TABLE 6.**  
**LIST OF COURSES ORGANIZED IN 2009**

No.	Courses/Workshops	Date	No. of Participants
1.	Managing Teams for Effective Outcomes	31 March - 2 April	61
2.	English Language	3 - 4 June	63
3.	Disaster Nursing Workshop	21 - 24 June	30
4.	Practical NLP (Neuro Linguistic Programme) for Government Leaders & Personality Success Workshop	17 - 18 August	61
5.	Effective Human Relationship at Workplace Course	23 - 25 October	44
6.	Mentor-mentee in Sabah & Sarawak Workshop/Course	3 - 5 November	57
7.	Managing Soft Skills Workshop	19 - 20 November	60
8.	Mentor-mentee in Peninsula Workshop/Course	2 - 4 December	60
9.	Effective Nursing Leadership Course	6 - 8 December	60
<b>Total</b>			<b>331</b>

Source: Nursing Division, MoH

#### 4. Private Practice Surveillance Unit

This particular unit is established with an objective to improve nursing services. It monitors and carries out surveillance together with MQA and the Ministry of Higher Education in all healthcare facilities of public/private institutions of higher learning, for conformance to Nurses Acts 1950 and Midwives Acts 1966, and to ensure that corrective actions are taken. Through surveillance, it also ensures that the Code of Profession Conduct is practiced by all nurses. This unit also conducts investigation in health facilities regarding complaints and the non conformance to nurses Act 1950. Besides that, it collaborates with other units in the Nursing Division to ensure adherence to stipulated guidelines.

### Regulatory Section (Comprising The Nursing Board And The Midwives Board In Accordance With The Nurses Acts 1950 And The Midwives Acts 1966)

#### 1. Registration Unit

Graduates from the Nursing and Midwifery programs, Assistant Nurses and Community Health Nurses intending to practice nursing in Malaysia are required to register with the Nursing Board Malaysia and Midwives Board Malaysia in accordance with the Nurses Act 1950 and the Midwives Act 1966. A total of 6995 Registered nurses, 1176 Community Nurses, 109 Assistant Nurses, 91 Public Health Nurses and 19 Mental Health Nurse were registered and endorsed by the Nursing Board whereas 884 Midwives Division were registered by the Midwives Board in 2009. Table 7 shows the number of Registered Nurses endorsed for the year 2007 until 2009. This unit also endorsed training transcripts and verification of registration for Nurses and Midwives who wish to pursue tertiary education or practice abroad. Table 8 shows the number of registrations and transcripts that were endorsed and verified.

**TABLE 7.**  
**NUMBER OF REGISTERED NURSES ENDORSED, 2007 - 2009**

Categories of Nurses	2007	2008	2009
Staff Nurses	6,074	5344	6995
Community Nurses	1,484	1,226	1,176
Assistant Nurses	238	300	109
Public Health Nurses	121	82	91
Mental Health Nurses	12	1	19
Midwifery Division	709	938	884
<b>Total</b>	<b>8,638</b>	<b>7,891</b>	<b>9,274</b>

Source: Nursing Division, MoH

**TABLE 8.**  
**NUMBER OF ENDORSED AND VERIFIED REGISTRATIONS AND TRANSCRIPTS, 2007 - 2009**

Activities	2007	2008	2009
Retention of Name	1,585	1,792	2,304
Verification of Registration	327	280	572
Verification of Transcripts	351	460	636

Source: Nursing Division, MoH

- **Issuance of Annual Practicing Certificate (APC)**

Every registered nurse must have a valid APC to practice nursing in Malaysia. The APC form can be downloaded from the MOH portal. Table 9 shows the number of issuance of APC for nurses in public and private sectors.

**TABLE 9.**  
**NUMBER OF APC'S ISSUED FOR NURSES IN PUBLIC AND PRIVATE SECTORS, 2008-2009**

Categories of Nurses	2008		2009	
	Public	Private	Public	Private
Basic Diploma Nurse	36,547	15,633	41,347	18,395
Community Nurses	16,230	406	18,147	1,313
Assistant Nurses	2,289	2,327	1855	2,417
<b>Total</b>	<b>55,066</b>	<b>18,366</b>	<b>61349</b>	<b>22,125</b>
<b>Grand Total</b>	<b>73,432</b>		<b>83,474</b>	

Source: Nursing Division, MoH

- **Issuance of Temporary Practicing Certificate (TPC)**

The Nursing Board approves applications and issues Temporary Practicing Certificates to foreign nurses who intend to practice nursing in Malaysia either for the purpose of work, teaching or attachment. In 2009, a total of 1317 TPC were issued to nurses from abroad as listed in Table 10.

**TABLE 10.**  
**LIST OF ISSUANCE OF TEMPORARY PRACTICING CERTIFICATES (TPC), 2007 – 2009**

Country	2007	2008	2009
India	678	861	1,012
Myanmar	77	83	91
Philippines	41	100	135
Indonesia	40	40	55
Vietnam	3	3	3
Singapore	2	2	2
Pakistan	0	1	1
Bangladesh	0	1	1
Australia	2	1	1
Zimbabwe	2	2	3
United Kingdom	2	2	1
Taiwan	1	2	2
USA	1	3	3
Iran	1	2	1
Ireland	1	2	2
Hong Kong	0	1	0
Germany	0	0	1
Netherlands	0	0	1
Britain	0	0	2
<b>Total</b>	<b>851</b>	<b>1,107</b>	<b>1,317</b>

Source: Nursing Division, MoH

## **2. Examination Unit**

The Examination Unit under the Regulatory Section establishes conditions and procedures in implementation of final examinations. Other functions include logistics preparation, setting the examination calendar, developing and editing examination questions and conducting the examination as a requirement for registration in accordance to the General Registry, Nurses Act 1950 and Midwives Act 1966.

The examination results are announced within 2 weeks of the Education and Examination Committee Meeting. Table 11 shows the results for diploma and pre registration of the final examination from various institutions and Table 12 displays the results of the final examination for all categories of nurses in the year of 2009.

**TABLE 11.**  
**RESULTS OF FINAL EXAMINATION FROM KKM, IPTA, IPTS AND MINISTRY OF DEFENSE, 2009.**

Institutions	No. of Candidates		Passed	Percentage	Ethnic Composition*				
					M	C	I	O	Total
Ministry of Health	March	7	2	28.6%	2	-	-	-	2
	June	1457	1438	98.7%	1086	23	52	277	1438
	Dec	986	952	96.6%	854	8	9	76	952
<b>Total</b>		<b>2450</b>	<b>2392</b>	<b>97%</b>	<b>1947</b>	<b>31</b>	<b>61</b>	<b>353</b>	<b>2392</b>
Higher Learning Institutions (Public)	March	2	2	100%	2	-	-	-	2
	June	512	508	99.2%	464	22	8	14	508
	Dec	21	19	90.5%	19	-	-	-	19
<b>Total</b>		<b>535</b>	<b>529</b>	<b>98%</b>	<b>485</b>	<b>22</b>	<b>8</b>	<b>14</b>	<b>529</b>
Higher Learning Institutions (Private)	March	422	131	31%	102	6	14	9	131
	June	3207	2425	75.6%	1400	309	318	398	2425
	Dec	3937	2793	70.0%	1842	117	324	510	2793
<b>Total</b>		<b>7566</b>	<b>5349</b>	<b>70%</b>	<b>3344</b>	<b>432</b>	<b>656</b>	<b>917</b>	<b>5349</b>
Ministry of Defence	March	-	-	-	-	-	-	-	-
	June	10	10	100%	9	-	-	1	10
	Dec	-	-	-	-	-	-	-	-
<b>Total</b>		<b>10</b>	<b>10</b>	<b>100%</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>10</b>
<b>Grand Total</b>		<b>10561</b>	<b>8280</b>	<b>91.25%</b>	<b>5785</b>	<b>485</b>	<b>725</b>	<b>1284</b>	<b>8280</b>

Note: \*M = Malay, C = Chinese, I = Indian, O = Others

Source: Nursing Division, MoH



**TABLE 12.  
RESULTS OF FINAL EXAMINATION FOR ALL CATEGORIES OF NURSES, 2009**

Categories of Nurses	No. of Candidates	Passed	Percentage (%)
Community Nurse (Certificate)	1,285	1,274	99.1%
Midwifery Part 1 Nurse (Certificate)	880	280	98.1%
Assistant Nurse (Private Sector) (Certificate)	69	460	98.6%
Basic Diploma (MOH)	2,450	2,392	97.0%
Basic Diploma (Public Sector i.e. IPTA)	535	529	98.0%
Basic Diploma (Private Sector)	7566	5349	70.0%
Basic Diploma (Ministry of Defence)	10	10	100%
<b>Total</b>	<b>12,795</b>	<b>10,485</b>	<b>81.0%</b>

Source: Nursing Division, MoH

### **3. Curriculum Unit**

- **Approval and Accreditation of Nursing Programme**

The Nursing Board and Midwifery Board determined the Guidelines on Professional Standards & Criteria for the Approval and Accreditation of Nursing Programs offered locally by public and private nursing institutions. The Nursing Board and Midwifery Board with the cooperation of Higher Education, Malaysian Qualifying Agency and Public Service Department whom assesses, approves and accredits Nursing Programs for private and public nursing institutions.

#### **WAY FORWARD**

In line with the Division's mission to display professionalism and excellence in its services, the Nursing Division is in the process of developing CPD on-line (eCPD) incorporating performance appraisal (PTK). A pilot project on e-registration for APC to improve the waiting time will also be implemented. Another initiative is initiating a recruitment campaign with the objective of increasing applications in the nursing profession focusing on non-Malay applicants. The approaches will include talks, dissemination of brochures and filming a short documentary on the Nursing Profession.

#### **CONCLUSION**

In addressing the growing needs for improvement in human capital in terms of knowledge, innovation, and nurturing 1st class mentality, the Nursing division will continue its effort in addressing persistent nursing issues constructively and productively by instilling positive values and continue to cooperate and collaborate closely with Central Agencies, Ministry of Higher Education, public and private institutions of higher learning and other related agencies.





# 9

## Health Legislation

## **INTRODUCTION**

The Legal Advisor's Office is responsible in handling legal issues and tasks relating to the Ministry of Health. The Legal Advisor's Office plays a prominent role in the prosperous implementation of various new policies introduced into law. It deals with a wide array of legal issues ranging from planning, vetting and drafting of 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. The volume and scope of work performed by the Legal Advisor's Office is firmly dependant on the exigencies of the Ministry of Health.

## **ACTIVITIES AND ACHIEVEMENT**

Active actions were taken by the Legal Advisor's Office in preparing and updating a few Bills, Regulations and Orders that were of priority to the Ministry of Health. Even though there were no new health-related Acts being passed in 2009, two regulations were enacted namely the Food Hygiene regulations 2009 and the Food Export (Issuance of Health Certificate for Export of Fish and Fish Product to European Union) Regulations 2009. Existing health legislations are in the process of revision and amendment to keep in line with the Ministry's current policies.

Apart from that, the Legal Advisor's Office is also active in conducting prosecutions for offences under the Private Healthcare Facilities and Services Act 2006 [Act 586] and in 2009, 6 cases were prosecuted in court for various offences.

## **WAY FORWARD**

In the current era of globalisation and rapid technology advancements, challenges and responsibilities faced by the Legal Advisor office particularly and Ministry of Health generally will require more efforts and commitments. There were proposals of drafting new primary and subsidiary legislations to ensure Ministry of Health achieved its paramount objective of delivering safe and quality healthcare services to all Malaysians. Some of the new laws presently being drafted would include:

- a) Medical Devices Authority Bill;
- b) Medical Devices Bill;
- c) Medical (Amendment) Bill;
- d) Food Analyst Bill

## **CONCLUSION**

Year 2009 had brought challenges of its own to the Legal Advisor's Office. Nevertheless, the Legal Advisor's Office is dedicated and committed in helping the Ministry of Health to achieve its goal in delivering better healthcare services to the nation. The co-operation and full support given by the Ministry of Health had contributed to the effectiveness and productivity of the working process.



# 10 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 the subsequent Treasury Circular 9 of 2004. IAD reports directly to the Secretary General of MoH. The main function of the IAD was to assist MoH to achieve its objectives through systematic and continuous evaluation to ensure effectiveness of internal control processes and good governance in accordance with government rules and regulations.

## ACHIEVEMENTS

In 2009, 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/advisory services on financial management issues and audit achievements are as shown in Table 1

**TABLE 1.**  
**IAD ACHIEVEMENTS IN 2009**

Programs/Activities	Achievements
Financial Audit	63 RC
Performance Audit	3 Topics (14 RC)
Special Audit	12 Cases
Advisory Services	6 RC

*Note: RC – Responsibility Centres*

*Source: Internal Audit Division, MoH*

### Financial Audit

Financial audit includes the review of internal controls and compliance with government legislations, regulations, directives and circulars on financial management. It covers the audit inspection office management, revenue, expenditure and assets of MOH. In 2009, IAD had carried out financial audits on 63 Responsibility Centres (RC) throughout the country.

### Performance Audit

In order to ensure that MoH is achieving economy, efficiency and effectiveness in the employment of available resources, IAD carried out performance audit. This audit was able to identify weaknesses or short-comings on the management and operation of MOH programs/activities/projects and suggested recommendations to resolve issues and overcome challenges to ensure quality service delivery to all stakeholders. In 2009, IAD had carried out 4 performance audits involving 14 RC.

## Special Audit/Investigation

Special audits or investigations were carried out based on reports or instructions from the Secretary General. In 2009, IAD had carried out 12 special audits or investigations.

## Lectures/Advisory Services

IAD officers were also invited by various MoH Divisions to give lectures and advisory services on financial management issues/audit observations. A total of 6 lectures and advisory services were delivered by IAD officers in 2009.

## IAD INNOVATION

Financial Management Performance Monitoring System (3PK System) is a computer application developed by IAD to assist the Ministry to monitor and evaluate the financial performance of each RC and MoH as a whole. The system was developed in 2007 and first used in 2008 in which each RC must assess its own level of their financial management. The financial management performance evaluated for the year 2009 by 491 RC is shown in Table 2.

**TABLE 2.**  
**RC ACHIEVEMENTS IN YEAR 2009**

Status	First Half		Second Half	
	No of RC	%	No of RC	%
Excellent	288	58.66	340	69.25
Good	174	35.44	138	28.10
Satisfactory	4	0.81	2	0.41
No Participation	25	5.09	11	2.24
<b>Total</b>	<b>491</b>	<b>100</b>	<b>491</b>	<b>100</b>

Source: Internal Audit Division, MoH

## WAY FORWARD

IAD is committed in helping MoH to enhance its service delivery system to its client in an economic and effective manner. Hence, IAD has to carry out proactive risk analysis on the financial management and programs/activities of MoH, in line with the aspiration and the needs of the MoH stakeholders. The way forward for IAD is to visit the RCs on regular basis once in every 2 to 3 years. IAD will also evaluate from time to time the management internal controls of MoH whenever necessary.

## **CONCLUSION**

IAD of MoH had successfully carried out its programs/activities as planned. With commitment and full cooperation from other divisions, IAD is confident that MoH could enhance further its financial and programs/activities/projects management. MoH should strive to undertake corrective actions to resolve the issues and rectify weaknesses as reported by IAD to avoid recurrence in future





**11**

**Policy And  
International Relation**

## **INTRODUCTION**

The Policy and International Relations Division which was formerly known as the Corporate Policy and Health Industry Division before being renamed in 2008, is responsible for the formulation of policies for the nation's health sector. The Division coordinates matters related to the Cabinet; acts as the focal point for the Ministry with respect to international relations issues; and responsible for promoting the local healthcare industry. This Division is also the designated national focal point for the World Health Organization (WHO). Various activities are carried out by the three Sections of the Division namely Policy and Secretariat Section; International Relations Section; and Health Industry Section.

## **ACTIVITIES AND ACHIEVEMENT**

### **Cabinet Related Matters**

In 2009, this Division prepared and coordinated 32 Cabinet Notes and 37 Memoranda for tabling to the Cabinet. The Division also monitored, provided inputs and facilitated the preparation of 74 comments on Memoranda received from other ministries and 32 feedbacks to decisions made by the Cabinet throughout the year 2009.

### **High Level Meetings within MOH**

The Division was also the secretariat for 4 high level meetings in the Ministry in addition to 35 Post-Cabinet Meetings, 15 Morning Prayers, 1 Secretary-General's Meeting with State Health Directors and 1 Annual Work Plan Meetings for the MoH Senior Management.

### **Training Courses**

The Division conducted 2 Health Economics Courses for MoH administrative officers in 2009. A total of 47 MoH administrative officers completed the course successfully. The course is aimed at introducing health economic concepts and the application of analytical tools that are commonly used in decision making with regards to resource allocation, expenditure, financing and economic evaluation in the health sector. In addition, participants also had the opportunity to share information and experience with their counterparts in the private sector during their visits to private hospitals.

### **Corporate Culture Campaign**

This Division has also been appointed as the secretariat for the Working Committee on MOH Corporate Culture Campaign chaired by the Deputy Secretary-General (Management). In 2009, a total of 3 meetings were held and the MoH Corporate Culture Campaign was launched by the Honorable Minister of Health at Putrajaya International Convention Centre (PICC) on 23rd February 2009

## World Health Organization (WHO)

Throughout 2009, the Division coordinated placements of 34 foreign WHO consultants and 77 WHO fellows in various institutions in Malaysia. In addition, the Division also coordinated and processed applications from 97 participants and 10 short-term advisors comprising Malaysian professionals to attend 70 meetings/workshops/study visits overseas under WHO sponsorship.

## Foreign Visitors

The Division is the focal point for the provision of technical expertise and assistance to foreign countries through study visits and training attachments. In 2009, this Division facilitated study visits and training attachments in various Institutions and Divisions under MoH involving 836 foreign officials from 23 countries.

## International Relations in Health

The Division coordinated the participation of the Malaysian delegation led by the Minister of Health which also includes the Deputy Minister of Health in the following events: -

- i. The Honorable Minister of Health Malaysia and delegation visit to Beijing, People's Republic of China from 18 to 23 January 2009. The purpose of the visit was to encourage collaboration among the pharmaceutical regulatory authority between Malaysia and China;
- ii. Participation of the Honorable Deputy Minister of Health to Arab Health Exhibition in 2009 in Dubai, United Emirates of Arab. The visit was continued by an official visit to Saudi Arabia, Croatia, Bosnia Herzegovina and United Kingdom, 26 January - 6 February 2009 to exchange experience and promote the Malaysian medical device industries.
- iii. The Commonwealth Health Minister Meeting in Geneva, Switzerland on 17th May 2009;
- iv. The 62nd World Health Assembly in Geneva, Switzerland, 18 - 22 May 2009;
- v. Informal Meeting of ASEAN Health Ministers in Geneva, Switzerland on 19th May 2009;
- vi. NAM Meeting of Health Ministers in Geneva, Switzerland on 20th May 2009; and
- vii. The 60th WHO Western Pacific Regional Committee Meeting in Hong Kong, People's Republic of China from 12 - 25 September 2009.

This Division was the secretariat for the 3rd Bilateral Technical Working Group Meeting on Health between Malaysia and Brunei Darussalam from 22 - 23 June 2009 in Kota Kinabalu, Sabah. During the technical meeting, both countries emphasized on working closely to further strengthen the Joint Work Plans and its implementation especially on Information Exchange, Capacity Building, Research and Joint Operations. The outcome of the meeting will be presented during the 5th Bilateral Ministers of Health Meeting between Malaysia and Darussalam in 2010 to be held in Brunei.

## **International Trade and Health**

### **i) Malaysia-European Commission (EC) Trade and Investment Working Group Meeting**

Representative from the Policy and International Relations Division and Food Safety and Quality Division participated in the Trade and Investment Working Group Commission Senior Officials Meeting from 4-5 February 2009 in Brussels, Belgium. The Trade and Investment Working Group Meeting were led by the Ministry of International Trade and Industry Malaysia (MITI) whereas the Second Senior Officials Meeting was co-chaired by the Secretary General of the Ministry of Foreign Affairs Malaysia. Apart from the two meetings, the Ministry representatives also attended technical meetings on the sideline to deliberate on issues related to health. The major concerns were the fishery export to European Union market and the new testing requirements for *Listeria Monocytogenes* on the imports of soft and semi-soft cheese from the European Union

### **ii) Malaysia-Australia Free Trade (MAFTA): Sixth Trade Negotiating Committee (TNC) Meeting for Expert Group on Services**

This division represented the Ministry in the Expert Group Meeting on Services at the Sixth Trade Negotiating Committee (TNC) Meeting on Malaysia-Australia Free Trade Agreement (MAFTA) from 3 to 7 December 2009 in Canberra, Australia. The Expert Group on Services commenced prior to the Trade Negotiation Committee (TNC) meeting which made possible for both negotiating teams to deliberate mainly on services issues.

Negotiations were based on these topics:

- a) Movement of Natural Persons;
- b) Financial Services;
- c) Telecommunications;
- d) Market Access;
- e) Mutual Recognition Arrangements (MRAs); and
- f) Service Chapter Text.

Apart from the Expert Group on Services meeting, this Ministry also had a separate bilateral discussion with the Department of Health and Ageing Australia to discuss the possible collaboration and issues related to health cooperation on 7 December 2009.

## Health Industry Promotion

In terms of the healthcare industry, the Division works closely with other government ministries and agencies such as the Ministry of International Trade and Industry (MITI), Ministry of Tourism, Tourism Malaysia, Malaysian External Trade Development Corporation (MATRADE), Malaysia Industrial Development Authority (MIDA) as well as industry associations to promote and develop the local healthcare industry. Throughout 2009, this Division organized/participated in 4 main activities, e.g. Malaysia Healthcare – Seminar & Exhibition, Familiarization Programme on Malaysia Healthcare Industry, overseas events, and domestic events.

### (i) Malaysia Healthcare – Seminar & Exhibition (MHSE)

Throughout the year 2009, this Division organized three (3) MHSE programmes respectively in Indonesia, Vietnam & Cambodia as well as Bangladesh with collaboration of Malaysia External Trade Development Corporation (MATRADE), Tourism Malaysia and Association of Private Hospitals of Malaysia (APHM).

#### a) *Malaysia Healthcare - Seminar & Exhibition 2009, 21 - 22 February 2009, Surabaya, Indonesia*

A total of 72 delegates comprising 52 hospital representatives and 20 specialists (healthcare talk speakers) participated in the event. 21 hospitals showcased their services at this exhibition, which received about 500 visitors. 22 sessions of healthcare talks were conducted throughout the 2 days of the event and participated by approximately 700 attendees. The Ministry of Health Malaysia also hosted a networking dinner attended by the Malaysian delegates and Indonesian officials from the Department of Health Surabaya, Indonesian Hospital Association (IHA/PERSI) and Surabaya Chamber of Commerce and Industry.

#### b) *Malaysia Healthcare – Seminar & Exhibition 2009, 1 - 6 June 2009, Ho Chi Minh City, Vietnam & Phnom Penh, Cambodia.*

This event was organised as a follow up of MHSE 2008 in both countries and also the Familiarisation Visit on Malaysia Healthcare Industry for Cambodia & Vietnam Delegation. A total of 9 organisations comprising of 2 private group hospitals, 3 private hospitals, 2 medical devices companies and 2 pharmaceutical companies participated in this mission. The programme consists of Malaysia Healthcare seminar, business meetings, and healthcare talks, networking dinner and hospital visits.

#### c) *Malaysia Healthcare – Seminar & Exhibition 2009, 3 - 7 October 2009, Dhaka, Bangladesh*

Six organisations participated in this event, comprising of 3 private hospitals and 3 medical devices companies. Total of 98 sessions on business meeting was held with potential value RM 1.02 million. About 126 participants attended for the seminar.

**(ii) Familiarization Programme on Malaysia Healthcare Industry**

Throughout 2009, this Division organized four (4) familiarization programmes with collaboration of MATRADE, Tourism Malaysia and APHM. The purpose of this programme is to introduce and create awareness on Malaysian Healthcare Industry, especially our private healthcare facilities and services.

**a) *Mega Familiarization Programme in conjunction with the APHM/ ASQua/ ISQua International Healthcare Conference & Exhibition 2009, 20 - 25 July 2009***

This programme was participated by 20 delegates namely from the U.S.A., United Arab Emirates, Vietnam, Thailand, Bangladesh, China, Japan, Singapore, United Kingdom, Egypt, Algeria and Indonesia. The delegates visited 10 private hospitals in Kuala Lumpur and Melaka. The delegates also attended the Opening Ceremony of APHM / ASQua / ISQua International Healthcare Conference & Exhibition 2009 on 21 July 2009 and the Launching of Patients Beyond Borders: Malaysia Edition on 23 July 2009.

**b) *Familiarisation Visit on Malaysian Healthcare Industry, 28 September – 4 October 2009***

Eleven delegates from the United States of America (USA) participated in this programme. The delegates' are representatives from media, insurance companies and health tourism facilitators. This programme was organised to provide initial exposure to the delegates prior to Malaysia's participation in the World Medical Tourism & Global Health Congress 2009 (WMT&GHC) at Los Angeles, USA on 26-28 October 2009. The delegates visited 8 private hospitals in Kuala Lumpur and Penang.

**c) *Familiarisation Visit on Malaysian Healthcare Industry, 4 - 9 October 2009***

Nine Vietnamese delegates from various hospitals and media participated in this programme. The delegates visited 10 private hospitals in Kuala Lumpur and Melaka.

**d) *Familiarisation Visit on Malaysia Healthcare Industry, 2 - 7 December 2009***

14 delegates from Bangladesh, the USA, Thailand, Canada and Germany took part in this programme. The delegates are representatives from medical tourism facilitation companies, hospitals and medical tourism related business. The delegates visited 6 private hospitals in Kuala Lumpur.

**(iii) Overseas Events**

In 2009, this Division participated in three (3) overseas events. The objectives of the participation were to create awareness on Malaysian health tourism and to establish business networking and strategic relations in promoting the health tourism and services industry.

**a) *Tourism Malaysia led the Malaysia Pavilion at the ASEAN Tourism Forum, 9 - 12 January 2009, Hanoi, Vietnam***

Representative from Ministry of Health was invited to assist in promoting health tourism as a niche product during the event. A total 499 buyers and 578 sellers were involved in Travel exchange programme. In the event, MoH representative acted as the focal point for health tourism related enquiries.

**b) *Malaysia Services Exhibition (MSE) 2009, 17 – 19 July 2009, Dubai UAE***

It was the second services exhibition organised by MATRADE with a total of 10 industry specific clusters showcasing their services. Healthcare Cluster was co-led by MoH and APHM with the participation of 11 organisations comprising of 4 hospitals/hospital groups, 3 dental organisations, 2 hospital support services organisations and 2 health tourism facilitators.

**c) *Malaysia Pavilion at the World Medical Tourism & Global Health Congress 2009, 26 - 28 October 2009, Los Angeles, USA***

The MoH led Malaysia Pavilion was participated by 6 private hospitals with a total of 22 delegates. The Malaysian delegates attended almost 100 business meeting during the event. During the mission, eight (8) Letters of Intent were signed.

**(iv) Domestic events**

Throughout 2009, this Division participated in two (2) domestic events to further support the healthcare industry.

**a) *APHM / ASQua / ISQua International Healthcare Conference and Exhibition 2009, 21-23 July 2009, Kuala Lumpur Conference Centre***

The Opening Ceremony was officiated by Y.B. Minister of Health, Malaysia on 21 July 2009. On 23 July 2009, APHM launched the Patients Beyond Borders: Malaysia Edition as a continuous effort in promoting health tourism of the country. During the event, 120 booths had been set-up. The National Pharmaceutical Control Bureau, Clinical Research Centre, Tele-Health Division and Health Education Division showcased their services under the MoH booth.

**b) *APHM International Healthcare Travel Conference, 18 - 19 November 2009, Kuala Lumpur***

The Opening Ceremony was officiated by Y.B. Tan Sri Nor Mohamed Yakcop, Minister in Prime Minister's Department. A Networking Dinner on 18 November 2009 was hosted by the Secretary General of MoH. The conference was attended by 200 participants. MATRADE organised Incoming Business Meetings in conjunction with the conference.

**(v) Other events**

**a) *The Official Launch of Malaysia Health Tourism Logo and Website, 9 June 2009, Renaissance Hotel Kuala Lumpur.***

The Launch was attended by 350 guests, and officiated by the Honorable Minister of Health. During the ceremony, 35 private hospitals received the Recognition Award as hospitals promoting Malaysian health tourism.

**b) *The Launching of Malaysia Healthcare Travel Council (MHTC), 21 December 2009, Putra World Trade Centre (PWTC), Kuala Lumpur.***

Y.A.B Prime Minister of Malaysia graced the Launch of MHTC. This ceremony was also attended by Y.B. Tan Sri Nor Mohamed Yakcop, Minister in Prime Minister Department, Secretary General of MoH and Director General of Health. A total 450 guests from various government agencies, private sector, NGOs and media attended the event.

**CONCLUSION**

Throughout the year of 2009, the activities of the Policy and International Relations Division were carried out as planned. This Division will continue its role as a focal point of the Ministry in various areas for which it is responsible and will strive to achieve targets that have been set out in the 9th Malaysia Plan and the 3rd Industrial Master Plan.





# 12 Important Events

## IMPORTANT EVENTS IN 2009

### 8 January

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *Ministry of Health's New Year Commendation Ceremony* at the Parcel E Auditorium, Precinct 1, Putrajaya.

### 12 January

Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Merican, Director General of Health, Ministry of Health launched the *CPG Management of Dengue Infections in Adults (2nd Edition)* at the Parcel E Auditorium, Precinct 1, Putrajaya.

### 15 January

*The Foundation Stone Laying Ceremony for The Maternity Specialists and The Psychiatric & Mental Health Complexes* at Hospital Sultanah Zahirah, completed by Prime Minister, YAB Dato' Seri Abdullah Ahmad Badawi and YB Dato' Sri Liow Tiong Lai, Minister of Health, Malaysia.

### 19 - 20 January

Y Bhg Dato' Dr Ramlee Rahmat, Deputy Director-General of Health (Public Health) Ministry of Health Malaysia officiated *1st Meeting of the Interim Steering Committee of the Islamic Conference of Ministers of Health* at Hotel Istana Kuala Lumpur.

### 21 January

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia attended a meeting with the Health Minister of China, Chen Zhu, in Beijing.

### 1 February

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia launched *The Anti Dengue Campaign* in Shah Alam, Selangor.

### 5 February

Dr. Azman bin Abu Bakar, Director of Institute for Health Systems Research, Ministry of Health Malaysia officiated *the Policy Brief Workshop For Western Pacific Region* at the Grand Seasons Hotel, Kuala Lumpur.

### 5 February

The Ground Breaking Ceremony of the Bera Hospital Site, completed by His Royal Highness the Sultan of Pahang, Sultan Haji Ahmad Shah Al Musta'in Billah Ibni Al-Marhum Sultan Abu Bakar Ri'ayatuddin Al-Mua'adzam Shah.

**8 February**

*The Launching ceremony of Kempen 10 Minit Setiap Minggu Musnahkan Aedes, Perangi Denggi' Peringkat Kebangsaan* by the Ministry of Health in collaboration with residents of Taming Jaya.

**19 February**

Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the opening ceremony of the *7th Asian Pacific Congress of Hypertension 2009*, at the Kuala Lumpur Convention Centre (KLCC).

**16 - 20 February**

Ms. Noraini Dato' Mohd Othman, Director of the Food Safety and Quality Division, officiated and chaired the *21st Session of the Codex Committee on Fats and Oil (CCFO)* which was hosted by Malaysia at Kota Kinabalu, Sabah.

**23 February**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the launching of *Kempen Penerapan Budaya Korporat Kementerian Kesihatan Malaysia* at the Putrajaya International Convention Centre (PICC).

**24 February**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *HiMSS Asia Pac'09 Asia Pacific's Premier Healthcare IT Conference & Exhibition* at Kuala Lumpur.

**2 March**

Y.B. Datuk Dr. Hj. Abdul Latif bin Ahmad, the former Deputy Minister of Health, officiated the launching of *National Level Food Safety Promotion* for TABIKA Children at the Tabung Haji Complex, Kota Kinabalu, Sabah.

**3 - 12 March**

A Food and Veterinary (FVO) Inspection Mission from the European Union (EU) was carried out by two FVO Inspectors. The report findings indicated that Food Safety and Quality Division (FSQD) of the Malaysian Ministry of Health, and the Competent Authority (CA) appointed by the EU, were able to give official guarantees on the control of fish and fishery products exported to the EU as equivalent to EU requirements.

**12 March**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated *The World Kidney Day 2009*. Technical speech was given by Dr. Goh Bak Leong, Head of Nephrology Department at the Serdang Hospital Auditorium.

### **24 March**

Y.A.B. Dato' Hj. Musa bin Hj. Aman, Chief Minister, Sabah officiated the *World TB Day 2009* at Tamu Putatan, Penampang, Sabah.

### **25 March**

YB Dato' Dr. Hajah Rosnah binti Haji Ismail, the Health Director of Pahang launched the *Sambutan Hari Kusta Sedunia 2009 Peringkat Negeri Pahang* at Kg. Kerpai Rompin, Pahang.

### **28 March**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *World TB Day 2009* at Pulau Pinang and the theme was I Am Stopping TB.

### **3 April**

Dr Shahnaz Murad, Director of Institute for Medical Research received a visit by the Honorable Dato' Seri Hishammuddin Tun Hussein, Minister of Education Malaysia and the President of SEAMEO Council (SEAMEC) at the Institute for Medical Research.

### **9 April**

YB Dato' Shahiruddin bin Abd. Moin, State Representative of Dong, Pahang officiated the *World TB Day 2009 Peringkat Negeri Pahang* at the Sg. Ruan Raub Rehabilitation Centre, Pahang.

### **11 April**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *World Parkinson Day*.

### **11 April**

Y. Bhg. Dato' Dr. Norain Abu Talib, the Principal Director of Oral Health, the Health Minister of Malaysia, launched the *Oral Health Month 2009* at the Sunway Pyramid Shopping Mall, Selangor.

### **14 April**

YB Dato' Seri Liow Tiong Lai, the Health Minister of Malaysia, officiated the launch of the *Coffee Table Book: A Lifetime of Healthy Smiles* by the Oral Health Division, Ministry of Health Malaysia at the Parcel E Auditorium, Putrajaya.

### **14 April**

YB Dato' Seri Liow Tiong Lai, the Health Minister of Malaysia, launched the *Sistem Pengurusan Pengambilan Atas Talian (SPAT)* at the Level 8 Dewan Serbaguna, Block E7, Ministry of Health, Putrajaya.

**20 April**

Y. Bhg. Dato' Dr. Hajah Rosnah binti Haji Ismail, the Health Director of Pahang, officiated the *Majlis Penerapan Budaya Korporat dan Soft Skill* at the Dewan Jabatan Agama Islam Pahang.

**22 April**

Y.B Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *Media Awards Ceremony 2009* at the Hilton Hotel, Kuala Lumpur.

**23 - 24 April**

Y. Bhg. Dato' Sri Dr. Hj. Mohd Nasir bin Mohd Ashraf, the Secretary General of Ministry of Health, Malaysia officiated the *Persidangan Pengerusi dan Ahli Lembaga Tata tertib Kementerian Kesihatan Malaysia* at the Hotel Royale Bintang, Seremban.

**24 April**

Dr Zakiah Ismail, Head of Herbal Medicine Research Centre, Institute for Medical Research, officiated the *Graduation Ceremony for the 31st Diploma in Medical Microbiology Course* at the Institute for Medical Research.

**28 April**

Y.B. Dr. Robia Bt. Hj. Kosai, Health Executive of Johor, officiated the *World Health Day* at the PERSADA Complex, Johor Bahru, Johor.

**7 May**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia and Y.B Dato' Sri Ong Tee Keat, the Transportation Minister of Malaysia, officiated the *Majlis Pelancaran Perkhidmatan Pemindahan Perubatan Kecemasan* at Port Klang, Selangor

**8 May**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia participated in the *Press Conference for Special Meeting of ASEAN+3 Health Ministers* at Bangkok, Thailand

**12 May**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia officiated the *International Nurses Day 2009 Ceremony: Delivering Quality, Serving Communities: Nurses Leading Care Innovations* at the Putra World Trade Centre (PWTC), Kuala Lumpur.

**19 May**

His Royal Highness the Sultan of Pahang, Sultan Haji Ahmad Shah Al Musta'in Billah Ibni Al-Marhum Sultan Abu Bakar Ri'ayatuddin Al-Mua'adzam Shah completed the *Rompin Hospital Site Declaration Ceremony* at Jalan Kolam Air, Rompin.

## **21 May**

YB Dato' Hoh Kai Mun, Chairman of the Pahang State Local Government, Environment, and Health Committee, officiated the *World Health Day* at the Sultan Haji Ahmad Shah Hospital (HOSHAS), Temerloh, Pahang.

## **21 May**

Mohd Norwawi bin Mohamed, Deputy Under Secretary of Acquisition Division, Ministry of Home Affairs, officiated the *Healthy Catering Training for Canteen Entrepreneurs and Officers* at the Dewan Sri Siantan, Kompleks Perbadanan Putrajaya 24, Precinct 3, Putrajaya.

## **30 May**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *World No Tobacco Day 2009* with the *Amaran Kesihatan Bergambar* theme at the Institut Kefahaman Islam Malaysia (IKIM), Jalan Duta, Kuala Lumpur.

## **5 June**

YBhg. Dato' Sri Dr. Hj. Mohd Nasir bin Mohd Ashraf, Secretary General of the Ministry of Health, chaired the *Majlis Bersama Ketua Setiausaha KKM Bersama Wakil-Wakil Persatuan / Kesatuan KKM Tahun 2009* at the Level 8 Dewan Serbaguna, Block E7, Ministry of Health, Putrajaya.

## **19 June**

Dato' Dr. Azmi Shapie, Director of the Medical Development Division, Ministry of Health, launched the *CPG Management of Schizophrenia* at the J.W. Marriot Hotel, Kuala Lumpur.

## **20 June**

Y.B Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *10,000 Steps Campaign at Ministry of Health Level* at the Wetland Park, Putrajaya.

## **22 June**

Tuan Hj. Abdul Jabar bin Ahmad, Director of Health Education Division, officiated *The PROSTAR School National Convention* at the Pantai Cahaya Bulan Resort, Kota Bharu.

## **22 - 23 June**

YB. Dato' Haji Tan Mohd Aminuddin bin Haji Ishak, the Deputy Chief Minister of Pahang, officiated the *Majlis Tilawah Al-Quran Peringkat Jabatan Kesihatan Negeri Pahang* at the Sultan Haji Ahmad Shah Hospital (HOSHAS), Temerloh, Pahang.

**22 - 23 June**

Y. Bhg. Dato' Dr. Hj Ramlee bin Rahmat, Deputy Director General of Health (Public Health), Ministry of Health, officiated the *3rd Bilateral Working Group Meeting on Health between Brunei Darussalam and Malaysia* at the Borneo Hotel, Kota Kinabalu.

**23 - 25 June**

Madam Eisah Binti A. Rahman, Senior Director of Pharmaceutical Services, Pharmaceutical Services Division officiated *The 12th ASEAN Cosmetic Committee (ACC) & 11th ASEAN Cosmetic Scientific Body (ACSB) Meeting organised by the National Pharmaceutical Control Bureau (NPCB) in collaboration with Department of Standards Malaysia and ASEAN Secretariat* at the Prince Hotel & Residence, Kuala Lumpur.

**30 June**

The Information Management Divisions (BPM) organized the Seminar on Enhancing ICT Security at the Putrajaya International Convention Centre (PICC). It was officiated by Mr. Hasib bin Mansor, Deputy Secretary of BPM.

**5 - 7 July**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *2nd TPC Users Conference* at The Summit Hotel, USJ, Subang Jaya.

**9 July**

Puan Rokiah Don, Director of Nutrition Division, Ministry of Health, officiated the *Healthy Catering Training for Caterers Providing Catering Services to the Ministry of Health* at the Dewan Sri Siantan, Kompleks Perbadanan Putrajaya 24, Precinct 3, Putrajaya.

**10 July**

Madam Hasnah Binti Ismail, Director of Pharmacy Practice and Development, Pharmaceutical Services Division had launched the *Renal Pharmacy Handbook – A Practical Guide to Drug Therapy during the opening ceremony of the 1st National Scientific Meeting of Renal Pharmacy* at the Holiday Villa & Suites, Subang.

**11 July**

Madam Hasnah Binti Ismail, Director of Pharmacy Practice and Development, Pharmaceutical Services Division, officiated the *1st National Scientific Meeting of Renal Pharmacy* jointly organised by the Malaysian Renal Pharmacy Group, the Pharmaceutical Services Division and the Malaysian Pharmaceutical Society at the Holiday Villa & Suites, Subang Jaya.

**20 - 22 July**

Y. Bhg. Datuk Dr. Noor Hisham bin Abdullah, the Deputy Director General of Health (Medical), Ministry of Health, officiated the *Konvesyen Kualiti 2009 Peringkat Negeri Pahang* at the Sultan Haji Ahmad Shah Hospital (HOSHAS), Temerloh, Pahang.

## **20 - 23 July**

Y. Bhg. Tan Sri Dato' Sri Haji Mohd Ismail Merican, the Director General of Health, officiated the Johor Scientific Meeting, *Cancer Care: Teaming Up Across The Horizon* at The Softel Palm Resort, Senai, Johor.

## **20 - 24 July**

Y. Bhg. Dato' Dr Maimunah A. Hamid, the Deputy Director General (Research & Technical Support) officiated the Training of *Trainers on QA/QI in the WHO WPRO* at the Grand Seasons Hotel, Kuala Lumpur.

## **23 - 26 July**

The Honorable Datuk Rosnah Shirlin binti Haji Abdul Rashid Shirlin, the Deputy Minister of Health inaugurated *The 7th INTRACOM, 2nd ICBWI & WIEX 2009 Scientific Conference And Exhibition* which was held at the Putra World Trade Centre (PWTC), Kuala Lumpur. The theme for the conference was *Wellness through the Advancement in the Holistic Approach*.

## **28 - 30 July**

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Bin Merican, the Director General of Health officiated *The National Medicines Policy (NMP) Mid-Term Review Workshop* organised by the Pharmaceutical Services Division at the Sheraton Subang Hotel, Subang Jaya.

## **11 August**

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Merican, the Director General of Health, Malaysia, launched the *CPG Management of Type 2 Diabetes Mellitus (4th edition)* at the Putrajaya Hospital.

## **13 - 14 August**

Dr. Shahnaz Murad, Director of Institute for Medical Research officiated *The 48th SEAMEO TROPED NETWORK Governing Board Meeting (GBM)* at the Istana Hotel, Kuala Lumpur.

## **16 August**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the *Karnival Sihat Sepanjang Hayat* at the school hall of Sekolah Jenis Kebangsaan Serdang Baru, Serdang.

## **17 August**

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Merican, the Director General of Health, Malaysia, officiated the *8th Ministry of Health – Academy of Medicine of Malaysia Scientific Meeting 2009* at the Institute for Health Management, Bangsar, Kuala Lumpur



**17 – 19 August**

The Honorable Datuk Rosnah Shirlin binti Haji Abdul Rashid Shirlin, the Deputy Minister of Health, officiated *The MoH Quranic Recitation Competition* at the Dewan Seri Negeri, Ayer Keroh, Melaka.

**19 August**

The Division Secretary of the Information Management Division (BPM) *Technology Update Series 1 / 2009*, organized by BPM, with the program theme of *Diversity Varying Technology Innovation: Towards 1- Mission*.

**20 August**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated the opening ceremony on the *Stem Cell Research & Therapy Seminar and The Launching of Stem Cell Services Guidelines* at the Ampang Hospital.

**10 - 11 October**

Madam Hasnah Binti Ismail, the Director of Pharmacy Practice and Development, Pharmaceutical Services Division officiated *The New Strategies in Combating Antiinfectives Resistance Seminar* jointly organised by the Pharmaceutical Services Division, the Malaysian Pharmaceutical Society, and the Pharmacy Department of Hospital Melaka at the Avillion Legacy Hotel, Melaka.

**19 - 21 October**

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Merican, the Director General of Health, Malaysia, launched *5th National QA Convention* at Holiday Villa & Suites, Subang Jaya.

**19 October**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated *The Feast of Aidilfitri and Deepavali* at the Dataran Bendera, Parcel E, Putrajaya.

**23 October**

Dr Zakiah Ismail, Head of Herbal Medicine Research Centre, Institute for Medical Research, officiated *The Graduation Ceremony for the 40th Diploma in Applied Parasitology and Entomology course* at the Institute for Medical Research.

**28 - 30 October**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated *The 9th World Congress: International Association for Adolescent Health* at the Shangri-La Hotel, Kuala Lumpur, with the theme: *Private Lives Public Issues-Global Perspectives on Adolescent Sexual Health*.

## **5 November**

YB Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated *The Ministry of Health Innovation Ceremony 2009* at the Putrajaya International Convention Centre (PICC), Putrajaya.

## **6 November**

Dr Shahnaz Murad, the Director of Institute for Medical Research received a visit by His Excellency Mr Jurin Laksanawisit, the Minister of Education Thailand and President of SEAMEO Council (SEAMEC) at the Institute for Medical Research.

## **16 - 18 November**

Tuan Haji Abdul Hadi bin Awang Kechil, the Principal Director of National Service Training Department, officiated the *Seminar on Nutrition and Food Safety Guidelines for the National Service Training Programme (PLKN)* at the Flamingo Hotel, Ampang, Selangor.

## **19 November**

Y.B. Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated and chaired the *8th National Food Safety and Nutrition Council (NFSNC)*, at Putrajaya.

## **23 - 25 November**

Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Bin Merican, the Director General of Health, Malaysia, officiated *The Pharmacy Quality Convention 2009 organised by the Pharmaceutical Services Division* at the Summit Hotel, Subang USJ, Selangor.

## **3 December**

Y.B Dato' Sri Liow Tiong Lai, the Health Minister of Malaysia, officiated *The World AIDS Day* at the Hard Rock Hotel, Batu Feringghi, Penang.

## **8 - 9 December**

YB Dato' Dr. Hajah Rosnah binti Haji Ismail, the Health Director of Pahang, officiated the *Pahang H1N1 Seminar* at the Bukit Gambang Resort, Kuantan, Pahang.

## **14 December**

The Traditional and Complementary Division, Ministry of Health established 2 new branches at the Sultanah Nur Zahirah Hospital (Kuala Terengganu) and the Duchess of Kent Hospital (Sandakan, Sabah). These branches provide services in Traditional Malay Massage and Acupuncture for chronic pain and stroke.

## **21 December**

The official launching of the *Malaysia Healthcare Travel Council (MHTC)* launched by YAB Dato' Sri Haji Mohd Najib bin Tun Haji Abdul Razak, the Prime Minister of Malaysia, at the Putra World Trade Centre (PWTC), Kuala Lumpur.

**28 December**

YB Dato' Hoh Kai Mun, Chairman of the Pahang State Local Government, Environment, and Health Committee officiated the *Sambutan Hari AIDS Sedunia 2009 Peringkat Negeri Pahang* at the Lakum Community Hall, Pahang.