



MINISTRY OF HEALTH MALAYSIA

**ANNUAL REPORT
2008**



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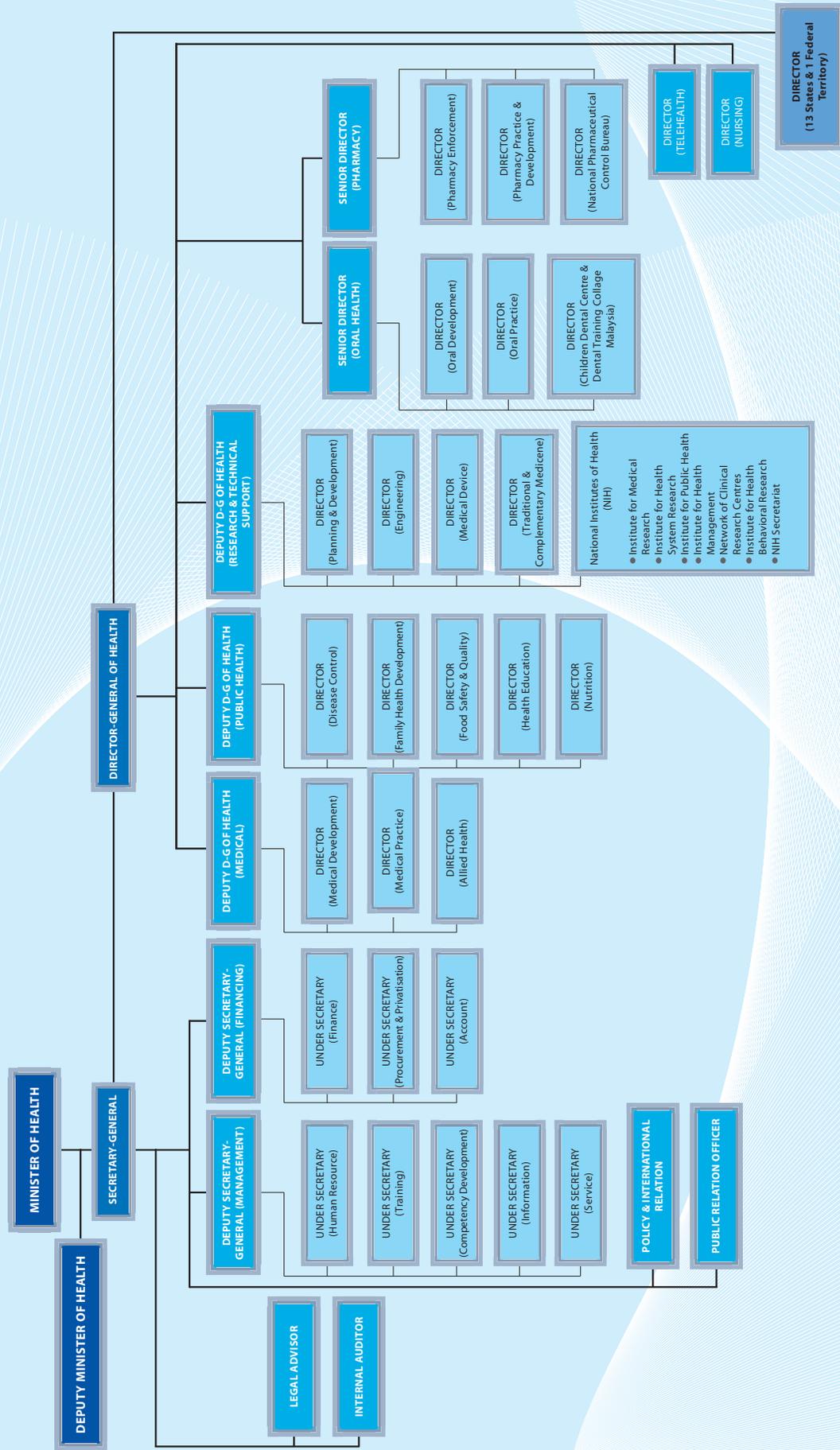
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ORGANISATION CHART MINISTRY OF HEALTH, MALAYSIA



Vision For Health

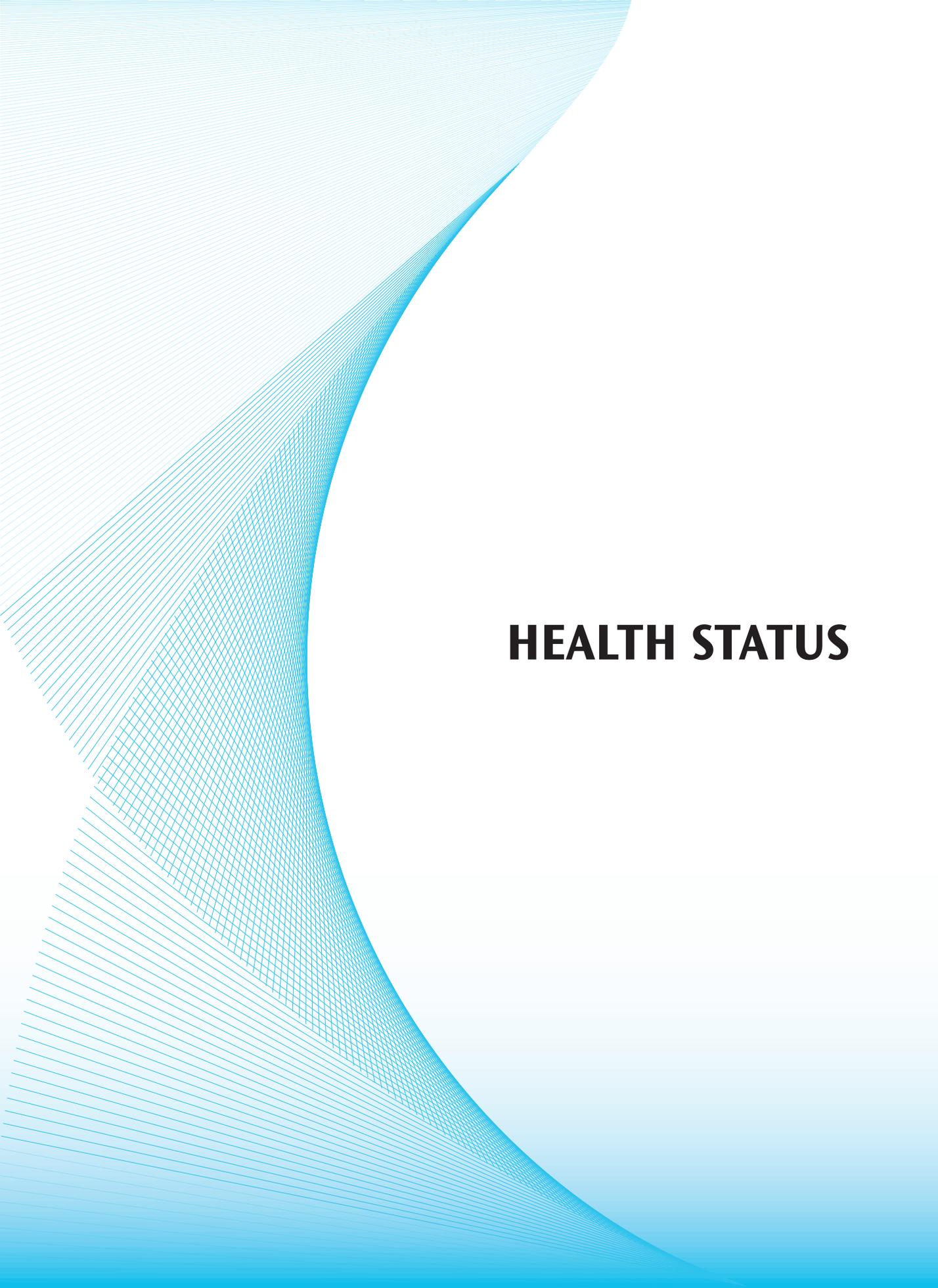
A nation working together for better health.

Mission of the Ministry of Health

- i. 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

- ii. To ensure a high quality health system that is:
 - Equitable
 - Affordable
 - Efficient
 - Technologically appropriate
 - Environmentally adaptable
 - Customer centred
 - Innovative

- iii. With emphasis on:
 - Professionalism, caring and teamwork value
 - Respect for human dignity
 - Community participation



HEALTH STATUS

HEALTH STATUS

INTRODUCTION

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

Population Structure

The population of Malaysia in 2008 was 27.73 million with an average annual population growth rate of 2.0 per 100 population. The total population in 2008 increased by 0.56 million as compared to 27.17 million recorded in 2007. The geographical distribution of population showed that Selangor (including Federal Territory Putrajaya) had the highest population of 5.07 million, while Federal Territory Labuan recorded the lowest population of 0.09 million (Table 1). However, Terengganu recorded the highest annual population growth rate of 2.4 per 100 population, followed by Selangor (including F.T. Putrajaya), Johor, Kelantan and Sabah at 2.2, while Federal Territory Kuala Lumpur and Labuan recorded the lowest annual growth rate of 1.5. In 2008, 63.5% out of the total population lived in urban area, while 36.5% lived in rural area (Table 2).

Overall, Malaysia has a relatively young population, with 41.4% of the total population below 20 years of age, and only 7.0 % of the population is aged 60 years and above (Table 2). In 2008, the economically-productive population which consists of people aged 15 to 64 years was 17.6 million or 63.5% of the total population, while the economically dependent i.e aged below 15 years and 65 years and above was 10.1 million or 36.5% of the total population.

TABLE 1
POPULATION AND AVERAGE ANNUAL POPULATION GROWTH RATE BY STATE MALAYSIA 2007 - 2008

State	Population (Thousand)		Average Annual Population Growth Rate (per 100 population)
	2007	2008	
Johor	3,240.9	3,312.4	2.2
Kedah	1,918.7	1,958.1	2.0
Kelantan	1,560.5	1,595.0	2.2
Melaka	738.8	753.5	2.0
Negeri Sembilan	978.2	995.6	1.8
Pahang	1,483.6	1,513.1	2.0
Perak	2,314.6	2,351.3	1.6
Perlis	231.9	236.2	1.8
Pulau Pinang	1,518.5	1,546.8	1.8
Sabah	3,063.6	3,131.6	2.2
Sarawak	2,404.2	2,452.8	2.0
Selangor*	4,961.6	5,071.1	2.2
Terengganu	1,067.9	1,094.3	2.4
F.T. Kuala Lumpur	1,604.4	1,629.4	1.5
F.T. Labuan	86.3	87.6	1.5
Malaysia	27,173.6	27,728.7	2.0

Note: * includes Federal Territory Putrajaya
Source: Department of Statistics, Malaysia

TABLE 2
STATISTICS RELATED TO POPULATION, 2007 - 2008

Population	2007		2008	
	Number (Thousands)	% of Total Population	Number (Thousands)	% of Total Population
Male	13,833.0	50.9	14,114.30	50.9
Female	13,340.6	49.1	13,614.40	49.1
Youths (below 20 years)	11,837.6	43.6	11,477.30	41.4
Elderly (60 years and above)	1,853.7	6.8	1,932.60	7.0
Economically-productive (age 15-64 years)	17,237.9	63.4	17,620.20	63.5
Economically-dependent (age below 15 & above 64 years)	9,935.6	36.6	10,108.50	36.5
Urban	17,221.6	63.4	17,615.5	63.5
Rural	9,952.0	36.6	10,113.2	36.5

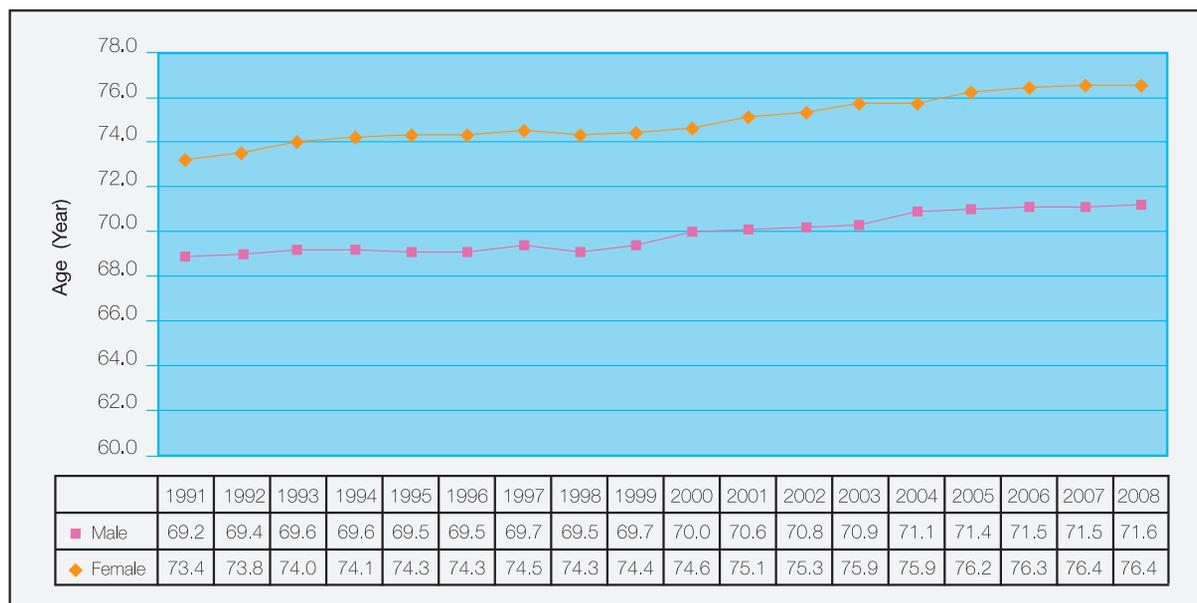
Source: Department of Statistics, Malaysia

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 life expectancy at birth in 2008 has increased to 71.6 years for male and 76.4 years for female as compared to 69.2 years for male and 73.4 years for female recorded in 1991 (Figure 1).

FIGURE 1
LIFE EXPECTANCY AT BIRTH (IN YEARS) BY GENDER MALAYSIA 1991 - 2008



Source: Department of Statistics, Malaysia

Mortality

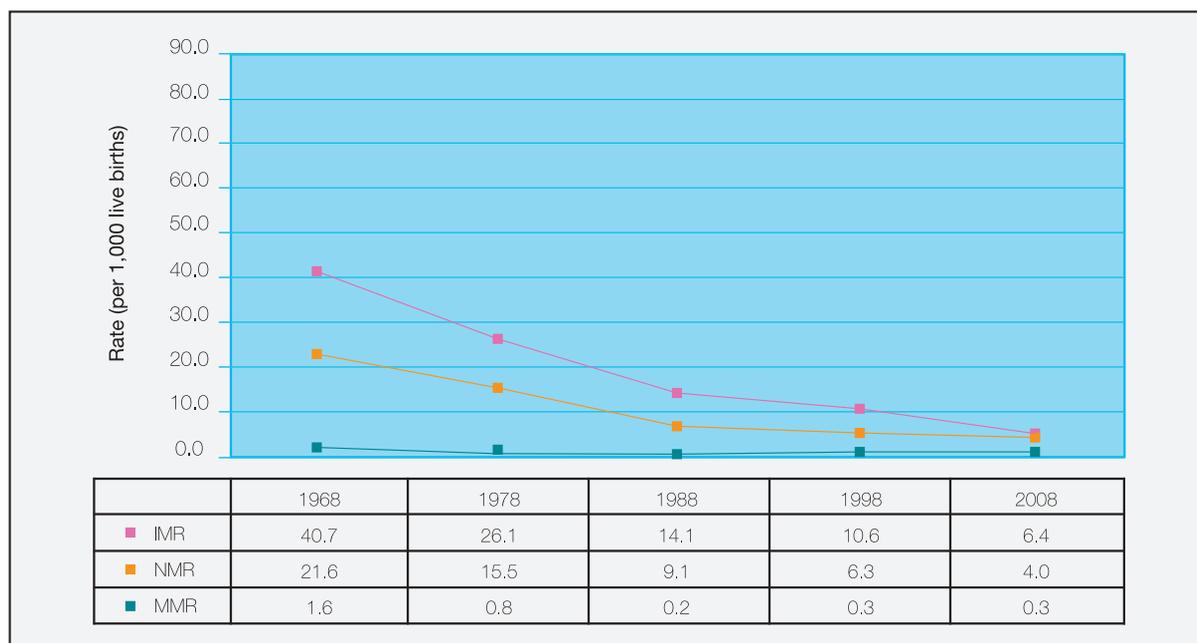
Mortality data provides a useful endpoint for measuring health. These data provide a comprehensive picture of the health of the community, since it covers every individual. Many different types of measures are used to provide views of health from differing perspectives.

For the past 40 years (1968-2008), the mortality rates in Malaysia had been decreasing. In 2008, crude death rate per 1,000 population had decreased to 4.7 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 Figure 2. The MMR, which refers to the ratio of deaths occurring in women during pregnancy, childbirth or within 42 days after childbirth, due to causes directly or indirectly related to the pregnancy or childbirth, showed an apparent decrease from 1.6 per 1,000 live births in 1968 to 0.2 in 1988. Even though there was a slight increase in the MMR to 0.3 per 1,000 live births in 1998, the rate has stabilized for the past 10 years, i.e. from 1998 to 2008. 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 40.7 in 1968 to 6.4 in 2008. Besides that, neonatal mortality rate per 1,000 live births for the same period dropped to 4.0 as compared to 21.6 in 1968.

FIGURE 2
 INFANT MORTALITY RATE, NEONATAL MORTALITY RATE AND MATERNAL MORTALITY RATE MALAYSIA
 1968 - 2008



Source: Department of Statistics, Malaysia

Another indicator which showed an improvement was the under five mortality rate which recorded 8.1 per 1,000 live births in 2008 as compared to 8.7 in 2003 (Table 3). Intensive immunization efforts and other related programmes carried out by both the public and private sectors contributed to the improvement.

TABLE 3
 MORTALITY RATES IN MALAYSIA 2003 - 2008

Indicator	2003	2004	2005	2006	2007	2008 ^P
Crude Death Rate (per 1,000 population)	4.5	4.5	4.5	4.5	4.5	4.7
Maternal Mortality Rate (per 1,000 live births)	0.3	0.3	0.3	0.3	0.3	0.3
Infant Mortality Rate (per 1,000 live births)	6.6	6.5	6.6	6.2	6.2	6.4
Neonatal Mortality Rate (per 1,000 live births)	3.2	3.7	3.9	3.7	3.8	4.0
Under Five Mortality Rate (per 1,000 live births)	8.7	8.5	8.5	7.9	7.9	8.1
Toddler Mortality Rate (per 1,000 population aged 1 – 4 years)	0.5	0.4	0.5	0.4	0.4	0.4
Stillbirth Rate (per 1,000 births)	4.2	4.2	4.4	4.6	4.4	4.4
Perinatal Mortality Rate (per 1,000 births)	6.8	6.8	7.2	7.3	7.2	7.4

Note : P – Preliminary figures

Source: Department of Statistics, Malaysia

Similarly, the toddler mortality rate also showed a decline from 0.5 per 1,000 population aged 1 to 4 years in 2003 to 0.4 in 2008. The declining trend can be attributed to improved nutritional status of 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 live births in 2003 to 4.6 in 2006, however it dropped to 4.4 in 2008.

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, stabilisation of patients or the need of isolation in order to prevent the spreading of the diseases to others. For the period of 2000-2008, the number of admissions in Ministry of Health (MoH) hospitals had increased by 33.3% to 2,072,633 in 2008 from 1,555,133 in 2000. The 10 principal causes of hospitalisation in the MoH hospitals for 2008 are shown in Table 4.

In 2008, normal delivery (13.99%) was the top leading causes of admissions in MoH hospitals followed by Complication of Pregnancy, Childbirth and the Puerperium (12.77%).

TABLE 4
10 PRINCIPAL CAUSES OF HOSPITALISATION IN MINISTRY OF HEALTH HOSPITAL, 2008

No.	Principal Causes	No. of Discharges	Percentage
1.	Normal Delivery	290,059	13.99
2.	Complication of Pregnancy, Childbirth and the Puerperium	264,606	12.77
3.	Accidents	174,074	8.40
4.	Diseases of The Respiratory System	166,759	8.05
5.	Diseases of The Circulatory System	144,900	6.99
6.	Certain Conditions Originating in the Perinatal Period	140,580	6.78
7.	Diseases of the Digestive System	111,345	5.37
8.	Ill-Defined Conditions	75,136	3.63
9.	Diseases of the Urinary System	72,351	3.49
10.	Malignant Neoplasms	65,416	3.16
	Total Admissions	2,072,633	

Source: Health Informatics Centre, MoH

Similarly, the number of deaths (for all causes) in MoH hospitals for the period of 2000-2008 increased from 30,319 in 2000 to 45,936 in 2008. As for the ten principal causes of death in government hospitals, Heart Diseases and Diseases of Pulmonary Circulation were the top causes of death recorded in 2008 (16.54%), followed by Septicaemia (13.18%) and Malignant Neoplasms (11.21%). The ten principal causes of deaths in the MoH hospitals for 2008 are shown in Table 5.

TABLE 5
10 PRINCIPAL CAUSES OF DEATH IN MINISTRY OF HEALTH HOSPITAL, 2008

No.	Principal Causes	No. of Discharge	Percentage
1.	Heart Diseases and Diseases of Pulmonary Circulation	7,597	16.54
2.	Septicaemia	6,053	13.18
3.	Malignant Neoplasms	5,150	11.21
4.	Pneumonia	4,262	9.28
5.	Cerebrovascular Diseases	3,974	8.65
6.	Diseases of the Digestive System	2,379	5.18
7.	Accidents	2,299	5.00
8.	Certain Conditions Originating in the Perinatal Period	1,825	3.97
9.	Nepritis, Neprotic Syndrome and Nephrosis	1,729	3.76
10.	Ill-Defined Conditions	1,210	2.63
	Total Deaths (All Causes)	45,936	

Source: Health Informatics Centre, MoH

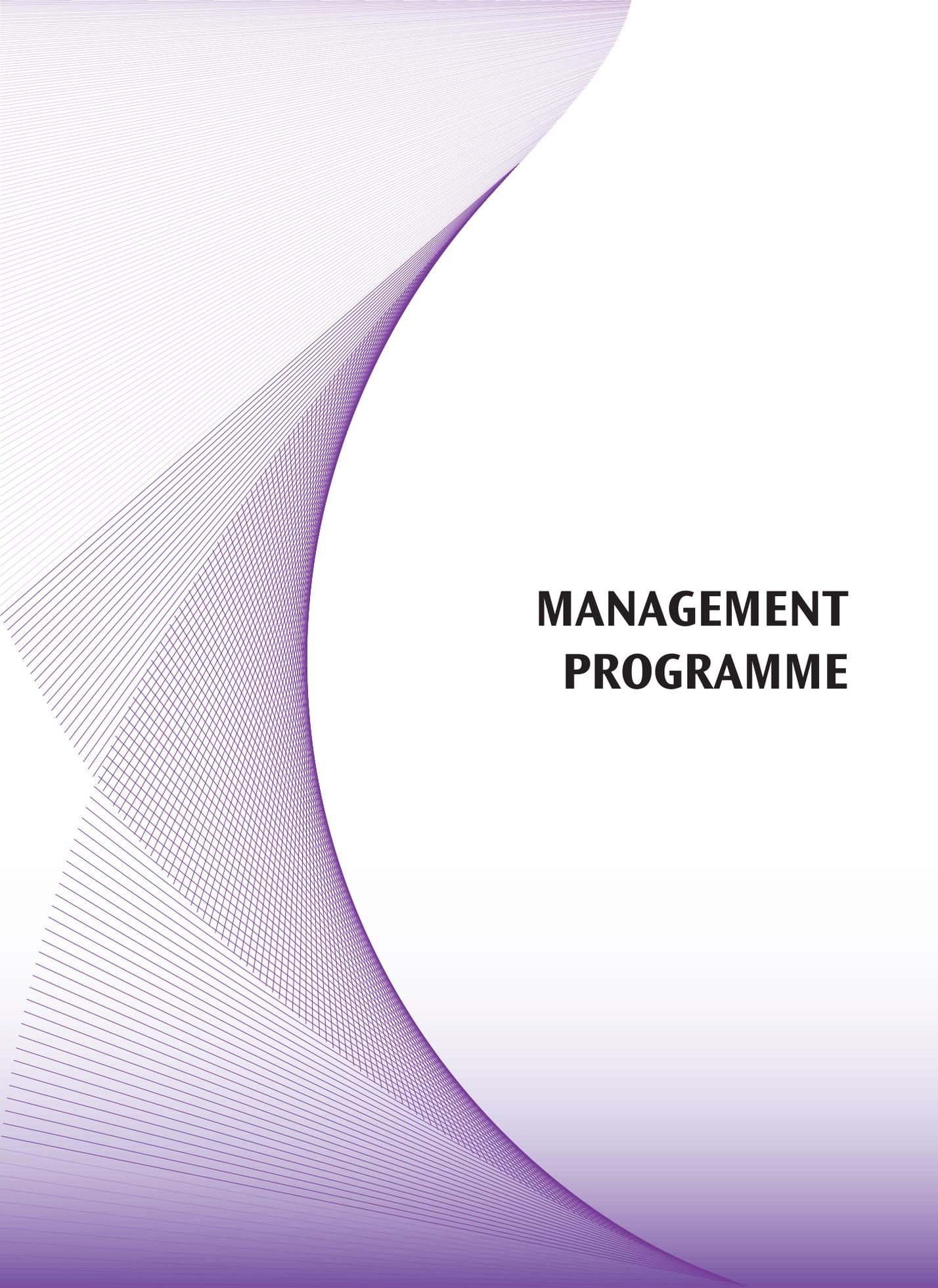
Health Facilities and Facility Utilisation

As for Health Facilities, there were 802 Health Clinics, 1,927 Community Clinics and 95 Maternal and Child Clinics in 2008. There were 130 government MoH hospitals and 6 Institutions with 32,149 bed complementary and 5,000 beds respectively. Overall Bed Occupancy Rate (BOR) for MoH hospitals and institutions in 2008 was 65.46% (Table 6).

TABLE 6
HEALTH FACILITIES BY TYPE TOTAL BED COMPLEMENTS AND BED OCCUPANCY RATE, 2003 - 2008

Facility	2003	2004	2005	2006	2007	2008
Number of MoH Hospital	117	119	122	128	130	130
Number Special Medical Institution	6	6	6	6	6	6
Total Beds Complement ¹	34,089	34,414	34,761	35,739	37,149	38,004
Bed Occupancy Rate (%) ¹	63.66	64.90	66.93	65.07	64.23	65.46
Number of Health Clinics	864	859	809	807	806	802
Number of Community Clinics	1,847	1,924	1,919	1,919	1,927	1,927
Number of Maternal and Child Clinics	95	93	89	88	97	95

Note: ¹ refers to beds complement and BOR in MoH hospitals and Special Medical Institutions
Source: Health Informatics Centre, MoH

An abstract graphic design featuring a series of thin, parallel purple lines that curve and intersect to form a complex, grid-like pattern. The pattern is denser in the center and fades out towards the edges, creating a sense of depth and movement. The overall color palette is a range of purple tones, from light lavender to deep, dark purple.

MANAGEMENT PROGRAMME

MANAGEMENT PROGRAMME

INTRODUCTION

Management Programme consists of two (2) Sections; Management and Finance. The Management section comprises of five (5) Divisions, namely Human Resource, Training Management, Competency Development, Management Services and Information Management. The Finance Section has three (3) 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 Planning and Development

Human Resource Division (HRD) in the Ministry of Health is responsible for human resources planning and development in the health sector. The function of HRD is to ensure that MOH remains a sustainable organization which optimizes manpower utilisation. All the activities conducted by HRD are aimed at strengthening the workforce and enhancing their commitment level in order to achieve an efficient and excellent services delivery system.

Establishment

Organizational structuring is carried out to ensure the optimum utilization of human resources and the efficiency of the services delivery system. In line with this objective, 23 surveys have been successfully implemented in 2008 which include restructuring of Management Services Division, reinforcement and strengthening of 9 divisions namely Allied Health Science Division, Institute of Public Health, Medical Development Division, Medical Practices Division, Finance Division, Procurement and Privatisation Division, Food Safety and Quality Division as Competent Authority, and also strengthening of functional structure of the Deputy Health Director (Medical) and Deputy Health Director (Public Health) Offices at State Health Departments and hospitals. 18,456 new and additional posts were created. The total number of positions in MOH by 31 December 2008 were 196,152.

Scheme and Allowance Review

Several initiatives had been taken by HRD to attract and retain human resources in the public health sector. Inline with these objectives, several proposals were submitted to and approved by the Public Service Department (PSD) which includes Coordination of Flying Allowance, Increment of Specialist Allowance, Increment and extension of Clinical Incentive after Office Hours, Housing Allowance to Medical Workforce residing in Hostels, and Increment of Drivers' Special Allowance.

Human Resource Management Information System (HRMIS)

By 31 December 2008, the percentage of Establishment Data entered into HRMIS was 98.77% while Post Filled data accounted for 95.69%. Data entry achievements in 2008 are as shown in Table 1.

TABLE 1
DATA ENTRY ACHIEVEMENT IN 2008

Data / Year	December 2008
Establishment Data	98.77%
Post Filled Data	95.69%
Service Profile	75.77%
Personal Record	74.31%

FIGURE 1
STATUS OF MOH ESTABLISHMENT DATA UPDATES WITHIN THE HRMIS APPLICATION
(AS OF 31ST DEC 2008)



In 2008, Separation Sub Module and Counseling Psychology Sub Module were implemented at MOH Headquarters. Leave Management Sub Module was also extended to all State Health Departments, Health Management Institutes and the National Blood Centre.

Promotion

Table 2 shows the number of promotions and acting in positions exercises that were carried out in 2008. As for promotion exercises, 105 exercises have been carried out involving 2,237 officers for the Support Group. With respect to acting in positions, 192 applications for officers to assume senior level positions were approved in 2008 involving 4,609 officers. As for the Support Group (I and II), 84 promotion exercises were carried out involving 4,205 officers 28 exercises involving 4,569 officers were approved for acting in positions. For superintendent positions, 1,443 applications were approved in 2008.

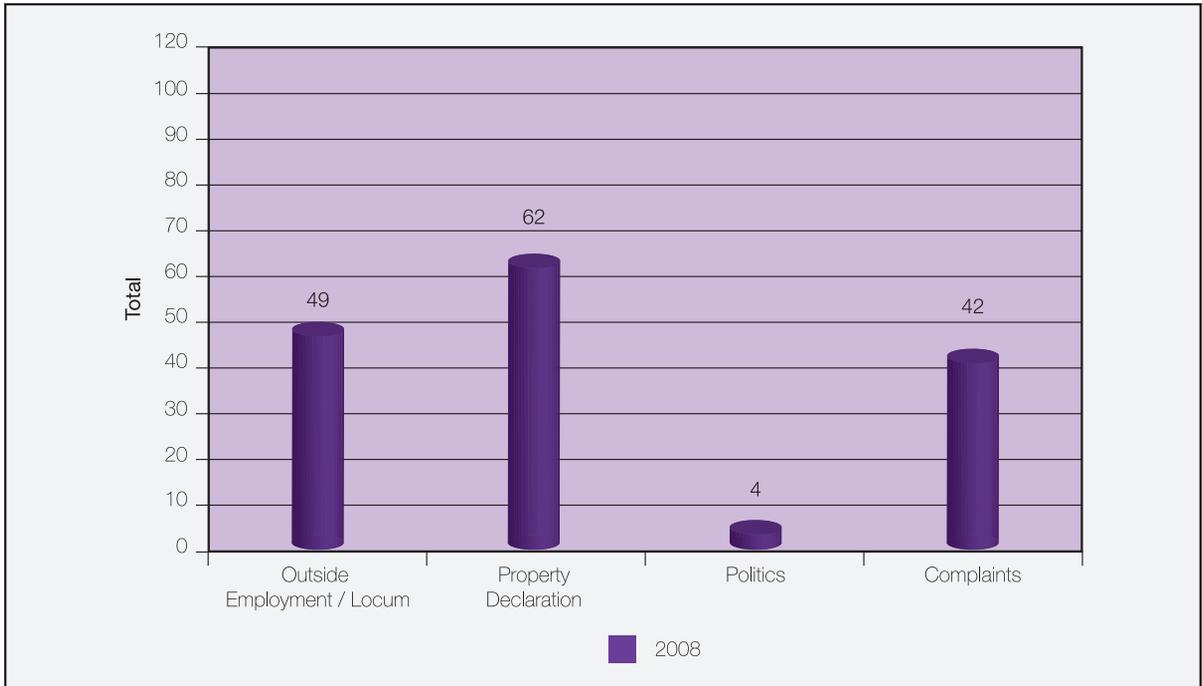
TABLE 2
TOTAL OF PROMOTION AND ACTING EXERCISE BY CATEGORY IN 2008

Activity	Management and Professional Group	Support Group
	No. of Officers	No. of Officers
Acting	1793	4609
Promotion	1575	2237
Total	3368	6846

Disciplinary Action and Integrity

Efficient, effective and transparent governance will ensure excellent organizational performance. To achieve this, punitive, integrity and preventive actions have been taken to enhance the efficiency of MOH's services delivery system. As at December 2008, 25 cases were reported involving the Management and Professional group while 155 cases involved the Support Group. There were 157 integrity related matters which involved both the Management & Professional and Support groups which include unauthorized out-of-office employment, property declaration, involvement in political activities and public complaints as shown in Figure 2. A total of 19 briefings and workshops were held for human resource managers to ensure a better understanding of regulations pertaining to the code of conduct and discipline.

FIGURE 2
MONITORING OF INTEGRITY RELATED MATTERS



Service Matters

In 2008, the HRD had processed a total of 1,335 services related matters for higher management group, 14,555 for Management and Professional group, 34,980 for Paramedic and Auxiliary and 21,141 for Common User and Support group. These matters are regarding the confirmation of employment, confirmation in service, extension of probation period, pension status and other related service matters.

Contractual Employment

Contractual recruitment was implemented to accommodate the shortage of medical officers and paramedics in MOH. In 2008, a total of 205 Medical Officers were recruited on contractual basis with 34 new appointments which involved 10 citizens and 24 non-citizens.

Improvisations and Innovations

HRD constantly promote the environment that encourages innovative and creative way of working. HRD believes that it will uplift management quality, improves service delivery and enhance work process. A number of improvisations and innovations were successfully implemented as follows:-

- 1) Expediting the appointment process for Medical Officers (Permanent) within 15 days to 1 month.
- 2) Conducting briefings and talks on career development as Medical Officers and Dentists in MOH to Medical and Dentistry final year students in public and private institutions of higher learning.
- 3) Developing several database to enhance efficiency and expediting the implementation of service related matters as follows:
 - a) Posting and Transfer Information System
 - b) Service Related Matters Information System

TRAINING MANAGEMENT

INTRODUCTION

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.

ACTIVITIES AND ACHIEVEMENTS

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 3, Figure 4, Figure 5 and Figure 6 depict the current and projected national requirement and supply of Medical Doctors, Dentists, Pharmacists and the AHSP respectively.

FIGURE 3
CURRENT AND PROJECTED REQUIREMENT AND STOCK OF MEDICAL DOCTORS TO POPULATION ON THE RATIO OF 1:600



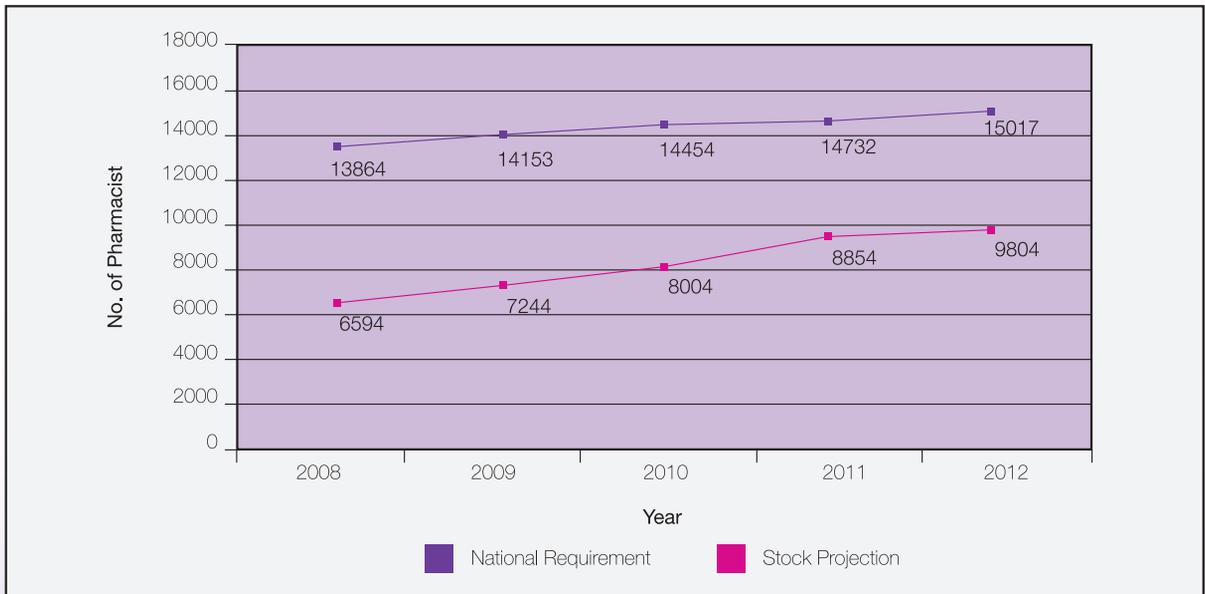
Source: Training Management Division, MoH

FIGURE 4
CURRENT AND PROJECTED REQUIREMENT AND STOCK OF
DENTIST TO POPULATION ON THE RATIO OF 1:4000



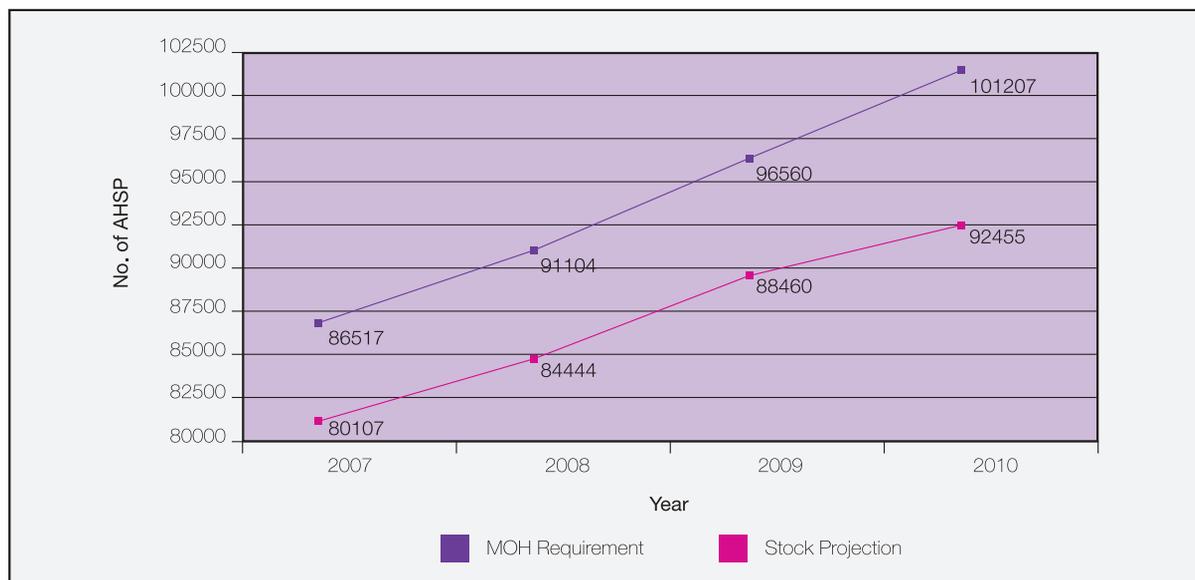
Source: Training Management Division, MoH

FIGURE 5
CURRENT AND PROJECTED REQUIREMENT AND STOCK OF
PHARMACIST TO POPULATION ON THE RATIO OF 1:2000



Source: Training Management Division, MoH

FIGURE 6
CURRENT AND PROJECTED REQUIREMENT AND STOCK OF
AHSP FOR MOH



Note: Based On Vacancies And Projected Needs For New Projects
Source: Training Management Division, MoH

Training Programmes

In ensuring the health care personnel of the Ministry of Health (MoH) acquire the necessary skills and knowledge, the 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 / Pharmacist, Sub-speciality Training for Medical Officers, Doctoral Programmes, Short-team In-services Courses, In-service Conversion Courses and Induction Courses.

There has been an increase in the intake of participants for various categories of training / courses offered with the exception of the Masters / Doctoral programmes offered and the Basic Training offered through the outsourcing programme in the year 2008 as compared to the year 2007, as shown in Table 3.

TABLE 3
INTAKE OF TRAINEES BY TYPES OF TRAINING

No.	Types of Training	2007	2008
1.	Basic Training in MoH training colleges (Basic Training through outsourcing programs)	5921 (953)	7464 (834)
2.	Post-Basic Training	2267	2545
3.	Specialist Training (Medical Officers)	441	557
4.	Sub-Speciality Training (Medical Officers)	80	93
5.	Master / Doctoral Programmes	104	89
6.	Short Term In-Service Courses (Overseas)	387	470
7.	In-Service Conversion Courses	210	226
8.	Induction Courses	10977	13706

Source: Training Management Division, MoH

a) Basic Training

In 2008, 7,464 trainees were admitted for Basic courses offered at MoH Allied Health Science Colleges (AHSC) and 834 were admitted through the outsourcing programmes initiated with selected private colleges. The number of trainees admitted for Basic Training at MOH AHSC in 2008 increased by 26% as compared to only 5921 trainees in the year 2007. This reflects the commitment of the government in ensuring an efficient health care delivery system being provided at its various government 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 MoH AHSC as well as for the outsourcing programmes for the years 2007 and 2008 is depicted in Table 4.

TABLE 4
INTAKE OF TRAINEES FOR BASIC TRAINING

No.	Discipline	2007	2008
1.	Nurse	2481	3107
2.	Community Nurse	1322	1571
3.	Medical Assistant	664	759
4.	Pharmacy Assistant	112	268
5.	Assistant Environmental Health Officer	224	267
6.	Medical Laboratory Technologist	273	472
7.	Radiographer	121	222
8.	Dental Nurse	118	98
9.	Dental Technician	46	72
10.	Physiotherapist	77	84
11.	Occupational Therapist	78	76
12.	Dental Surgery Assistant	141	198
13.	Public Health Assistant	264	270
	Total	5921	7464

Source: Training Management Division, MoH

Among the 13 disciplines, the intake for both the Dental Nurse and Occupational Therapist training programmes demonstrated a decline in enrolment in 2008 as they are generally unpopular. However, the Nurse training programme attracted a high number of applicants due to its popularity with school leavers and hence there was a surge in the number of candidates admitted in 2008 as compared to the previous year.

b) Post Basic Training

In the year 2008, a total of 2545 AHSP attended Post-Basic training programmes in 33 different disciplines at the various MoH AHSC as compared to only 2267 candidates who offered themselves to 29 different disciplines in the year 2007, which is shown in Table 5.

TABLE 5
INTAKE OF TRAINEES FOR POST BASIC TRAINING

No.	Discipline	2007	2008
1.	Midwifery	864	833
2.	Emergency Care	134	178
3.	Public Health Nursing	111	91
4.	Environmental Health	18	7
5.	Laboratory Management	33	28
6.	Health Personnel Management	85	69
7.	Primary Healthcare	42	37
8.	Transfusion Medicine	-	30
9.	Gerontology	14	21
10.	Coronary Care	59	82
11.	Neonatal Nursing	54	75
12.	Ophthalmic Nursing	33	35
13.	Oncology Nursing	19	42
14.	Orthopaedic Nursing	78	83
15.	Paediatric Care	59	90
16.	Preoperative Care	122	147
17.	Psychiatric Nursing	56	42
18.	Intensive Care	117	149
19.	Renal Nursing	104	147
20.	Legal and Prosecution	18	7
21.	Cytology	-	15
22.	Computerize Tomography	19	23
23.	Anaesthesiology	5	7

TABLE 5 (CONTINUED)
INTAKE OF TRAINEES FOR POST BASIC TRAINING

No.	Discipline	2007	2008
24.	Diabetic Management	65	91
25.	Sports Medicine	27	11
26.	Hemostasis	11	12
27.	Occupational Health and Safety	-	-
28.	Paediatric Dental Care	-	-
29.	Forensic	22	8
30.	Otorinolaringology Treatment	12	14
31.	Microbiology	-	-
32.	Food Safety and Cleanliness	-	-
33.	Orthodontic Treatment	-	22
34.	Infection Control	20	49
35.	Perianesthesia Care	38	55
36.	Periodontic Care	-	-
37.	Oral Surgery	16	-
38.	Neuroscience Care	12	30
39.	Rehabilitative Nursing	-	15
	Total	2267	2545

Source: Training Management Division, MoH

The number of AHSP attending Post-Basic training programmes in 2008 increased by 12.26% as compared to 2007 due to lowering of the Annual Appraisal Assessment Report points from 85% to 80%. Further, 33 Post Basic disciplines were offered in 2008 as compared to 29 in the year 2007 thus offering the participants a much wider choice. The most popular Post Basic Training programme is Midwifery which registered an enrolment of 833 participants followed by Emergency Care at 178 and Intensive Care at 149.

c) Masters Degree Programme for Medical Officers and Sub-Specialty Training

A total of 557 Medical Officers were offered Federal Government Scholarship (FGS) to read for their Masters in Medicine degree in various fields of specialization for the year 2008, which is highlighted in Table 6.

TABLE 6
INTAKE OF MEDICAL OFFICERS FOR MASTERS PROGRAMMES

No.	Discipline	2007	2008
1.	Obstetric & Gynaecology	25	40
2.	Anesthesiology	49	70
3.	Paediatric	25	34
4.	Internal Medicine	38	51
5.	Psychiatry	20	25
6.	Radiology	30	36
7.	General Surgery	42	41
8.	Ophthalmology	24	31
9.	Orthopaedic	30	37
10.	Otorhinolaryngology	21	19
11.	Pathology	31	41
12.	Family Medicine	32	36
13.	Public Health	24	23
14.	Sports Medicine	3	2
15.	Rehabilitation Medicine	5	9
16.	Emergency Medicine	23	34
17.	Neurosurgery	5	6
18.	Plastic Surgery	2	3
19.	Clinical Oncology	4	4
20.	Pediatric Surgery	3	4
21.	Tranfusion Medicine	5	7
22.	Nuclear Medicine	-	4
	Total	441	557

Source: Training Management Division, MoH

In 2008, the number of Medical Officers offered scholarships increased by 26.3% as compared to 2007. This unprecedented rise is due to an increase in the number of scholarship (600) offered and an attractive stipend that covers a wide array of allowance which were among the pull factors in the increased number of candidates that applied and were admitted in 2008. Specialisation in Nuclear Medicine was introduced in 2008 and 4 candidates were admitted into the programme.

In the year 2008, 93 Medical Specialists received FGS to proceed sub-speciality training in various medical fields, as shown in Table 7.

TABLE 7
INTAKE OF MEDICAL SPECIALISTS FOR SUB-SPECIALTY TRAINING

No.	Discipline	2007	2008
1.	Medicine	19	24
2.	Surgery	11	12
3.	Paediatric	10	10
4.	Obstetric & Gynaecology	4	7
5.	Anesthesiology	8	9
6.	Orthopedic	5	10
7.	Otorhinolaryngology	4	1
8.	Ophthalmology	6	6
9.	Psychiatry	5	3
10.	Pathology	4	6
11.	Radiology	2	3
12.	Family Medicine	2	1
13.	Radiotherapy	-	-
14.	Forensic Medicine	-	1
15.	Palliative Medicine	-	-
16.	Health Management	-	-
	Total	80	93

Source: Training Management Division, MoH

As can be seen, there was an increase of 16.25% in admittance for the year 2008 as compared to 2007.

d) Masters and Doctorate Programmes

In 2008, 89 MoH officers from different health services were offered FGS to pursue post-graduate studies both at Masters (75 officers) and at Doctorate level (14 officers) in disciplines related to the health sector. The number of scholarships offered in 2008 registered a decline of 14.4% as compared to 2007 due to lower allocation. In addition, the bulk of the available scholarships were offered to Dental Officers (15 officers) who chose to read for their Masters degree overseas. Thus, the lion's share of the available allocation were taken by this group.

e) 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 2008, 470 MoH personnel attended short-term in-service courses overseas as compared to 387 in 2007, an increase of 21.5%. An allocation of RM 14.84 million was allocated in 2008 as compared to RM 14.27 million in 2007. Hence, the surge in allocation attracted a large number of applicants as compared to the previous corresponding year.

f) Conversion Courses (In-Service)

In 2008, the TMD initiated in-service conversion courses for the career advancement of 226 Community Nurses to Nurses. Similar programmes were held in 2007 whereby 210 Community Nurses benefited.

Management of Examinations

In the management of examination, the following steps were undertaken to further strengthen its effectiveness, such as:

- Standardization of the marking system of all courses;
- Engaging Discipline Consultants in the training of their own specialized staff;
- Increasing teaching hours of the discipline specialists;
- Guiding and monitoring the performance of the allied health tutors by the discipline specialists;
- Involvement of discipline specialists in the construction, editing, selection and approval of the examination questions.

For the year 2009, the TMD plans to introduce the following:-

Establishment of the Q Bank system:

A centralized and fully computerized question bank system was established which stores examination questions that have been edited and tested. Selected examination questions will be chosen from the system according to the Specific Assessment Schedule for submission to the Examination Panel for approval. This facilitates a high degree of confidentiality and safety in the preparation of examination questions; and

Establishment of the e-Examination system:

With the establishment of this system, semester examination result slips, course certificates and transcripts will be produced centrally through a fully computerized software system. The registration of student profiles would also be keyed into the system. Hence, upon being operational, the e-Examination system would ensure confidentiality, safety and authenticity of the slips, certificates and transcripts.

Development of Curricula

Throughout 2008, initiatives were taken to review and update the curricula for some of the Basic training programmes. Under this score, the following activities were undertaken:

- Reviewing of both the Pharmacy Assistant and Medical Laboratory Technologist curricula;
- Updating the Teacher's Guide and Check List for Year 1 of both semester 1 and semester 2 of the Medical Assistant programme;
- Updating the Teacher's Guide, Log Book and Procedure Book for Year 1 of both semester 1 and 2 of the Radiography programme;
- Developing of the Post Basic Endoscopy curriculum with affirmative approval from the Education Board of the Ministry of Health;
- Reviewing and updating the curricula of the following Post-Basic courses i.e. Orthopaedic Nursing, Paediatric Nursing, Renal Nursing, Neonate Care, Coronary Care, Primary Health Care and Public Health Nursing; and
- Training courses were conducted for tutors with a view to develop interactive modules that will be uploaded into the Integrated College Management System (ICMS).

Since the January 2008 intake, a new subject called Co-curriculum was introduced into the curricula of all Allied Health Science programmes both at Diploma and Certificate level. This subject has been accredited with 2 credits amounting to a total of 64 hours of co-curriculum activities. This subject was introduced with a view towards imbuing the trainees to lead a healthy lifestyle by inculcating elements of spirituality, cognitive and physical activities. Monitoring of the co-curriculum activities are undertaken by the student development unit of TD.

Management of the Training Colleges

Since 2008, the monitoring and care of all the 27 MoH AHSC located in Peninsular Malaysia were subsumed under the ambit of the TMD. This move was undertaken with the view that the administration and planning of the various AHSC would be better monitored and streamlined under this arrangement. Towards this end, a pilot project called Integrated Campus Management System (ICMS) was initiated last February 2008 with the TMD as its focal point. ICMS is a comprehensive campus and learning management system that integrates and manages all key functional work processes such as student enrolment, examination matters, hostel etc. Presently, on a pilot basis, both the Community Nursing College in Port Dickson and Medical Assistant College in Alor Setar have been initiated into this project with the TMD as the centre of coordination. Hence, the success of this pilot project will in due course assist the TMD in the systematic collection of data from its various AHSC for qualitative analysis.

Where the outsourcing programme is concerned, the year 2008 saw a continuation in the implementation of the said programme whereby trainees were sent to selected private colleges to undertake trainings in the various Allied Health Science programmes. Further, these private colleges are themselves being monitored by TMD so as to ensure the agreed standards are being maintained. Likewise, the teaching and training activities of AHSC under the control of MoH are also continuously monitored.

Tutor Development

In line with the restructuring of AHSC under the control of the TMD, a Tutor Development Unit was established in 2008 at the TMD with the sole intent to manage human capital development activities of tutors. In 2008, RM5.8 million was allocated in conducting the following programmes:

(i) Internal Attachment Programme:

99 selected tutors were given the opportunity to undergo Attachment Programme locally, with the objective to improve their knowledge and skills in the various available disciplines. The attachments were undertaken at the various health care facilities such as hospitals, health clinics and at health institutions.

(ii) Overseas Attachment Programme:

This programme is meant to expose tutors to the various health facilities available overseas. It is hoped that such invaluable experience could be filtered down to the AHSC as a benchmark with the noble aim to further enhance teaching methodology and new learning experiences. 70 tutors benefited from this programme.

(iii) Degree Programme for Tutors:

This programme was introduced to provide tutors below the age of 45 the opportunity to pursue higher studies at first degree level at local universities. 99 tutors are presently in the programme.

(iv) Short Courses:

13 short courses in various disciplines were organized for 478 tutors.

(v) Intensive Courses for new tutors:

2 intensive courses were conducted involving a total of 61 new tutors.

Further, a Tutor's Conference was organized at the Nursing College in Kuantan that was attended by 260 tutors nationwide. This aim of this conference was to provide inter alia the opportunity to foster interaction as well as a platform in exchanging ideas and experiences both in teaching and learning. A workshop on *Sasaran Kerja Tahunan* (SKT) for directors of AHSC was also held.

Accreditation of MS ISO 9001: 2000

In the year 2008, TMD and 5 MoH AHSC successfully achieved the MS ISO 9001: 2000 accreditation. This is an accreditation that sets the standards for quality management systems in an organization. The attainment of this accreditation reflects a new era and milestone towards achieving an efficient and laudable public service delivery through improved customer satisfaction, staff motivation and continuous improvements.

Programme Assessment

The TMD continuously conducts Quality Assurance Programme (QAP) on all its teaching and learning programmes. In the year 2008, 2 QAP reports i.e. for the terms January to June and from July to December were carried out for Basic training programmes at the various MoH AHSC. This assessment is conducted so as to ensure the teaching programmes are of quality and conducted in compliance within the required quality assurances.

FINANCIAL MANAGEMENT

ACTIVITIES AND ACHIEVEMENTS

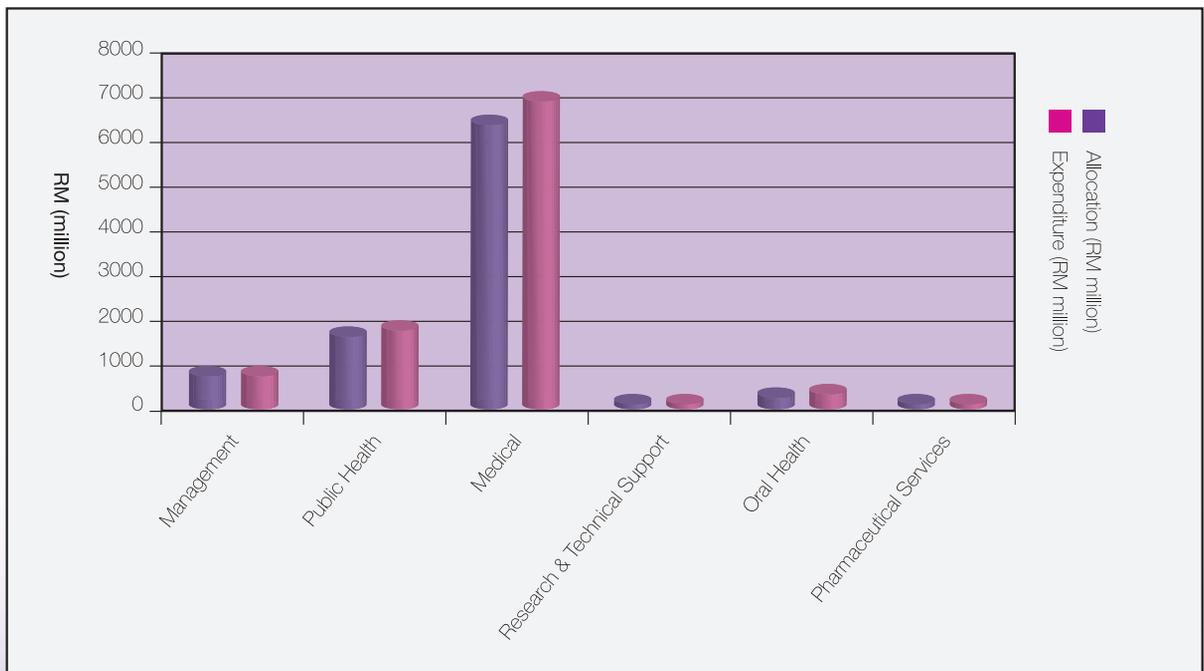
Budget Management

In 2008, a total of RM13.09 billion was allocated to MoH which consists of RM10.87 billion for the Operational Budget and RM2.22 billion for the Development Budget.

Performance of Operating Expenditure For 2008

The Operating Budget allocation for 2008 was RM10.87 billion which represents an increase of RM1.3 billion as compared to RM 9.57 billion allocated for 2007. However, the total expenditure for the year 2008 was RM11.5 billion, which was 5.80% higher than the sum allocated. The excess in expenditure was due to payments incurred for emoluments which was not budgeted for in 2008. These payments included the one month bonus for civil servants, which totaled RM305.27 million, incentives for post-basic medical assistants, which amounted to RM20.44 million and additional recruitment of 10,684 medical personnel of various categories to fill vacancies. Figure 7 shows the allocation and expenditure of the Operating Budget in 2008 according to Programme.

FIGURE 7
ALLOCATION AND EXPENDITURE OF OPERATING BUDGET IN 2008

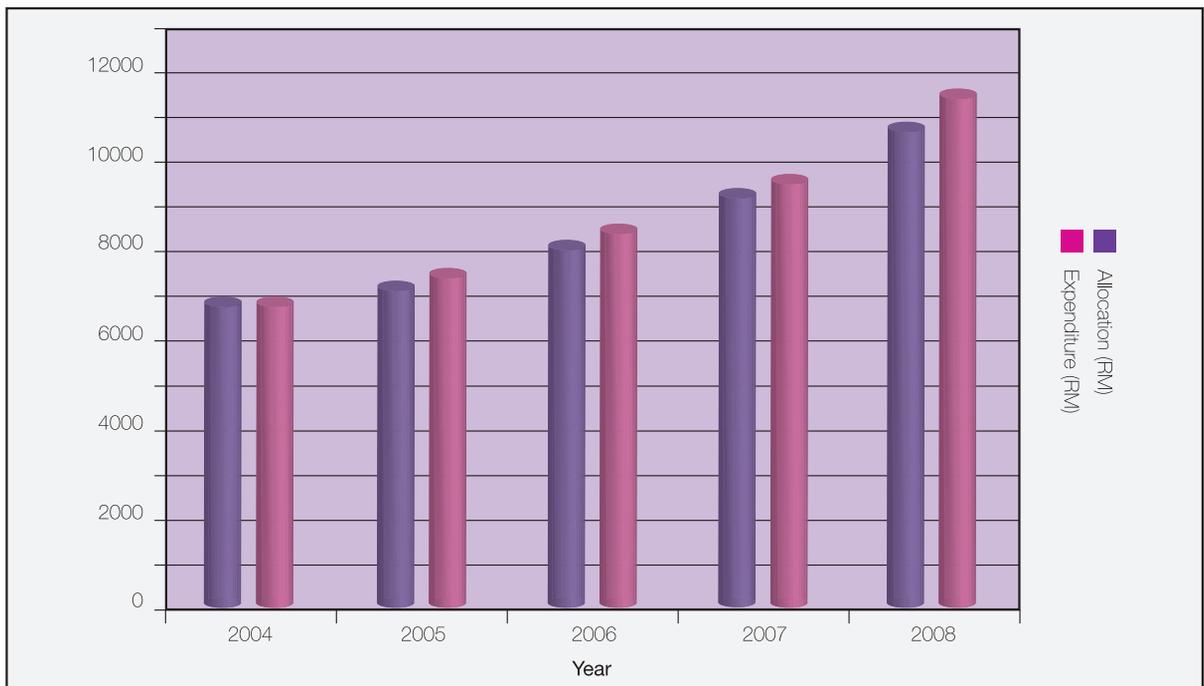


Source: Finance Division, MoH

Overall Performance of Operating Budget From 2004-2008

For the past five years (2004-2008), the Operating Budget allocation for MoH has increased from RM7.20 billion in 2004 to RM10.87 billion in 2008. Meanwhile, the expenditure for operating budget recorded an increase from RM7.01 billion in 2004 to RM11.5 billion for 2008. Overall, the major factor which contributed to over spending was due to payments of emolument which was not allocated sufficiently in the budget. Figure 8 shows the overall performance of Operating Budget from 2004-2008.

FIGURE 8
OVERALL PERFORMANCE OF OPERATING BUDGET FROM 2004 - 2008



Source: Finance Division, MoH

Performance of Development Expenditure For 2008

The total expenditure of the Development Budget was RM1.47 billion or 66.0% of the total budgeted allocation of RM2.22 billion. The expenditure in 2008 was marginally lower than that in 2007 which accounted for 93.21% of the budgeted allocation. Expenditure performance of the Development Budget is expected to increase in 2009 and 2010 which mark the end of the Ninth Malaysia Plan. Table 8 shows the development expenditure according to project details.

TABLE 8
DEVELOPMENT ALLOCATION AND EXPENDITURE BY PROJECT DETAILS, 2008

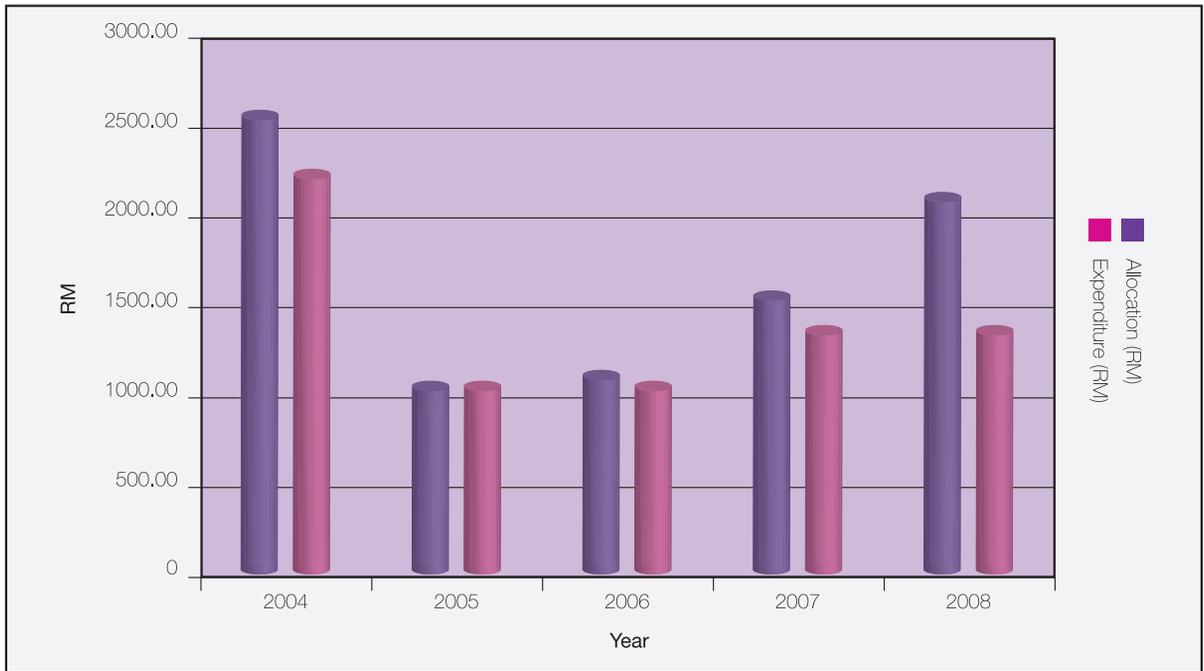
Project Detail	Title	Allocation (RM million)	Expenditure (RM million)	Percentage
00101	Construction of New Colleges	126.00	123.44	97.97
00102	Upgrading of Training Projects	32.50	10.70	32.89
00103	Hostels for Pre-Service Trainees	23.00	2.53	11.00
00104	Outsourcing	72.00	17.36	24.12
00105	In-Service Training	58.00	56.43	97.29
00100	Training	311.50	210.46	67.56
00201	Rural Health Services	286.54	131.70	45.96
00202	BAKAS	12.83	12.69	98.84
00203	Urban Health Services	220.00	104.72	47.60
00204	Mobile Clinics	8.40	0.00	0.00
00200	Public Health	527.77	249.11	45.48
00300	Hospital Facilities	371.35	234.00	63.01
00400	New Hospitals	274.00	250.37	91.38
00500	Research and Development	44.97	36.86	81.96
00600	Restructure, Upgrade and Repair	11.18	11.11	99.40
00700	Land Procurement and Maintenance	78.02	76.30	97.80
00800	ICT Facilities	145.63	124.41	85.42
00900	Staff Facilities	207.03	86.54	41.80
01000	Health Promotion	0.00	0.00	0.00
01100	Equipments and Vehicles	250.82	187.90	74.91
Total		2,222.27	1,467.06	66.02

Source: Finance Division, MoH

Overall Performance of Development Budget From 2004-2008

Figure 9 shows the overall performance of the Development Budget allocation and expenditure from 2004-2008. 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 9
OVERALL PERFORMANCE OF DEVELOPMENT BUDGET, 2004 - 2008



Source: Finance Division, MoH

Revenue Management

Revenue Collections

The total revenue collection for MoH in 2008 was RM266,115,839.82 of which RM197,360,013.76 was collected from the charges of health services in hospitals and clinics while RM68,755,826.06 or 25.84% was collected from other revenues such as fines, rentals, sales, etc. The breakdown of the revenue classification are shown in Table 9.

TABLE 9
TOTAL REVENUE COLLECTION OF MOH, 2008

Code	Revenue Classification	Amount (RM)
60000	Tax Revenue	-
71000	Licenses, Registration Fees and Permits	7,897,019.26
72000	Services and Services of Goods	219,137,114.09
73000	Receipts from Sales of Goods	3,486,123.48
74000	Rentals	12,213,418.53
75000	Interest and Returns on Investment	249,323.70
76000	Fines and Penalties	6,140,698.80
80000	Non-Revenue Receipts	15,786,945.52
90000	Revenues from Federal Territory	1,205,196.44
	Total	266,115,839.82

Source: Finance Division, MoH

Outstanding Revenue

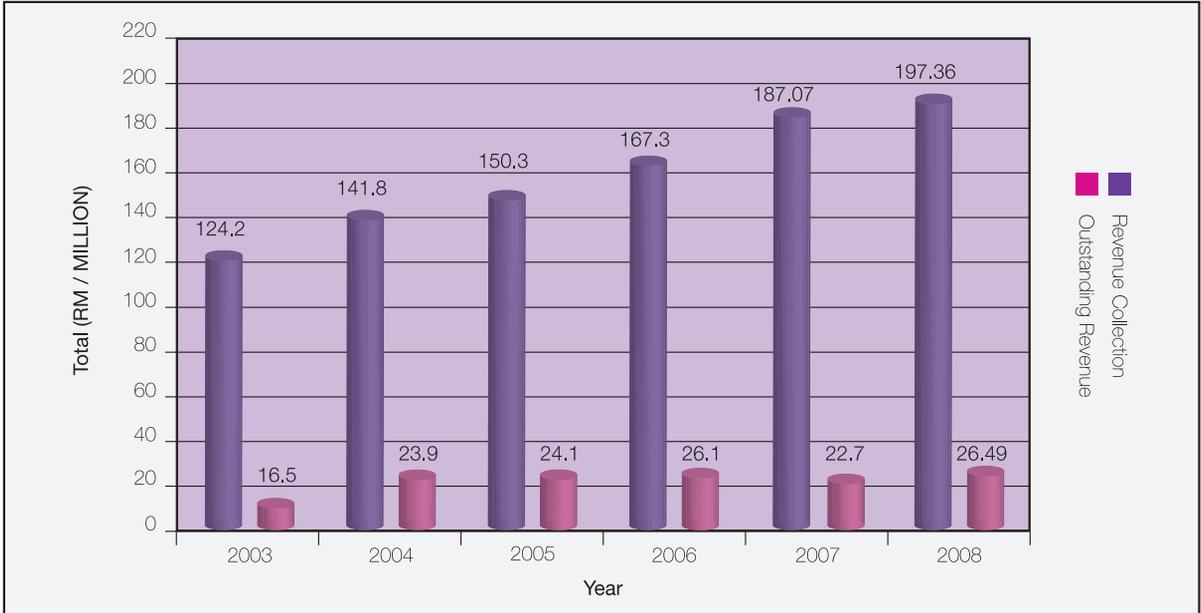
Total outstanding revenue collection in 2008 increased by 12.8% to RM28.81 million from RM25.54 million in 2007. Out of these, a total of RM26.49 million of the outstanding revenue was due from charges of health services under the Fees (Medical) Order 1982, while RM2.32 million was due from other revenues such as fines, rentals, sales, etc.

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

The total revenue collection for health services under the Fees (Medical) Order 1982 for the year 2008 was RM197,360,013.76 of which RM143,863,741.59 was contributed by Malaysians as both in-patient and out-patient, and Full Paying Patients for services provided by clinics/hospitals, while RM53,496,272.17 was contributed by non-Malaysian patients.

In 2008, a total of RM26.49 million of the outstanding revenue was due from charges of health services under the Fees (Medical) Order 1982. A total of RM13.66 million and RM12.83 million of the outstanding revenue was due from Malaysian and non-Malaysian patients respectively.

FIGURE 10
COLLECTION AND OUTSTANDING REVENUE UNDER THE FEES
(MEDICAL) ORDER 1982, FROM THE YEAR 2003 TO 2008.



Source: Finance Division, MoH

The total revenue collected under the Fees (Medical) Order 1982 from 2003 to 2008 showed an average increment of RM73.16 million or 58.9%. The revenue collected in 2008 increased by RM197.36 million as compared to RM187.07 million collected in 2007 (Figure 10). Meanwhile, outstanding revenue collection for health services under the Fees (Medical) Order 1982 for the year 2008 increased by 16.7% or RM3.79 million as compared in 2007.

Financial Aid And Subsidy To Non-Governmental Organisation (Ngo)

Financial Aid to Non-Governmental Organisation (NGO)

There are 3 types of financial assistance offered by the Ministry of Health Malaysia (MoH) to Non-Governmental Organisations (NGO) which are:

1. *Health Related Programmes Fund*

In 2008, a sum of RM10,980,645.00 was allocated by MoH to NGOs in the form of financial aid to support health-related programmes and activities such as counseling sessions, awareness campaigns, treatment and other related activities to patients. This allocation was given to Malaysian Hospital Council, The Heart Foundation of Malaysia, National Diabetes Institute (NADI), Malaysian Association for the Prevention of Tuberculosis (MAPTB) and others. The total allocation in 2008 increased by 30% as compared to RM3,254,620.00 allocated in 2007. The Ministry of Health also provided funds amounting to RM4.0 million to the Malaysian AIDS Council (MAC) in 2008 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 2008, a sum of RM3,236,359.00 was allocated to NGOs in the form of capital grant. This amount represented an increment of 65% as compared to RM2,090,208.00 allocated in 2007.

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 hemodialysis centers with a subsidy of RM50.00 for each treatment. In 2008, MoH had allocated a sum of RM21,040,550.00 to NGOs as subsidy payments for hemodialysis treatment.

INFORMATION MANAGEMENT

Due to the awareness towards achieving high standard of ICT infrastructure, the Ministry has always undertake efforts in enhancing the ability and facilities of ICT to support the effectiveness of the service delivery systems. In 2008, the development and enhancement of excellent ICT infrastructures and facilities has been implemented throughout the departments in the ministry. It was based on four (4) key areas which are ICT Soft Infrastructure, ICT Product, ICT Hard Infrastructure and ICT Services to Customer.

In 2008, the ministry has successfully achieved the activities' planned target. Illustrated below are the details of activities that have been implemented.

ICT Soft Infrastructure

BPM will proceed with the MoH ICT Strategic Plan (ISP) in monitoring the implementation of the activities throughout MoH. The Technology Update Program to improve ICT literacy and inculcate the ICT culture to MoH staffs will be performed continuously.

ICT Product

Enterprise Architecture document for MoH (MOH*EA) had completed on 15 February 2008. This document was part of ISP requirement, which has been stated in the Improve and Strengthen Main ICT Program.

MOH*EA is an architecture framework that explains the current scenario, a medium for the architecture references and can be used to align the changes in the group of enterprise. The MOH*EA framework has been divided as follows:

- i) Business Architecture
- ii) Information Architecture
- iii) Data architecture
- iv) Application architecture
- v) Technology Architecture

MOH*EA is based on EA model from the National Institute of Health (NIH), USA. To ensure the successful of MOH*EA, MoH members are required to provide extensive commitments. Architecture templates should always be in the latest updated version with regards to the current technology.

BPM as the lead, will be handling the promotion program to ensure the commitment of MOH members in ICT projects utilising the template.

ICT Hard Infrastructure

BPM has organized 12 inspectorate programs which include 11 ICT projects and 1 activity for ISP awareness program. The ICT projects are Annual Practice Certificate (APC) for Health Assistants, *Sistem Pengurusan Kompetensi* (SPK), Asset Inventory Management Systems (AIMS), e-Measles, e-Notification, e-Reporting, MyCPD (Continuous Professional Development), Clinical Information System (CIS) for Putrajaya Clinic, MyHealth Portal, Teleconsultation (TC) and Electronic Hazard Analysis Critical Control Point (e-HACCP) System.

There were 11 committees established to conduct inspections. Each committee consisted of 3 or 4 officers of Grade 32 to Grade 52 from various project sections . The objective of this method is to expose the officers to the broad information available from the project which they inspected and utilize the experience to perform and develop their own inspections. For 2009, the criteria and methods used to perform the inspections will be reviewed from time to time.

ICT Services to Customer

BPM has implemented a Customer Relationship Management (CRM) system which aims to provide quality customer service by resolving at least 85% of complaints received. To maintain quality services, BPM helpdesk will continue to administer customer surveys biennially. BPM is also in the process of strengthening the ICT technical support service.

Improvisation and Innovation

Malaysian Public Sector OSS Master Plan was launched on 16 July 2004 to encourage and enhance the use of Open Source Software (OSS) within the public sector. In conjunction with the plan, MoH has taken the initiative to develop various systems using OSS environment. Amongst the major systems are as follows: MOH*Portal, MOH*Cube, KSU Dashboard, MOH*Search, i-Portal and MOH*Blog.

Apart from system development, BPM through the Committee of JPICT Bil. 2/2008 has approved the collaboration with Microsoft Office to implement the Open Office software. Consequently, the "*Garis Panduan Pelaksanaan Pemasangan Perisian Open Office Pada Perolehan Komputer Peribadi Dan Komputer Riba Baru Di Kementerian Kesihatan Malaysia*" was established as guidelines for users.

In 2008, the implementation of OSS in MoH has won it a prestigious award when MOH*Cube application was chosen as the winner of "*Anugerah Kajian Kes Implementasi OSS*" in the 2008 Nationwide Application Category.

BPM participated in the Malaysian Government Open Source Software (MyGOSSCON 2008) Exhibition at PICC Putrajaya on 5 and 6 November 2008 to share experiences with regards to software implementation in the Health Ministry that was developed using OSS.

MANAGEMENT SERVICES

The main objective of Management Services Division (MSD) is to provide efficient and effective support and advisory services in management so that all the activities within the Ministry of Health (MoH) Headquarters (HQ) can be carried out 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 was restructured on September 2008 with two additional posts of Deputy Under-secretary which resulted in MSD to comprise two main divisions with several Units, i.e.:

- a) General Management Branch
 - i. Psychology Counselling Services
 - ii. Administration Unit
 - iii. Human Resource Unit
 - iv. Quality and Protocol Management Unit
 - v. Information Resources Unit

- b) Finance and Asset Management Branch
 - i. Finance Unit
 - ii. Asset Management Unit

Although MSD was restructured on September 2008, the 27 new posts created would only be filled in November 2008. Thus, MSD had performed its functions based on the former structure for the whole year.

Personnel Management

The MSD is responsible in managing all service related matters for the 3,639 employees within the HQ. These employees come from various fields as summarized in Table 10.

TABLE 10
VARIOUS CATEGORIES OF MOH HEAD QUARTERS EMPLOYEES 2008

No.	Category	No. of Employees
1.	Administration	3
2.	Top Management	95
3.	Professional & Management	866
4.	Support	1574
5.	Part-time	372
6.	Training Pool	639
7.	Temporary Addition	81
8.	Pool	9
	Total	3639

Source: The Management Services Division, MoH

The core activities of this branch 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 11.

TABLE 11
PERFORMANCES BASED ON ACTIVITIES IN PERSONNEL MANAGEMENT FOR 2008

No.	Activity	Performance
1.	To prepare and record change reports	11655 reports
2.	To record service-related matters	10126 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	667 personnel
4.	To process compulsory / optional / derivative retirement	Compulsory-31 / Optional-7 / Derivative-2
5.	To process and certify loan applications for computer, housing and vehicle	72 - Computer / 123 - housing / 18 - vehicle
6.	To process and certify applications for winter clothing / ceremonial attire allowance	94 - winter clothes / 112 - ceremonial attire
7.	To process promotion and 'acting' related matters	482 application
8.	Letter to certify and confirm entitlement for medical benefits	520 letters
9.	Covering Allowance Certification	275 application
10.	Disciplinary issues	6 cases
11.	Conducting service related courses	8 courses

Source: The Management Services Division, MoH

Within the scope of personnel management, the MSD has been appointed as the secretariat for various main committees which are related to employees' service matters. One of these committees is the Human Resource Development Panel, which convenes periodically to discuss various issues such as the annual salary review and movement, selection of the Excellent Service Awards recipients and to award diagonal salary increment for deserving employees. The activities of the said panel for the year 2008 have been summarized in Table 12.

TABLE 12
SUMMARY OF ACTIVITIES FOR HUMAN RESOURCES DEVELOPMENT PANEL 2008

No.	Activity	Performance
1.	Convened once to discuss and certify normal salary movement for employees who have submitted their Annual Performance Appraisal Forms.	3300 personnel
2.	Convened once to select recipients of the Excellent Service Awards.	264 selected from a pool of 3300
3.	Convened three times to consider and award the diagonal progress in salary.	188 personnel

Source: The 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 2008, 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. Since 2008, the achievement for employee personal data entry is summarized in Table 13.

TABLE 13
HRMIS PROFILE UPDATING STATUS IN MOH HQ AS AT 31 DECEMBER 2008

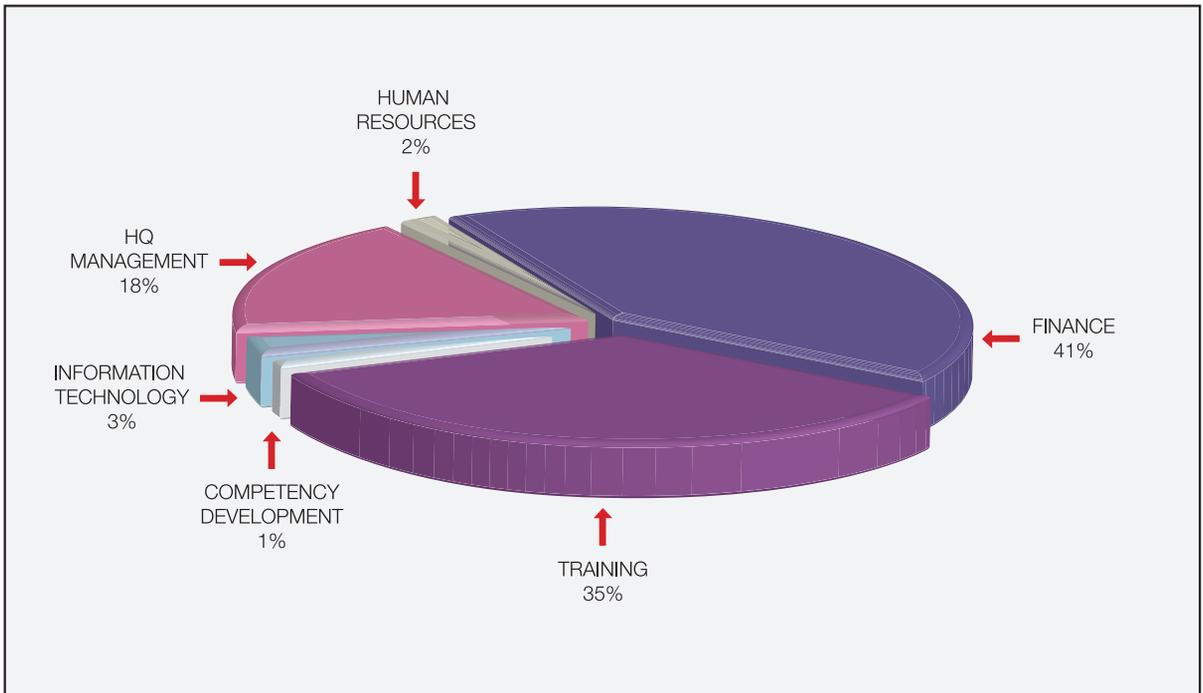
Type of Data	Status	
	Number	%
Personal	2178	96
Family	2047	90

Source: The Management Services Division, MoH

Finance Management

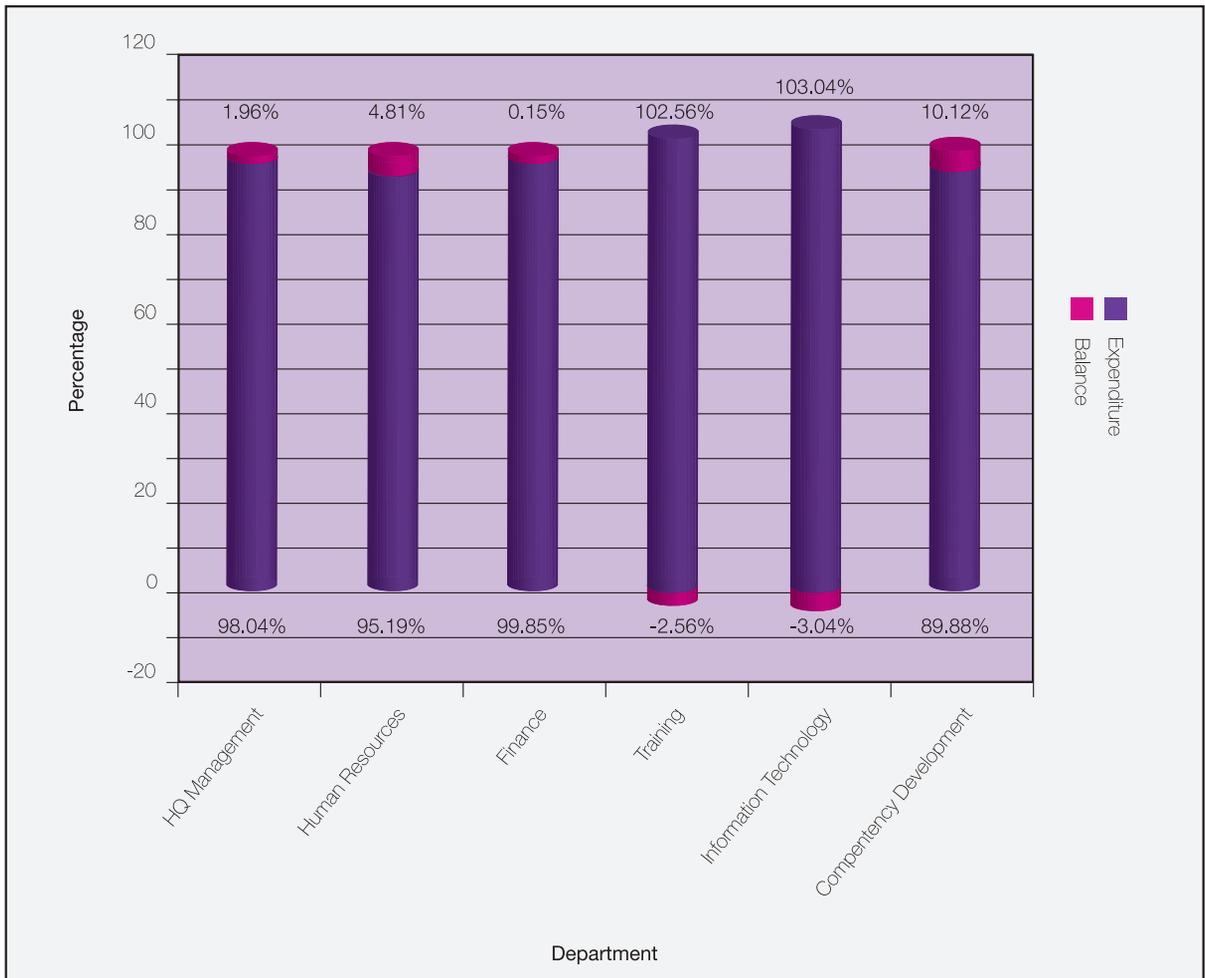
The MSD manages all finance-related matters for employees in the HQ. These includes payment of salary, allowances, reward and bonuses. It is also in charge of the HQs' Management Program whereby a total of RMv658.30 million has been allocated for its operations. The performance-based expenditure till December 2008 including Accounts Payable is 100.4% (Figure 11 and Figure 12).

FIGURE 11
TOTAL ALLOCATION BY ACTIVITY TILL DECEMBER 2008



Source: The Management Services Division, MoH

FIGURE 12
ALLOCATION ACHIEVEMENT BASED ON TOTAL EXPENDITURE BY ACTIVITY



Source: The 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 2008, a total of 513 warrants were received and 674 sub-warrants distributed.

The MSD is also the secretariat to the PTJ1 Accounts and Finance Management Committee Meeting (JKPA) and Government Property and Asset Management Committee Meeting (JKPAK). The committees were convened four times as per scheduled to monitor the accounts and financial practices and asset management of 12 PTJ 2 and 32 PTJ 3 under its jurisdiction.

The other responsibilities of this Division include accounting and revenue collection for the HQ. A total of RM11.69 million was collected in 2008. 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. In 2008, two such courses have been conducted which is Payroll Disbursement Courses Series I and II.

General Administration and Quality Management

The MSD is in charge of the quality and general administration matters in the HQ. This includes department vehicles management, office premises and the usage of the ministry's assembly hall. The Library also comes under this Division where its scope includes planning and development of reading collections, its system and services as well as providing access for two databases i.e. the NSTP E-Media and Lawnet. The activities and performance pertaining to this Division for 2008 are exhibited in Table 14.

TABLE 14
SUMMARY OF QUALITY AND GENERAL ADMINISTRATIVE ACTIVITIES

No.	Activities	Achievements
1.	Parliament (Both House of Representatives and The Senate)	<ul style="list-style-type: none"> - Compiled questions and answers for both houses. 202 verbal questions for all three settings of the House of Representatives and Senate and 58 written questions for all three settings of the House of Representatives and Senate. - Circulated the notification for 3 Bills - Coordinated the Policy Speech preparation for the Minister of Health in presenting the policy and to debate on the motion of thanks to H.R.H. The Yang Di-Pertuan Agong. - Coordinated answers for impromptu motions
2.	Quality & Productivity Committee Meeting	<ul style="list-style-type: none"> - Convened three times
3.	Compiling Time Card Reports	<ul style="list-style-type: none"> - 12 Reports compiled
4.	SPANCO car rentals	<ul style="list-style-type: none"> - 100 official cars for JUSA/Special Grade - 28 official department vehicles - 35 official vehicles replacement - 25 replacements of leased official vehicles, whose lease had expired.
5.	Security <ul style="list-style-type: none"> • Security Company Appointment • Security Tags/Pas Issuance 	<ul style="list-style-type: none"> - Appointment was made and the said company is being monitored. - 915 passes were issued
6.	Building Maintenance <ul style="list-style-type: none"> • Putrajaya Office Complex. • Cenderasari Office Building <ul style="list-style-type: none"> o Cleaning Services o Security Services o Renovation 	<ul style="list-style-type: none"> - 6 maintenance meetings were held - Maintenance Company appointed - Maintenance Company appointed - In the process of obtaining the plan specification by RWD appointed Contractor

TABLE 14 (CONTINUED)
SUMMARY OF QUALITY AND GENERAL ADMINISTRATIVE ACTIVITIES

No.	Activities	Achievements
7.	Premises and Space rental	<ul style="list-style-type: none"> - 101 office space rental applications - 26 residential rentals - 37 premises rentals
8.	Monthly Assembly	<ul style="list-style-type: none"> - 9 times
9.	Library Management	<ul style="list-style-type: none"> - Purchase of 1127 books, 44 journal and 1 databases - Customer services provided includes: - References and referrers – 1000 people - Borrowers – 801 people
10.	Filing Management	<ul style="list-style-type: none"> - File Registration: - Personal: 7626 - Open: 360 - Classified: 1131 - Application for expired file termination = 1084
11.	Correspondence Management	<ul style="list-style-type: none"> - 274740 letters have been received, sorted and distributed - Letters sent through postal service: - Domestic Mail: 150247 - Registered Mail: 10414 - Air Mail = 727 - Speed Mail = 47302 - Parcel = 2484 - Courier = 3687

Source: The Management Services Division, MoH

Protocol and Events Management

This Division manages all activities related to protocol, event management, applications seeking approvals for overseas bound trips/courses (of duration less than 14 days) and selection of medical representatives for the Hajj season.

- i. In 2008, nine main functions were organized by this Division. Some of these were Dinner with Former Minister of Health, Appreciation Ceremony for Former MOH Officers (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 Aidil Fitri, Opening Ceremony of Management Conference, Quality Day and MOH Annual Dinner.

- ii. MSD also coordinates Naming/Official Opening ceremonies of Hospitals, events organized by other divisions and formal visits by external parties to the ministry. In 2008, five opening ceremonies were held by several divisions from numerous State Department of Health, i.e.:
- iii. Perlis Health Department – The Official Opening ceremony of MRI services at Tuanku Fauziah Hospital, Kangar.
- iv. Perak Health Department – The Official Opening ceremony of Taiping Health Clinic, Perak and the function for renaming of the Ipoh Hospital to Raja Permaisuri Bainun Hospital.
- v. Kedah Health Department – The Official Opening ceremony of Sultanah Bahiyah Alor Star Hospital, Kedah.
- vi. Pahang Health Department – The Official Opening and Naming ceremony of Cameron Highlands Hospital.
- vii. A total of 628 applications from the ministry’s personnel for official overseas bound trips were received and processed while applications for personal trips amounted to 1,490.
- viii. MSD is also in charge of coordinating the launch of Islam Hadhari. Throughout the year of 2008, two reports based on a five-year strategic plan were drafted and sent to The Department of Islamic Development Malaysia. Two courses on Islamic Human Development were conducted using the approach of Islam Hadhari Module on 13 to 15 May 2008 and 2 to 4 December 2008. Each courses involved 50 staff members. In addition, five talks on inculcating Islamic values among MoH staff members were conducted.

Counseling Services

MSD plans and formulates policies, provides direction, develops and coordinates counseling activities for the Ministry of Health. It assists in managing cases together with the Personal Services Branch and also the Disciplinary Unit from the Human Resources Division. MSD also provides counseling services to all personnel and as at end of 2008, 215 individual and group counseling sessions were held.

Improvisation and Innovation

On 6 November 2008, MSD managed to obtain the MS:ISO 9001:2000 certification with 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. Counseling service
- vii. Bills payment
- viii. Library services

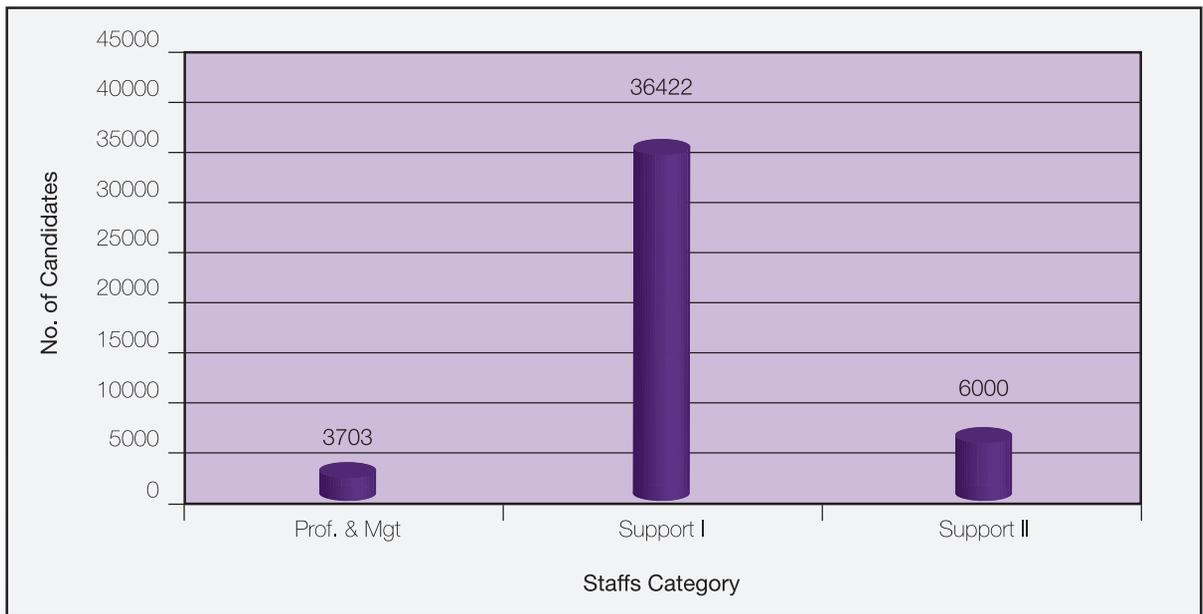
Competency Development

The main function of the Competency Development Division (CDD) is to be responsible for the management and implementation of the competency level assessments for the close services schemes in the Ministry of Health (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 for 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.

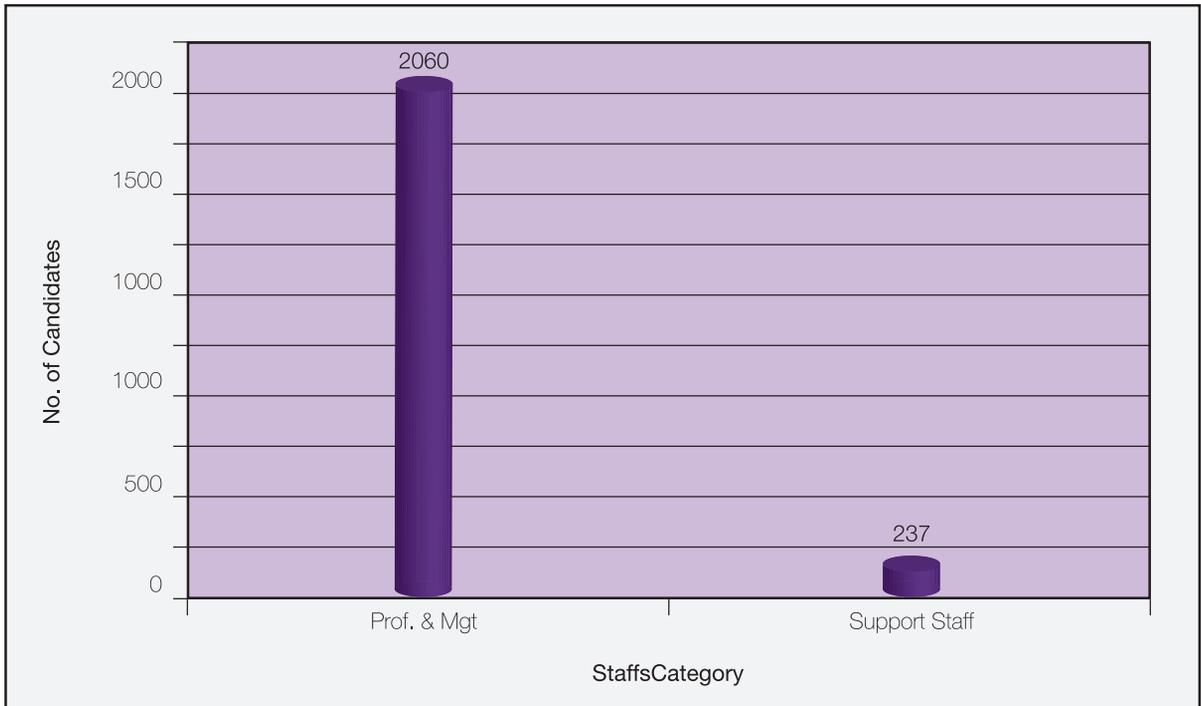
Seven (7) examinations were conducted for the Professional Group and Support Staff in year 2008 including two (2) special examinations for UD41 Medical Officers. The number of CLA courses that was conducted by this division was 33 for Professional Group and Support Staff. The number of candidates for examination and courses in year 2008 are shown in Figure 13 and Figure 14.

FIGURE 13
EXAMINATION CANDIDATES AND SCHEMES FOR 2008



Source: The Management Services Division, MoH

FIGURE 14
COURSES CANDIDATES AND SCHEMES FOR 2008



Source: The Management Services Division, MoH

Improvisation and Innovation

1. PTK-CPD

The Continuing Professional Development (CPD) programme shares the same concept and principles of the CLA under the *Sistem Saraan Malaysia* (SSM). They are both integral in the medical and health professional development. The CPD programme, which has been in existence for many decades, has recently undergone extensive revision. As a result of this revision, the CPD programme has a much wider scope that encompasses the current CLA, and incorporates an extensive evaluation and competency development for the staff at Ministry of Health (MOH) in both the Functional Competency and to some degree Generic Competency.

By integrating the CPD programme with the CLA, it is possible to provide a comprehensive mechanism to evaluate its personnel more objectively and appropriately.

2. Accreditation for Personnel with Masters in Medicine and Masters in Dentistry

Public Service Department (PSD) has approved the proposal to accreditate personnel who succeed in their master's programme in Medicine or Dentistry. The objective is to certify the four years course of Masters in Medicine/Dentistry as equivalent to the standard of competency of level III.

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 organization structure based on the need to produce effective work force that is well planned and efficient in order to achieve the optimum utilization 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 entice their personal and organizational skills, knowledge, and abilities which includes inter alia employee training. Therefore, the TD 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:

- 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;
- 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
- To embrace ICT where possible with a view to further improve both the teaching and learning methodologies.

Information Management

The Ministry is always enhancing the ability and facilities of ICT to support the effectiveness of the service delivery systems. For 2009, BPM will focus in four main subjects:

- i) Coverage of ICT Network (MOH*Net)
The coverage of MOH*Net will be expanded to all premises excluding the Health District Office. However the total number of coverage depends on the approved budget.
- ii) Quality of MOH's Portal
To produce a quality MOH Portal, BPM will ensure the content of the Portal is useful to customers. The Key Performance Indicator is based on the number of hits and Ranking of Portal by Malaysian Multimedia Development Corporation (MDec).
- iii) Coverage of Application System
BPM plans to rollout suitable applications to increase the application system's coverage to hospitals, clinics, institutions and divisions based on current ICT infrastructure.
- iv) ICT Facility for MOH's Staff
MoH will continue to procure high technology and capacity computers for the staff to accomplish the targeted ratio of 1:1 between management and professional officer.

Service Management

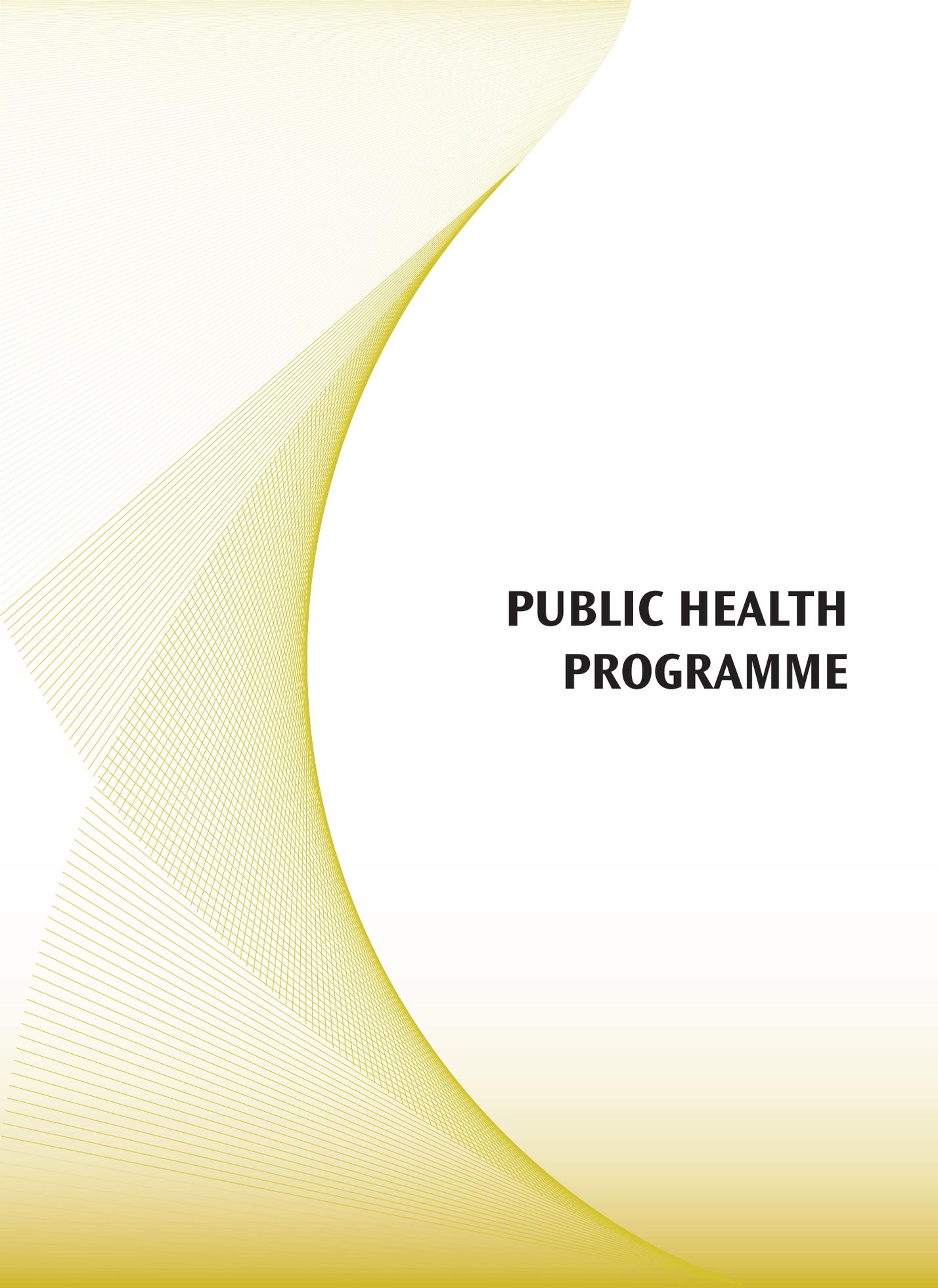
As a division that provides support services, it is our aspiration to shorten and simplify all work processes and to deliver excellent services for all the various divisions within the MOH's HQ. The MSD strives to carry out its responsibilities and tasks effectively and efficiently so that maximum customer 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

Competency Development Division (CDD) is looking forward to implement the new method of CLA in 2009, based on CLA reviews by the Public Service Department. Different approaches will be implemented to reduce examination-based assessment in CLA. The new methods are 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.

CDD 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. In addition, centralized training for non-finance managers will be conducted in year 2009, to educate and create awareness in financial management.



**PUBLIC HEALTH
PROGRAMME**

PUBLIC HEALTH PROGRAMME

INTRODUCTION

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

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

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

The main objective of Disease Control Division is to reduce the occurrence of diseases and death due to communicable and non-communicable diseases as well as environment-related diseases so that they will no longer poses a threat to public health. The other objectives are to encourage a healthy lifestyle, promote a healthy, safe and hygienic work environment and workplace, implementing suitable preventive measures, provide immediate detection and treatment, ensuring continuous monitoring and provision of suitable rehabilitation services; and to encourage the participation of members of public and promoting cooperation among agencies/sectors so as to build a healthy and caring society.

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

Family Health Development Division (FHD) 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 FHD Division namely Family Health Section and Primary Healthcare Section.

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

Meanwhile, the main objective of Health Education Division is to manage health education and promotion programme as well as to conduct training and behavioral 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.

Nutrition Division, formally known as nutrition section under FHD was proposed for restructuring as a Division for the purpose of providing more comprehensive services to the nation. On 13th August 2008, the Nutrition Section was approved to be restructured as a Nutrition Division by the Policy and Planning Committee, Ministry of Health (*Jawatankuasa Dasar dan Perancangan, Kementerian Kesihatan Malaysia*). Nutrition activities were broadly designated as Planning and Development, Promotion, Rehabilitation and Surveillance. These activities continued to be carried out in all the health facilities. 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.

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

ACTIVITIES AND ACHIEVEMENT

COMMUNICABLE DISEASE PROGRAMMES

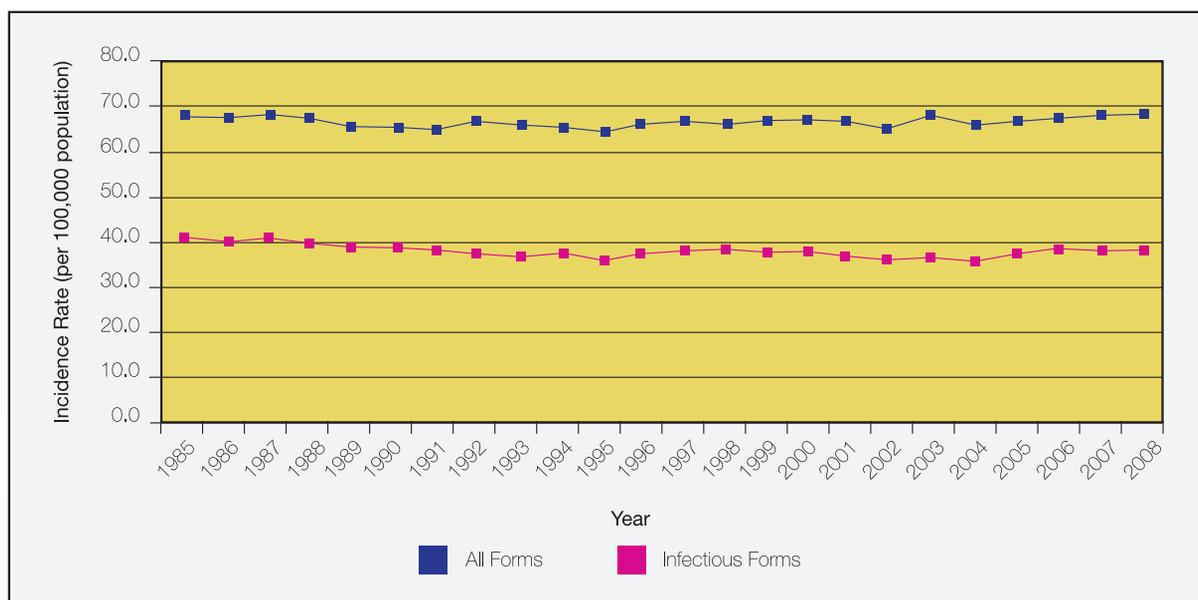
Tuberculosis and Leprosy Prevention and Control Programmes

In 2008, there were 17,506 reported Tuberculosis (TB) cases with the incidence rate of 63.1 per 100,000 populations for all forms of TB, an increase of 3.5% as compared to 2007 (16,918 cases). The incidence rate for infectious form of TB was 37.8 per 100,000 population. There were 16,335 (93.3%) new cases and 1,171 (6.7%) recurrent cases. There were 10,441 (59.6%) sputum smear positive cases.

TB cases among children (0-14 years old) were 466 (2.7%). Cases of TB with HIV positive detected were 1,819 (10.2%), of which 1,362 (7.8%) with HIV status known before the diagnosis of TB while 457 (2.6%) cases were found to be HIV positive after being diagnosed with having TB.

The number of patients received treatment following short course chemotherapy (SCC) regime were 17,056 (97.4%). The achievement of treatment through directly observed treatment short-course (DOTS) was 98.2% which achieved the predetermined target of >85%.

FIGURE 1
INCIDENCE RATE OF TUBERCULOSIS (ALL FORMS AND INFECTIOUS FORMS) MALAYSIA, 1985- 2008



Source: Disease Control Division, MoH

FIGURE 2
CASE DETECTION RATE (CDR) OF NEW TB CASES (SPUTUM SMEAR POSITIVE)
MALAYSIA, 2000 - 2008

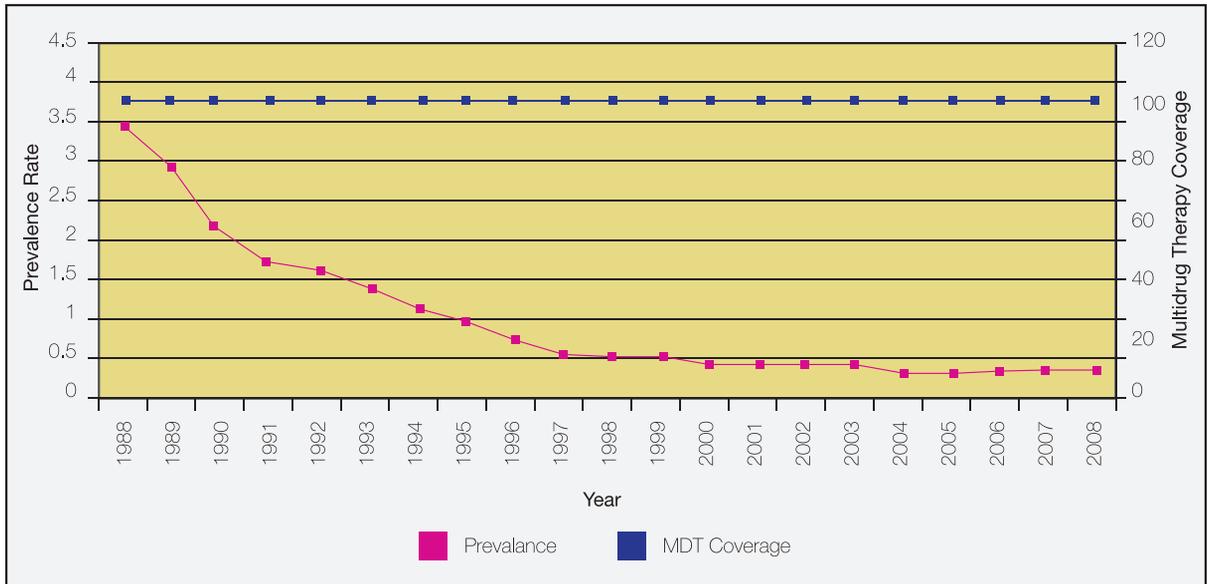


Source: Disease Control Division, MoH

In 2008, there were 218 reported new leprosy cases with incidence rate of 0.8 per 100,000 population where there is an increase of 15 cases (12.4%) as compared to the year 2007, which had 203 cases. 696 cases received on-going treatment with prevalence rate of 0.25 per 10,000 population.

Since the establishment of the National Leprosy Control Programme more than 30 years ago, Malaysia has been successful in decreasing the incidence of leprosy and has achieved the elimination status since 1994, which is 6 years earlier than the target set by World Health Organization (WHO). WHO had recommended the use of multi drug therapy as the treatment regime since 1988 and this has played a tremendous role towards the achievement of elimination of leprosy.

FIGURE 3
PREVALENCE OF LEPROSY AND 'MULTIDRUG THERAPY' COVERAGE
MALAYSIA, 1988 - 2008



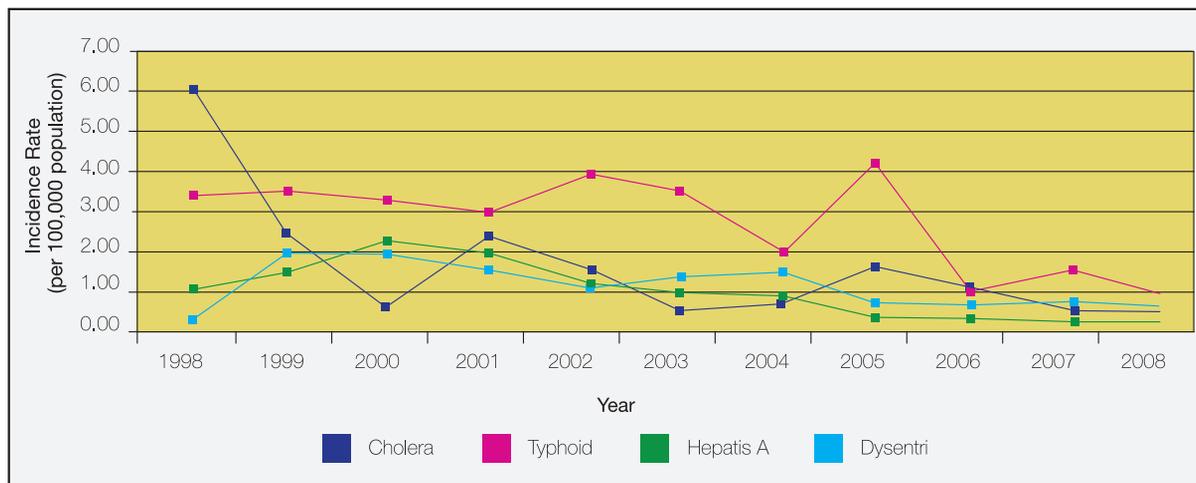
Source: Disease Control Division, MoH

Food and Waterborne Diseases Programme

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 1998 to 2008, the average incidence of cholera, typhoid, hepatitis A and dysentery was less than 5 cases per 100,000 population. In 2008, the incidences of these diseases were less than 1 per 100,000 population.

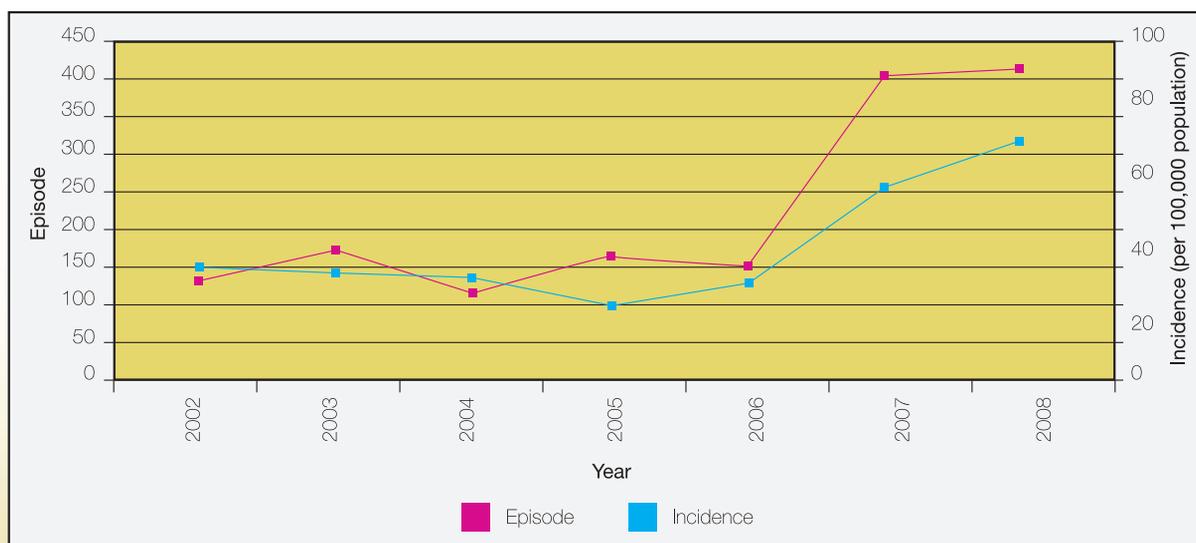
FIGURE 4
TREND OF CHOLERA, TYPHOID / PARATYPHOID, HEPATITIS A AND DYSENTERY IN MALAYSIA, 1998 - 2008



Source: Disease Control Division, MoH

In 2008, the incidence of food poisoning was 62 cases per 100,000 population, which was higher than its incidence in 2007. There were 420 episodes of food poisoning in 2008, which was 8 (1.9%) more than the episodes in 2007. Although there were increases in incidence as well as episode of food poisoning in 2008, the increases were comparatively very low if compared to the increase in 2007. The dramatic increase in 2007 was not actually showing a true increase but the increase is due to the improvement of the reporting and registration system. The establishment of the Crisis Preparedness and Response Center (CPRC) in 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
EPISODE AND INCIDENCE OF FOOD POISONING IN MALAYSIA, 2002 - 2008.



Source: Disease Control Division, MoH

Zoonotic Diseases Control Programme

Plague, rabies and yellow fever are the notifiable zoonotic diseases under the Infectious Disease Prevention and Control Act 1988. In 2008, there is no case of plague, rabies and yellow fever reported. Other zoonotic disease being monitored via admission to government hospitals (Hospital Management Information System) is as in Table 1. In 2008, there is also no avian influenza case among poultry or human being reported.

TABLE 1
ZOOONOTIC DISEASES ADMITTED IN THE GOVERNMENT HOSPITAL MALAYSIA, 2003 - 2008

Disease	2003	2004	2005	2006	2007	2008
Tularemia	0	0	0	0	0	0
Anthrax	0	0	0	0	0	0
Brucellosis	0	0	0	0	0	0
Rat-bite fever	0	0	0	0	0	0
Leptospirosis	269	263	378	527	929	1263
Listeriosis	0	0	0	0	0	0
Q fever	0	0	0	0	0	0
Toxoplasmosis	0	0	0	0	0	0
Echinococcosis	0	0	0	0	0	0
Taeniasis	0	0	0	0	0	0
Cysticercosis	0	0	0	0	0	0
Other zoonotic bacterial diseases	272	233	309	286	451	394

Source: Disease Control Division, MoH

VECTOR DISEASE CONTROL SECTION

Dengue Fever Control Programme

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. In 2008, 49,335 cases and 112 deaths were reported, the highest in the country's history of reported cases (Figure 6). This was equivalent to approximately 178 cases per 100,000 populations. The Dengue Fever contributed 94% (46,518 cases) of the total cases and 6% (2,817 cases) was Dengue Hemorrhagic Fever. States showing the highest Incidence Rate (IR) of cases (per 100,000 populations) were Selangor (408), Federal Territory of Kuala Lumpur (334), Perak (179), Terengganu (157) and for both Kelantan and Pulau Pinang (150). The other states have IR less than 150 cases per 100,000 populations

The case fatality rate has declined in recent years of which in 2008, it was 0.22% (Figure 7). In parallel with the number of reported dengue cases, Selangor contributed the highest number of deaths which were 46 cases, followed by Johor with 17 deaths, Federal Territory of Kuala Lumpur with 13 deaths and Kelantan with 10 deaths. The other states reported less than 10 deaths. For the state of Perlis, Kedah and Sarawak, no dengue deaths were reported in 2008.

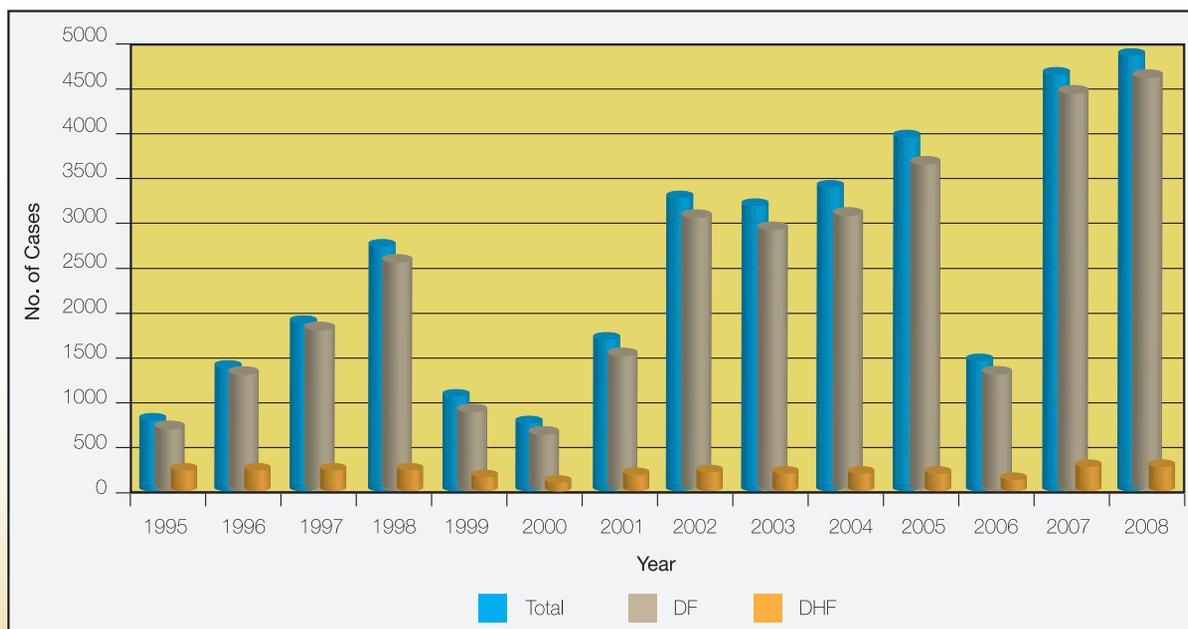
In 2008, DEN2 still remains the predominant serotype which contributed 38% from the overall samples with positive virus test, followed by DEN 3 (27%), DEN1 (24%), and DEN 4 (11%)

Health promotion activities on dengue prevention and control through community participation in the COMBI (Communication for Behavioural Impact) Program have been expanded over the years. In 2008, there were 585 COMBI programs nationwide with participation of 13,107 volunteers.

There were 3,629,440 premises inspected for mosquito breeding in 2008 with 46,731 of it found to be positive for Aedes breeding compared to 3,388,147 premises inspected with 37,195 premises with positive Aedes breeding in 2007 (Table 2). The number of premises inspected and premises found positive with Aedes breeding increases by 7% and 25% respectively in 2008 as compared to the previous year. There was an increase of 33% in fogging activities in 2008 as compared to 2007. This could be explained by the increase of the number of reported cases in 2008 compared to 2007. There were 508,807 premises which were placed with Temephos in 2008 compared to 435,029 premises in 2007 which showed an increase of 17%.

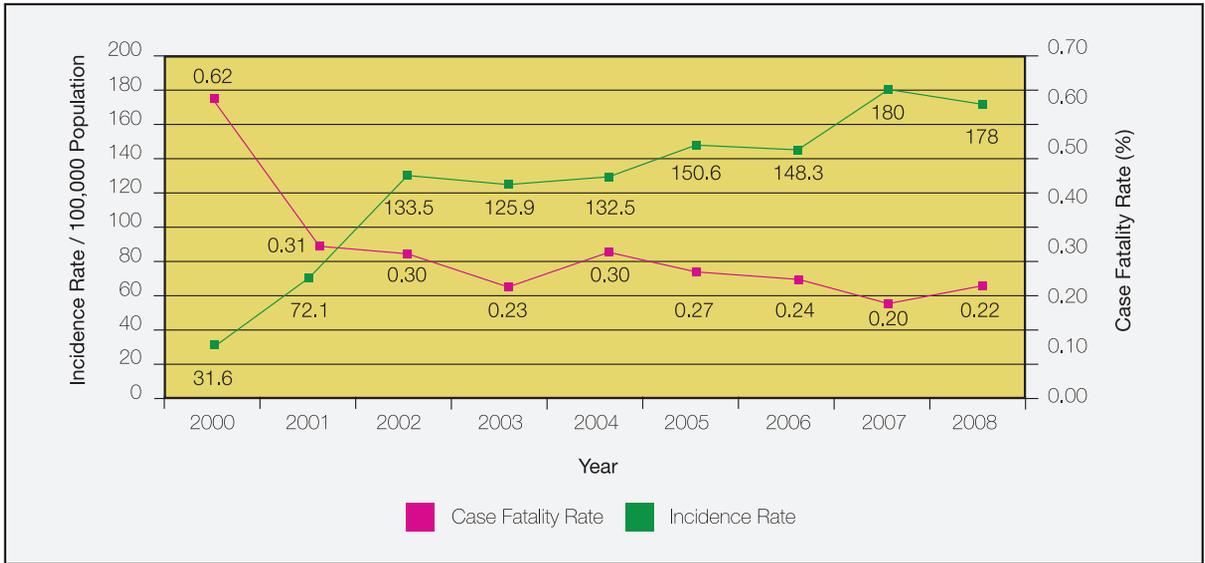
Results from the premise inspection activity showed that the highest Aedes index was at construction sites which was 9.89% followed by vacant lots/ land at 9.44%, unauthorized dumping area 8.50%, recreational area at 7.73% and factories at 6.42%.

FIGURE 6
TREND OF REPORTED DENGUE CASES IN MALAYSIA (1995 - 2008)



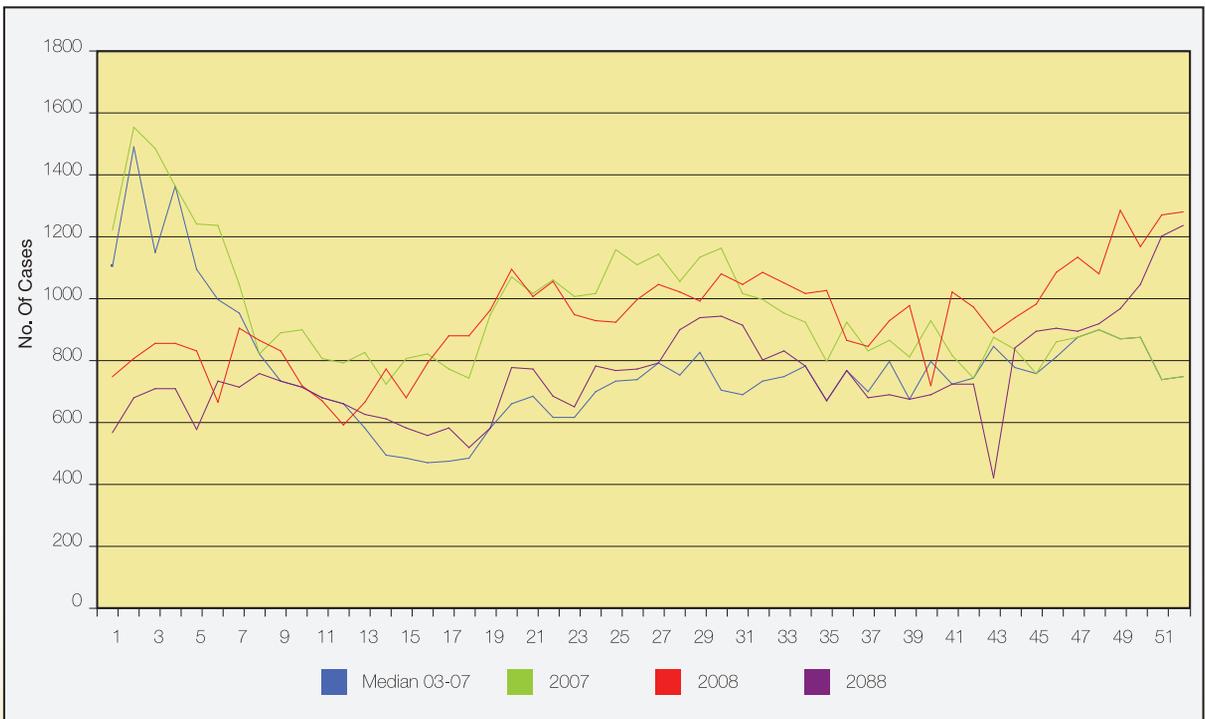
Source: Disease Control Division, MoH

FIGURE 7
INCIDENCE AND CASE FATALITY RATE OF REPORTED DENGUE CASES IN MALAYSIA (2000 - 2008)



Source: Disease Control Division, MoH

FIGURE 8
TREND OF REPORTED DENGUE CASES IN MALAYSIA (2006 - 2008) AND THE FIVE YEARS MEDIAN (2003 - 2007) BY WEEK



Source: Disease Control Division, MoH

TABLE 2
DENGUE VECTOR CONTROL ACTIVITIES ACCORDING TO STATES IN MALAYSIA FOR 2007 AND 2008

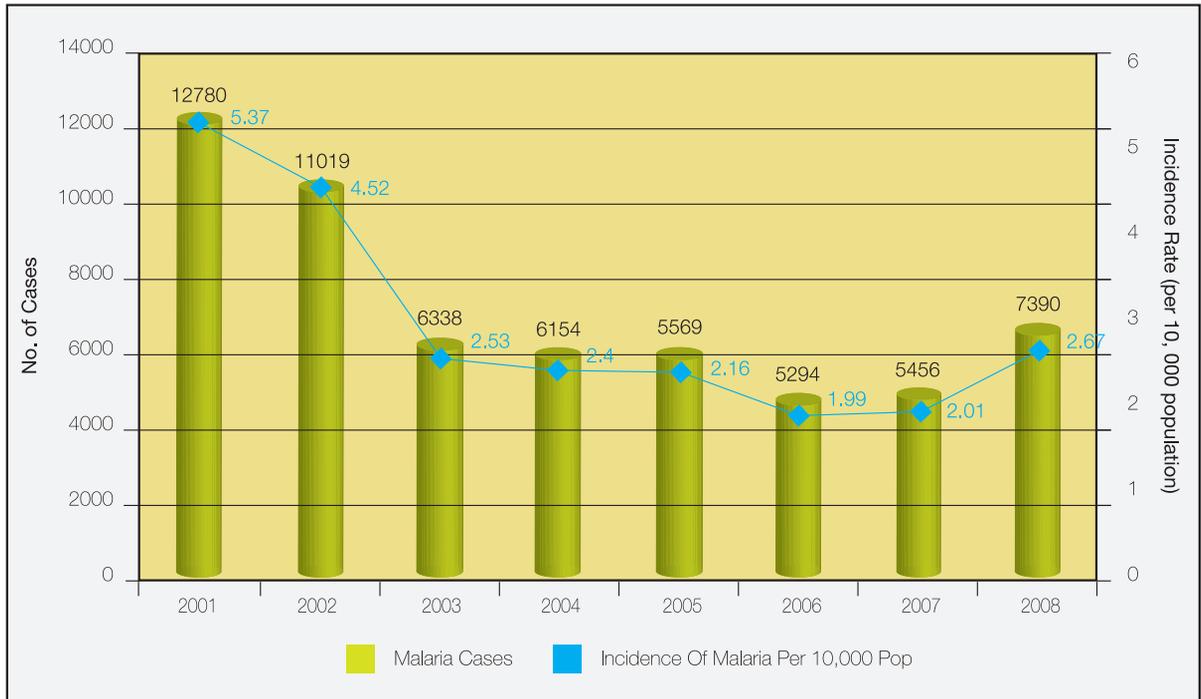
States	YEAR 2007										YEAR 2008												
	No. Of Premis Inspected		No. of Premises With Positive Breeding			No. of Premises With Positive Breeding		No. of Premises With Positive Breeding			No. of Premises With Positive Breeding		No. of Premises With Positive Breeding			No. of Premises With Positive Breeding		No. of Premises With Positive Breeding		No. of Premises With Positive Breeding			
	Aegy	Total	Aegy	Aalbo	Total	Aegy	Aalbo	Total	Aegy	Aalbo	Total	Aegy	Aalbo	Total	Aegy	Aalbo	Total	Aegy	Aalbo	Total	No. Premises Placed With Temephos	No. Premises Fogged	Aedes Index
Perlis	28,128	720	1,197	1,917	868	1,792	2,650	3,246	141,023	6.82%	9.42	36,757	797	888	1,665	873	1,079	1,952	3,662	103,203	4.53%	5.31	
Kedah	121,022	330	2,625	2,955	208	3,240	3,448	19,850	317,853	2.44%	2.85	143,471	234	2,269	2,503	217	2,755	2,972	31,180	248,870	1.74%	2.07	
Pulau Pinang	303,054	373	1,275	1,648	1,391	1,821	3,212	36,750	746,549	0.54%	1.06	355,196	141	3,632	3,773	304	4,814	5,118	50,649	655,508	1.06%	1.44	
Perak	481,632	1,266	2,627	3,893	275	2,593	2,868	42,810	887,896	0.81%	0.60	503,111	442	2,473	2,915	446	2,723	3,169	79,733	991,296	0.58%	0.63	
Selangor	542,077	3,078	4,895	7,973	3,445	6,974	10,419	105,827	5,133,045	1.47%	1.92	519,388	3,937	8,437	12,374	4,544	14,369	18,913	191,023	5,906,114	2.38%	3.64	
WP KL	90,406	234	2,165	2,399	340	3,070	3,410	157,581	6,407,604	2.65%	3.77	90,031	307	4,367	4,674	285	6,931	7,216	34,728	11,092,408	5.19%	8.02	
Negeri Sembilan	173,189	581	3,166	3,747	566	3,220	3,786	7,905	1,133,941	2.16%	2.19	164,727	889	2,513	3,402	911	2,719	3,630	10,798	991,113	2.07%	2.2	
Melaka	109,350	94	702	796	99	774	873	7,252	303,765	0.73%	0.80	131,602	61	561	622	67	599	666	3,301	374,011	0.47%	0.51	
Johor	362,096	543	1,829	2,372	544	2,142	2,686	12,377	199,219	0.66%	0.74	394,298	429	2,593	3,022	428	2,808	3,236	30,171	578,480	0.77%	0.82	
Panang	341,236	301	3,863	4,164	72	3,594	3,666	20,775	859,422	1.22%	1.07	460,575	3	6,684	6,687	3	6,684	6,687	43,965	883,808	1.45%	1.45	
Terengganu	175,622	42	593	635	48	629	677	2,909	196,894	0.36%	0.39	171,480	47	971	1,018	47	1,014	1,061	4,001	378,331	0.59%	0.62	
Kelantan	254,072	115	2,212	2,327	122	2,047	2,169	1,430	610,278	0.92%	0.85	298,463	117	1,937	2,054	128	2,108	2,236	3,962	767,339	0.69%	0.75	
Sabah	269,026	370	1,573	1,943	268	2,141	2,409	14,326	457,205	0.72%	0.90	238,674	309	1,323	1,632	327	1,412	1,739	11,011	329,262	0.68%	0.73	
WP Labuan	17,619	0	8	8	0	14	14	99	9,256	0.05%	0.08	18,524	0	8	8	0	8	8	334	16,344	0.04%	0.04	
Sarawak	119,618	22	396	418	25	412	457	1,892	126,830	0.35%	0.37	103,143	27	355	382	183	1,486	1,669	10,299	88,554	0.37%	1.62	
Total	3,388,147	8,069	29,126	37,195	8,261	34,463	42,724	455,029	17,530,780	1.10%	1.27	3,629,440	7,740	38,991	46,731	8,763	51,509	60,272	508,807	23,404,641	1.29%	1.66	

Source: Disease Control Division, MoH

Malaria Control Programme

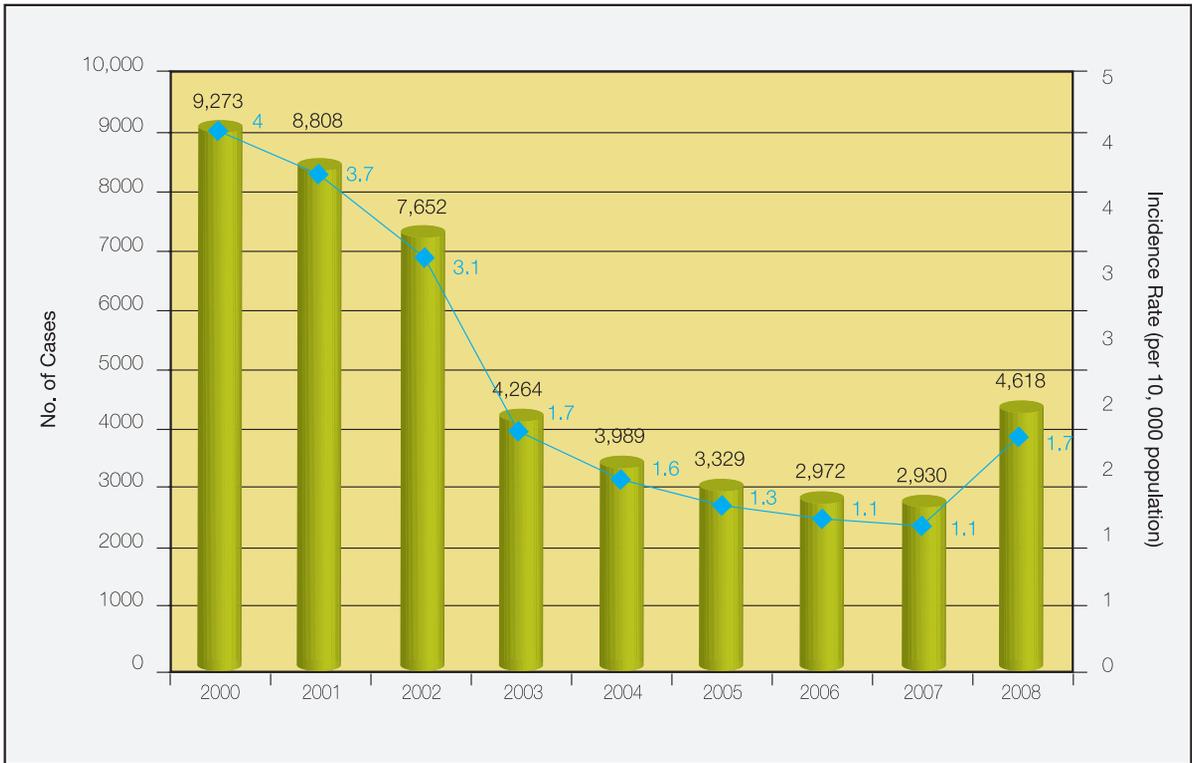
Malaria remains a public health problem in Malaysia, especially in Sabah, Sarawak and in the interior central regions of Peninsular Malaysia where Perak, Pahang and Kelantan share their borders. However this disease had increased in free malaria state like Penang and Negeri Sembilan in 2008.

FIGURE 9
MALARIA CASES AND INCIDENCE RATE TRENDS IN MALAYSIA FROM 2001 - 2008



Source: Vector Borne Disease Section, DCD, MOH

FIGURE 10
INDIGENOUS MALARIA CASES AND INCIDENCE RATE TRENDS IN MALAYSIA FROM 2000 - 2008



Source: Vector Borne Disease Section, DCD, MOH

In 2008, the incidence rate of malaria in Malaysia was 2.67 per 10,000 populations compared to 2.01 per 10,000 populations in 2007 (Figure 9). The incidence rate of indigenous cases also increased from 1.1 per 10,000 populations in 2007 to 1.7 per 10,000 populations in 2008 (Figure 10).

Sabah had the highest incidence rate with 12.84 per 10,000 populations and followed by Sarawak with 7.78, Kelantan with 1.71, Pulau Pinang with 1.25, Negeri Sembilan with 1.18 and Pahang with 1.02 per 10,000 populations. The other states have malaria incidence rates of below 1 per 10,000 populations. Three states which showed the highest increase of malaria cases compared to 2007 were Negeri Sembilan which increased by 350%, Penang increased by 259% and Kelantan increased by 249%. From the analysis, it was illustrated that two of the three states, Penang and Negeri Sembilan showed more than 80% of malaria cases in 2008 were among foreigners.

In 2008, five states showed increases of indigenous cases of which Sarawak increased by 1,094 cases (35%), Sabah increased by 525 cases (18%), Kelantan increased by 115 cases (4%), Negeri Sembilan increased by 46 cases (3%) and Penang increased by 22 cases (0.7%). The increased indigenous cases in these five states were due to ineffective, inefficient and poor control activities and malaria case monitoring.

The main parasite infection this year is by the Plasmodium vivax with 3,820 cases (51.69%) and the Plasmodium falciparum with 2,268 cases (30.69%). The death rate from malaria this year is 0.44%, an increase compared to the death rate in 2007 which was 0.33%. The number of malaria deaths in 2008 for Sabah was 12, Sarawak was 5, for the states of Selangor, Johor and Kedah was 3 and for the states of Negeri Sembilan, Pahang dan Perak was 1. There were 2,372 malaria cases among immigrants that covered 43.52% of all malaria cases in Malaysia. There was an increase of 439 malaria cases (18.59%) among immigrants when compared to the 2,361 cases in 2007. Out of the 7,390 cases in 2008, 4,618 cases (62.49 %) were indigenous, 2,326 cases (31.47%) were imports, 296 cases (4.01 %) were unclassified, 49 cases (0.35%) were relapse and 5 cases (0.07%) were induced.

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). In 2008, two cycles of regular residual spraying were carried out at six months intervals in five states in Malaysia. In the first cycle, 1,202 localities were sprayed covering 27,278 houses/structures and 137,447 populations protected, while in the second cycle, 960 localities were covered with 36,126 houses/structures sprayed protecting 173,352 populations. Focal residual spraying was carried out in 1,278 localities with 35,265 houses/structures sprayed protecting 138,775 populations. Two cycles of special residual spraying were also carried out in 5 states, which covered 2,571 houses in 221 localities protecting 10,100 populations in the first cycle and covered 2,813 houses in 322 localities protecting 10,697 populations in the second cycle.

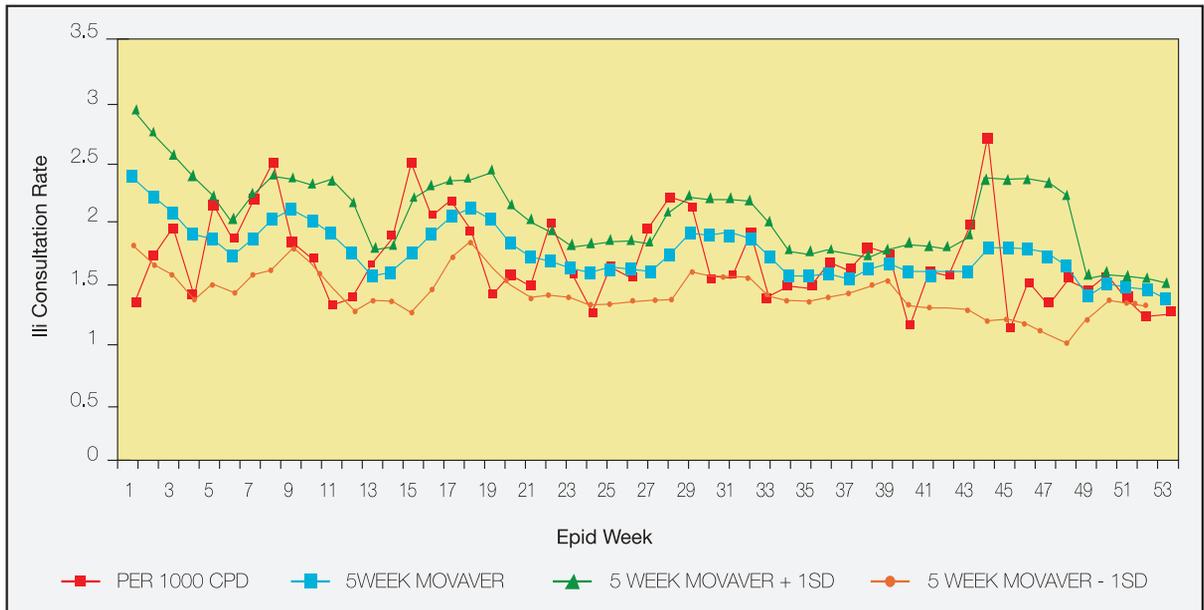
The strategy of using insecticide treated nets was to compensate the low coverage of residual spraying in areas due to houses having incomplete sprayable surfaces, high refusal of the population towards indoor residual spraying and as an additional vector control measure to stop malaria transmission in localities within malarious areas and outbreak localities in prone and free areas where malaria cases have been detected. In 2008, 400,051 residents were protected with the use of 239,406 insecticide treated bednets involving 89,168 houses in 2,634 localities.

Influenza-like Illness (ILI) Surveillance Programme

In 2008, there were 14,109 ILI cases reported compared to 31,159 cases in 2007, a reduction of 54.7%. The state with the most reported cases was Penang with 4,140 cases (29.3%), followed by Malacca with 2,559 cases (18.1%), Perak with 1,863 cases (13.2%), Johor 1,600 with cases (11.3%) and Pahang with 1,114 cases (7.9%). Perlis, Kedah, Selangor, Federal Territory of Kuala Lumpur, Negeri Sembilan, Kelantan, Terengganu, Sabah and Sarawak reported less than 1,000 ILI cases. Furthermore in 2008, only Federal Territory of Labuan acquired the status of zero reporting of ILI cases.

There were 3 ILI outbreaks reported in 2008. These outbreaks occurred in Selangor and Perak during the 5th, 19th and 42nd Epid Week. The first outbreak occurred in Sekolah Menengah Agama Simpang Lima, Sungai Besar, Selangor in the 5th Epid Week which involved 169 students. The subsequent outbreaks occurred in Perak; in the 19th Epid Week involving 11 trainees from PLKN Camp Jiwa Murni Semenggol and in the 42nd Epid Week involving 21 students from Sekolah Tunku Abdul Rahman (STAR), Ipoh.

FIGURE 11
ILI CONSULTATION RATE AT THE GOVERNMENT HEALTH CLINIC IN MALAYSIA, EPID WEEK 01/2008 UNIT 53/2008



Source: Disease Control Division, MoH

In 2008, there were 18 syndromic notifications received with the following distribution:

- i. Acute Diarrheal Syndrome: 8 cases (44.4%);
- ii. Acute Neurological Syndrome: 5 cases (27.8%);
- iii. Acute Respiratory Syndrome: 4 cases (22.2%);
- iv. Acute Haemorrhagic Syndrome: 1 case (5.6%);
- v. Acute Jaundice Syndrome: nil;
- vi. Acute Dermatological Syndrome: nil.

Filariasis Control Programme

The National Programme to Eliminate Lymphatic Filariasis in Malaysia started in 2001. The target is to achieve filariasis elimination status by 2013. A yearly MDA (mass drug administration) using Diethylcarbamazine and Albendazole have begun in 2004. The achievement of MDA from 2004 to 2007 was 84.3%, 88.5%, 91.3%, 93.2% respectively. In 2008 (fifth MDA), the MDA programme had achieved a coverage of 94.1% and 891,944 people were treated.

In 2008, there were 109 cases detected and 57.9% (62) of the cases were from migrants. The incidence rate of filariasis base on case detection activities was 0.39/100,000 populations. The microfilaria rate for the last 5 years ranges from 2.29 to 0.9 per 1000 people. The predominant parasite species were *Wuchereria bancrofti* (54.2%) followed by *Brugia Malayi* (subperiodic) (37.4%) and *Brugia Malayi* (periodic) (8.4%).

Chikungunya

In 2008, a total of 4,271 Chikungunya cases were reported showing a tremendous increase in comparison to 2007 (237 cases). Active Case Detection (ACD) consists about 35.7% of the cases. There were 5,850 blood samples tested and 44% were found positive. Most of the cases came from rural areas especially at the plantations. Majority of the cases had mild symptoms and they were treated as outpatients.

In 2008, Johor recorded the highest number of cases (1846 cases) which contributed to 43.22% of all cases, followed by Malacca with 606 cases (14.19%), Perak with 590 cases (13.81%), Selangor with 353 cases (8.27%), Pahang with 341 cases (7.98%), Kedah with 181 cases (4.24%), Negeri Sembilan with 178 cases (4.16%), Kelantan with 135 cases (3.16%), WP Kuala Lumpur with 14 cases (0.32%), WP Putrajaya with 13 cases (0.30%), Penang with 6 cases (0.14%), while Perlis, and Sarawak recorded 3 cases each (0.07%) and Terengganu with 2 cases (0.03%). There was no case reported in WP Labuan and Sabah.

PUBLIC HEALTH LABORATORY SERVICES

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

National Public Health Laboratory (NPHL)

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.

In 2008, the Disease Section in NPHL received 61,960 clinical samples for various purposes as shown in Table 3. There was an increase of 55% from 2007 (39,905) and affected almost all units except Bacteriology and Leprosy. NPHL was involved in providing laboratory tests for major outbreaks such as the nationwide Chikungunya outbreaks, dengue outbreak in Manjung, Perak and rubella outbreaks in schools/institutions in few states. In June 2008, the Malaria laboratory unit was set up in NPHL mainly for quality Programme and training in Malaria Control Programme. The Electron Microscopy Laboratory Unit which was set up in 2007 had started to perform test for reference samples received from other units within NPHL.

TABLE 3
NUMBER OF SAMPLES RECEIVED BY RESPECTIVE LABORATORY UNITS ACCORDING TO PURPOSE OF SAMPLING, NATIONAL PUBLIC HEALTH LABORATORY 2008.

Disease Section Laboratory Units	Outbreak	Surveillance / Monitoring / Screening	Diagnostik (case-based)	Others	Total
Bacteriology	1,982	394	87	-	2,463
Biochemistry	-	8,766	746	72	9,584
Cytology		16,300			16,300
Electron Microscopy	-	-	-	214	214
Leprosy	-	-	48	333	381
Malaria				8	8
Molecular	614	-	91	-	705
Serology		6,717			6,717
TB Reference Laboratory	-	8,509	3,479	100	12,088
Virus Isolation	9,817	3,006	677	-	13,500
TOTAL	12,413	43,692	5,128	727	61,960

Source: Public Health Laboratory, MoH

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 successfully 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 has been active in ASEAN Plus Three Emerging Infectious Diseases Programme as the proponent country in laboratory-based surveillance and networking. In August 2008, NPHL had organised a three-days workshop at Kuala Lumpur which was participated by all ASEAN representatives as well as representatives from Japan, Republic of Korea, WHO and ASEAN secretariat. The workshop aims to strengthen regional cooperation and collaboration in laboratory-based surveillance and planning for future activities for networking through ASEAN Plus Three Partnership Laboratories.

Food Laboratory

The Laboratory Section is responsible for planning of the development and coordinating the activities of 10 Food Safety and Quality Laboratories and 4 Food Division at Public Health Laboratories. For the year 2008, a total of 70,278 food samples were analysed as compared to 65,384 in the previous year (an increase of 7%). From this amount, 36,343 (51.7%) were for microbiological analysis. 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 International Proficiency Testing (PT) programme which participated in 2008 namely Food Analysis Performance Assessment Scheme (FAPAS), United Kingdom and IFM Quality Services, Australia for microbiological testing gave satisfactory results. Apart from international PT programmes, the food laboratories also participated in a PT organised by the Chemistry Department (FODAS).

During the melamine crisis in September 2008, determination of melamine in foods using Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) was developed and the melamine analysis was then provided by National Public Health Sungai Buloh, Johor Bahru, Ipoh and Food Safety and Quality Sarawak and Kedah.

Primary Health Care Clinic Laboratory Services

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). The number of tests performed in health clinics showed an increase of 23.5% as compared to 2007. A total of 42, 870,980 tests were performed in 2008.

NON-COMMUNICABLE DISEASE PROGRAMME

In 2008, the Non-communicable disease Programme focuses on prevention and control of Diabetes and Cardiovascular diseases, Cancer, promotion of mental health and general health.

Diabetes and Cardiovascular Diseases Prevention and Control Programme

In 2008, it was estimated that there were 554,000 diabetes patients on “active” follow-up at MoH health clinics throughout Malaysia. These patients contributed to 2,044,849 attendances in MoH health clinics, approximately 10% of total OPD attendances. In addition, a total of 66,856 patients were newly diagnosed and registered in 2008, 98.5% with Type 2 Diabetes Mellitus (Table 4).

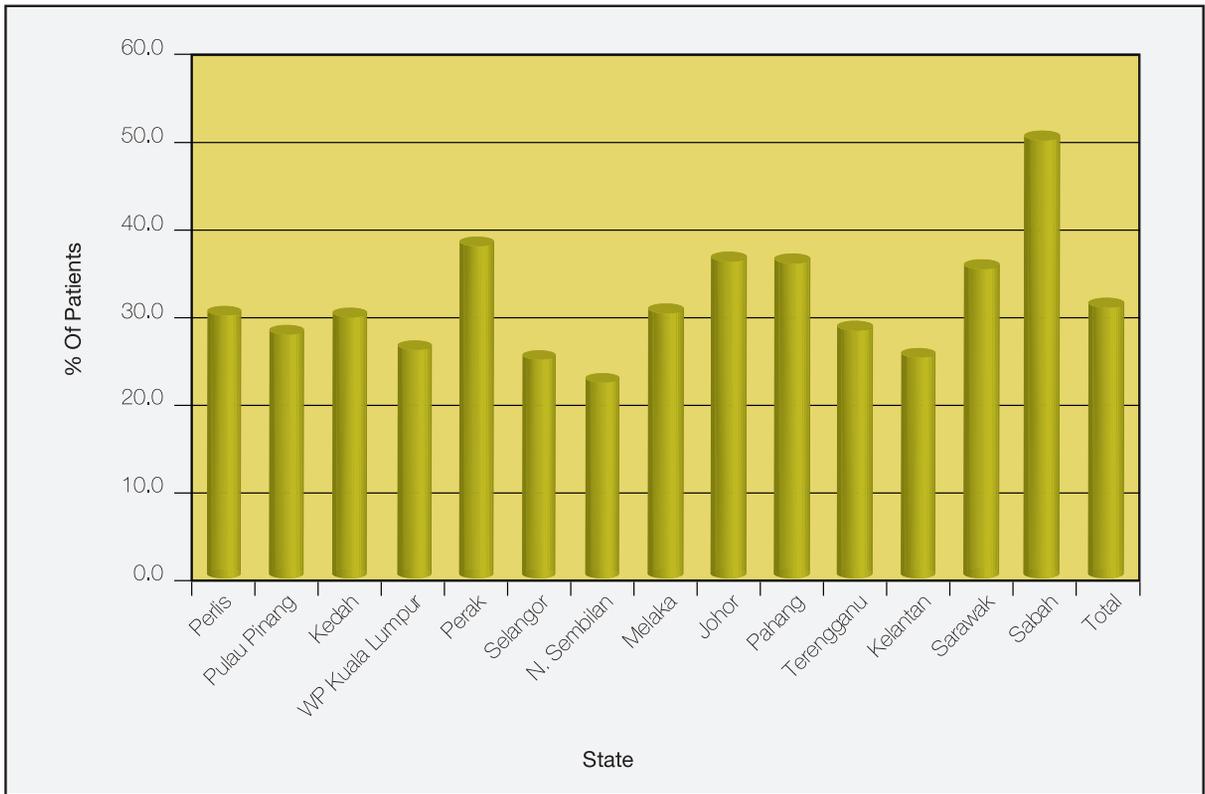
TABLE 4
DISTRIBUTION OF NUMBER OF ACTIVE DIABETES PATIENTS, TOTAL NUMBER OF OPD ATTENDANCES
AND NUMBER OF NEWLY REGISTERED DIABETES PATIENTS BY STATE, 2008

State	No. Of Active Patients	Total No. Of Attendances By Diabetes Patients	No. Of Newly Registered Patients
Perlis	9,039	40,815	1,190
Kedah	49,115	171,372	5,875
Pulau Pinang	27,147	101,904	5,233
Perak	68,372	255,647	4,907
Selangor	101,689	317,916	11,067
W.P. Kuala Lumpur	20,523	106,662	3,600
N. Sembilan	35,841	119,206	3,294
Melaka	31,316	73,467	2,996
Johor	53,598	265,918	7,297
Pahang	40,920	159,516	6,885
Terengganu	16,944	78,842	2,993
Kelantan	24,774	135,602	5,709
Sarawak	64,848	189,749	4,773
Sabah	9,205	26,926	979
W.P. Labuan	535	1,307	58
TOTAL	553,866	2,044,849	66,856

Source: Disease Control Division, MoH

A total of 290,988 HbA1c tests were conducted in MoH health clinics in 2008, in comparison to 214,145 tests in 2007. It was estimated that only 1 in 2 diabetes patients had the test done annually in 2008, although the Malaysian CPG recommends a minimum of one test every 6 months. However there is much variability of coverage between states, with Perlis having the highest coverage, while Kedah and Sarawak the lowest. The results showed that 32.3% showed good glycaemic control (HbA1c <6.5%), up from 29.9% in 2007 (Figure 12). However this result must be interpreted with caution due to the different coverage of tests and possible selection biases between states. In addition, there is currently a total of 73 fundus cameras in MOH health clinics throughout Malaysia.

FIGURE 12
DISTRIBUTION OF PERCENTAGE OF PATIENTS WITH HBA1C<6.5% BY STATE, 2008



Source: Disease Control Division, MoH

Efforts to monitor the quality of diabetes care at the MOH health clinics continue throughout 2008, in particular to fine-tune the nation-wide implementation of the Diabetes Clinical Audit planned for 2009, and also the implementation of the new Diabetes NIA Indicator “Quality of Diabetes Care at MOH Health Care Facilities: Glycaemic Control” which is also planned for 2009.

For early detection of diabetes in particular, screening is conducted opportunistically in the clinic setting and also in the community via health camps. In 2008, a total of 971,807 individuals underwent screening throughout the country, up from 679,233 in 2007. Approximately 69.4% had normal results; 19.3% borderline and 10.3% abnormal. This profile is almost similar to that of 2007 (72%, 18% and 10% respectively).

Cancer Prevention and Control

Under the National Cancer Registry Programme, up to 31 December 2008, 18,737 cancer cases were diagnosed and registered throughout 2007 and 2008, with 1,022 (5.4%) deaths reported. Out of these, 8,055 cases were men while 10,680 were women. Overall, the top ten cancers were breast (19.9%), colorectal (12.2%), lungs (10.1%), nasopharynx (5.4%), leukaemia (4.8%), cervix (4.7%), ovaries (3.5%), stomach (3.4%), hepatic (2.8%) and lymphoma (2.8%). By sex, the top ten cancers

in men were lungs (16.4%), colorectal (15.2%), nasopharynx (9.2%), leukaemia (6.6%), prostate (5.4%), hepatic (4.7%), stomach (4.7%), lymphoma (3.9%), brain (3.9%) and bladder (3.1%). While for women, breast (34.4%), colorectal (9.9%), cervix (8.3%), ovaries (6.1%), lungs (5.4%), corpus uteri (4.4%), leukaemia (3.4%), thyroid (2.9%), nasopharynx (2.5%) and stomach (2.4%).

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:

- a. To develop policies for mental health programme, human resources, infrastructure and mental health services in the community.
- b. To develop surveillance system for community mental health.
- c. To enhance positive mental health by improving living skills and practicing healthy lifestyle.
- d. To reduce prevalence of mental illness among high risk groups through screening and early detection.
- e. 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 and fine tuned by the technical working group in November 2008. This plan outlines implementation strategies among which are to:

- Improve awareness among public and health care providers on suicide and suicidal behaviour.
- 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.
- Foster inter-sector collaboration among various agencies towards enhancing suicide prevention.
- Advocate relevant agencies on efforts towards reducing access to lethal means.

Handling Stress at Workplace Programme

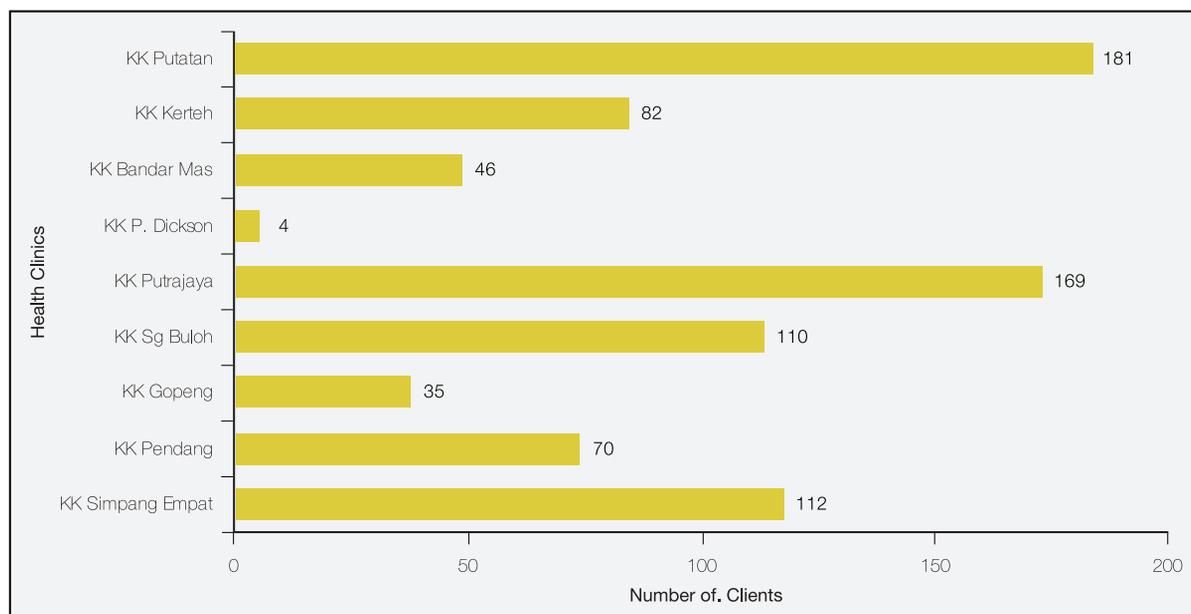
A meeting on development of Handling Stress at Workplace Programme was initiated in February 2008. Following this, a workshop to develop a Programme on Handling Stress at Workplace was conducted in April 2008 in which a draft proposal on the implementation plan was developed by the working group.

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. As at December 2008, 809 clients were screened using the Depression, Anxiety, Stress Scale (DASS) of which 296 (37%) were found to have stress, anxiety and depression. Of the 37%, 191 clients (64.5%) were referred for counselling.

FIGURE 13
TOTAL NUMBER OF CLIENTS SCREENED AT 9 HEALTH CLINICS IMPLEMENTING HEALTHY MIND SERVICES



Source: Family Health Development Division, MoH

Follow Up Treatment and Psychosocial Rehabilitation for Mentally Ill at Health Clinics

A total of 671 (82.9%) health clinics had implemented the follow up treatment for mentally ill patients who are stable. Up to December 2008, the total number of new cases detected to have mental disorders in the governmental health clinics is 1,187 cases. This had decrease by 38.7% as compared to 2007. In 2008, a total of 345 cases had received psychosocial rehabilitation in 26 health clinics implementing psychosocial rehabilitation services to improve their psychosocial functioning and promote independent living in the community.

Health Promotion

Health promotion activities via the National Healthy Lifestyle Campaign (NHLSC) and the media campaign of “*Tak Nak Merokok*” (“No to smoking”) is still on-going. For NHLSC, a total of 18 television and 30 newspaper advertisements were undertaken in 2008, while for the “*Tak Nak Merokok*”, a total of 18 television, 8 newspaper and 197 radio advertisements were undertaken. In addition, a total of 20 television, 18 national radio and 48 regional radio talks were undertaken. Health education activities to the general public also continues to be strengthened via the MyHealth portal (www.myhealth.gov.my).

The World Tobacco Free Day was celebrated on 31 May 2008 at the MSN Training Stadium in Bukit Jalil, Kuala Lumpur. The theme for this jointly organised event with the National Cancer Association was “Tobacco Free Youth”, and it was officiated by the Honourable Minister of Health. The World Heart Day was celebrated on 19 October 2008 in Astaka Taman Tasik Titiwangsa, Kuala Lumpur and it was officiated by the Mayor of Kuala Lumpur. The theme was “Know Your Risk” and the activities organised around this event includes “walk-a-mile”, fitballrobic demonstration and health exhibition. The National Rope Skipping and Fitballrobic Competition was held on 21-23 October 2008 in Negeri Sembilan. This event was officiated by The Honourable Minister of Health, with 63 teams participated in this competition.



World Tobacco Free Day 2008 Celebration

The Quit Smoking Infoline services (03-8883 4400) was still continued in 2008 with the infoline receiving 315 calls during the period. A special Programme was organised at the Parliament Building in order to raise awareness on the dangers of smoking among Members of Parliament as well as raising the political will for the anti-smoking campaigns. For mental health promotion, the “*Jom Tangani Stres*” (or stress management) campaign was carried out throughout the country in 2008. A total of 14 carnival sessions were organised which include 50 training sessions on stress management skills to various target groups i.e adolescents, working adults, parents and the elderly. In October 2008, during the observation of the World Mental Health Day, a workshop on Healthy Mind was conducted for 200 participants consisting of college students and teachers.

Healthy eating remained as one of the important activities in 2008. Efforts to promote nutrition education through the mass media were intensified. In 2008, a total of 77 nutrition topics were presented for discussion by expert panels on television and radio. In addition, 10 articles on various nutrition-related topics were published in local community magazines. To promote healthy eating within the Ministry of Health headquarters, a total of 250 food caterers were trained in “Healthy Catering”. The purpose of this training was to impart specialised knowledge and skills not only on the safe and hygienic preparation of food, but also on providing nutritious food.

At the community level, a “Healthy Cafeteria Model” was proposed and established, to meet the increasing demands for healthy food at commercial food joints. The first such Healthy Cafeteria

project was undertaken by My NutriBiz Health Food Bistro in Bandar Kinrara, Puchong. This cafeteria was officiated by the Honourable Minister of Health in August 2008. The cafeteria is fully managed by MyNutriBiz with technical support from MOH. All the food served at this cafeteria must receive approval by the technical committee to ensure that the food served meets the criteria as set out under the Healthy Cafeteria Guidelines, which includes food low in sugar, salt and fat. While also at the community level, 14 Nutrition Information Centres have been set up nationwide to ensure that efforts to promote healthy eating practices to the public are sustained.

Individualised Nutrition Counselling Services at health clinics was further increased in 2008, from 162 health clinics in 2007 to 392 in 2008. This service is provided by trained nutritionists on an appointment basis. It was initiated to address the nutrition-related health needs of the population such as obesity, diabetes, hypertension and hyperlipidemia. In 2008, Standard Operating Procedures (SOPs) on Nutrition Management of Diabetes, Hiperlipidemia and Obesity were published by the Nutrition Division, in order to facilitate the management of counselling for such clients at the primary care setting.

For health promotion activities at the district and health clinic levels, a total of 1,244 health camps were conducted in 2008, with emphasis on the promotion of healthy lifestyle and prevention of NCD. The MoH healthcare personnel also conducted 12,546 talks/lectures, 16,642 demonstrations, 2,032 exhibitions and 430 public forums on various topics relating to the prevention of NCD. A total of 17,941 posters, 213,321 leaflets and 14,514 booklets on various NCD topics were also distributed, while 47 new topics on health education were published in 2008. In addition, a total of 8 Community Health Promotion Centres were set-up in 2008, which recorded 7,602 attendances.

MATERNAL AND PERINATAL HEALTH CARE SERVICES

Antenatal Care

The antenatal coverage in 2008 was 94.1% (Table 5). The average number of antenatal visits by a pregnant mother to public and private health facilities had increased from 9.0 in 2007 to 9.4 in 2008. Anti tetanus toxoid immunisation (ATT) coverage for antenatal mothers has increased from 82.6% in 2007 to 87.7% in 2008.

Deliveries and Postnatal Care

There was an increase in the total number of registered births in Malaysia from 437,519 in 2007 to 449,939 in 2008 (Table 5). The coverage of postnatal care increased from 86.7% in 2007 to 90.9% in 2008. Deliveries conducted by trained health care providers were 98.6% in 2008. Only 1.4% of the deliveries were conducted by untrained personnel.

TABLE 5
COVERAGE OF ANTENATAL AND POSTNATAL SERVICES IN MALAYSIA 2000 - 2008

Indicators	2000	2005	2007	2008
Estimated no. of pregnant mothers	691,664	614,351	486,764	544,180
Number of new pregnancies	517,138	421,474	468,928	512,286
Antenatal care coverage (%)	74.8%	68.8%	96.3%	94.1%
Anti tetanus toxoid immunisation coverage (%)	86.8%	85.2%	82.6%	87.7%
Total deliveries	507,900	402,168	437,519	449,939
Number of postnatal mothers attending postnatal clinic	417,232	265,915	383,682	564,312
Postnatal clinic coverage	82.1%	91.0%	86.7%	90.9%

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 2008, 329,490 newborns were screened for G6PD of which 1.5% was found to have G6PD deficiency. About 53.7% of the babies had neonatal jaundice as compared to 54% in 2007. There were 4 cases of kernicterus in 2008 resulting in one death. The high percentage had drawn concerns and efforts were made to look into new approach for intervention.

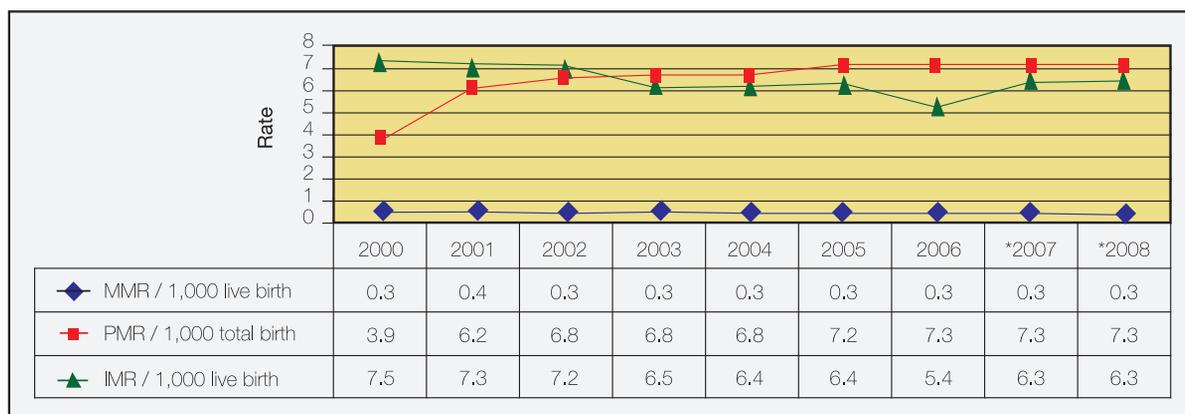
Thalassemia Prevention and Control Programme

The Programme was based on disease-oriented model combining the best possible patient care with complementary preventive activities namely, public education, carrier screening and counselling. The targeted population for screening are high risk family members (extended family screening) and adolescents (preferably 16 years old and above). Screening is also integral in the investigation of anaemia among antenatal mothers. Screening activities were implemented nationwide in June 2008 after 221 health clinics and 21 district hospitals were equipped with haemoglobin analysers. Training for laboratory staff was completed in May 2008. For 2008, national level training for thalassemia counselling was not done but echo courses were conducted at the state level.

Maternal Mortality

All maternal deaths were investigated and audited at the district, state and national levels. Maternal mortality ratio (MMR) was 30 per 100,000 livebirths in 2008 (Figure 14). The leading causes of maternal mortality were obstetric embolism, postpartum hemorrhage, hypertensive disorders in pregnancy and associated medical conditions. A National Conference on Maternal Mortality was held from 20th-22nd August 2008 in Kota Kinabalu, Sabah to increase awareness on maternal deaths and to strengthen the commitment of health care providers in reducing maternal morbidity and mortality. Reduction in maternal mortality remains a priority as required by Malaysia's commitment to achieving the Millennium Development Goal 5 which is to reduce maternal mortality by three quarter by the year 2015. It was selected as a Key Performance Indicator (KPI) for the Ministry of Health Malaysia.

FIGURE 14
MATERNAL, PERINATAL AND INFANT MORTALITY RATE IN MALAYSIA 2000 - 2008



Note : * Preliminary data
Source: Department of Statistics, Malaysia

Anaemia Amongst Pregnant Mothers

In 2008, the percentage of pregnant women who were anaemic (haemoglobin level <11 gm%) was 24.8% compared to 26.7% in 2007. Percentage of pregnant mothers with haemoglobin level <9 gm% was 1.4% and between 9 – <11 gm% was 23.4%. Percentage of pregnant mothers with normal haemoglobin level \geq 11 gm% was 75.2%. Pregnant women were given haematinics as prophylaxis together with nutrition education.

Perinatal mortality

Perinatal mortality rate showed a plateau of about 7.3 per 1,000 total births since 2005 (Figure 14). The leading cause of perinatal deaths was normally formed macerated stillbirths followed by asphyxial conditions and lethal congenital malformations. Immaturity, lethal congenital malformations and asphyxial conditions were the main causes of neonatal deaths. Strengthening pre-pregnancy and antenatal care is crucial to reduce perinatal deaths.

CHILD HEALTH SERVICES

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

The coverage of infants (0-1 years old) attending the government health clinics in 2008 was 71.8% where 29.3% for toddlers (1-4 years old) and 22.5% for pre-schoolers (5-6 years old). The average clinic visits per year by infants, toddlers and pre-schoolers were 6.3, 4.3 and 2.3 visits respectively.

Infant and Toddler Mortality Rates

Infant and toddler mortality rate had shown a decreasing trend since 1980 and appeared to stabilize from the year 2000 onwards. Infant mortality rate (IMR) in 2008 was 6.3 per 1000 live births. The toddler mortality rate remains at 0.4 per 1000 live births. The main causes of death among under five years old children were congenital malformation, deformation & chromosomal abnormalities, infectious & parasitic diseases, diseases of respiratory system and diseases of nervous system.

Immunisation

In 2008, the immunisation coverage for BCG (98.9%), hepatitis B (94.9%), polio (96.3%), DPT (95.8%) and Hib (95.3%) were above 90%, achieving the Universal Child Immunisation target. The rise in the coverage for MMR in 2008 to 94.3% in comparison to 2007 (87.5%) was due to the change in denominator used in the calculation, where the mid-year population of 1 year old children was used.

In October 2008, the Ministry of Health introduced the combination vaccine DTaP-IPV/Hib to replace DTwP-HepB+Hib into the National Childhood Immunisation Programme in 8 states namely Selangor, Federal Territory Kuala Lumpur, Labuan, Pahang, Kelantan, Terengganu, Sabah and Sarawak. The use of this vaccine will be expanded to other states incrementally.

National Congenital Hypothyroidism Screening

In 2008, 104 hospitals participated in the Congenital Hypothyroidism screening Programme (323,440 newborns being screened). Since its inception in 1998, 423 cases of congenital hypothyroidism have been detected. The Programme protocol was reviewed in 2008 focusing on laboratory definition, quality performance and targets. Pamphlets and posters were produced for public education.

Child Health Record (0-6 years old)

A revised infant and child health record (*Rekod Kesihatan Bayi dan Kanak-kanak 0-6 tahun*) was designed as a tool to facilitate delivery of health care with the incorporation of a systematic monitoring of growth and development based on age (WHO Growth Standard 2006), revised immunisation schedule, nutritional guidelines, anticipatory guidance for specific age and a section for writing clinical notes for practitioners including dental notes. The states of Pahang, Perak, Selangor, Negeri Sembilan, and Federal Territory Kuala Lumpur had started using these revised records for the 2008 cohort of newborns, to be incrementally followed by other states.

Integrated Management of Childhood Illness (IMCI)

IMCI Programme had been initiated in Sabah, Pahang and Sarawak in areas identified as remote, with low resources and with high under-5 mortality rate. In 2008, through collaboration with UNICEF, Sarawak expanded IMCI implementation to eight (8) districts, complemented with activities for infants and young child feeding.

Baby-friendly Hospital Initiative (BFHI)

Up to December 2008, 115 (92%) out of 125 government hospitals in the Ministry of Health and 6 private hospitals were designated as Baby Friendly. To ensure that the hospitals maintain this status, a reassessment of the hospitals were undertaken. In year 2008, 59 baby friendly hospitals were reassessed. Various strategies were also formulated to encourage more private hospitals to be baby-friendly.

Code of Ethics for the Marketing of Infant Foods and Related Products

The 4th revised edition of the Code of Ethics for Infant Formula Products, renamed as Code of Ethics for The Marketing of Infant Foods and Related Products was launched on 1 August 2008 by the Minister of Health Malaysia. The Vetting Committee received 162 materials related to Infant Formula Products, of which 86 (53 %) were given approval codes in 2008. The number of vetted materials was found to have met the set criteria of 'Significantly Exceeding Target' under the Key Performance Index, which is an average of 12 materials per month.

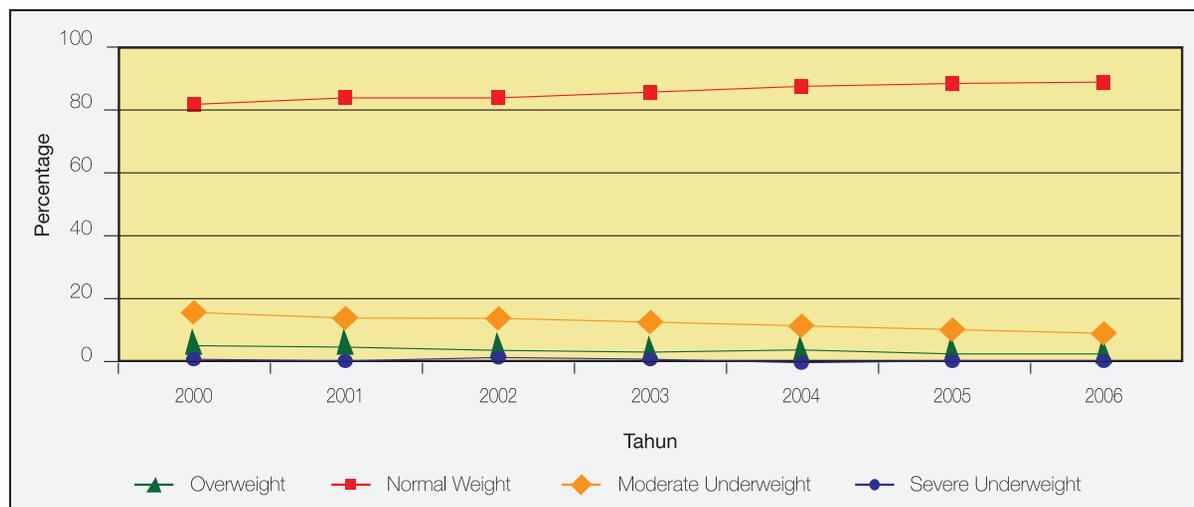
Nutrition Rehabilitation Programme for Malnourished Children (Food Basket Programme)

The aim of this Programme is to improve the nutritional status of malnourished children aged 6 months to 6 years within a period of 6 to 12 months of receiving the food basket. As at December 2008, a total of 7,606 children had received the Food Basket and of which 36.98% had been successfully rehabilitated.

Nutrition Surveillance of Children Below 5 Years

The Ministry of Health monitors the nutritional status of children under-five through the Nutrition Surveillance System (NSS) of the Health Management Information System, Ministry of Health using the National Centre for Health Statistics (NCHS) as a standard for benchmarking. There was an improvement in the nutritional status of children below 5 years old. The percentage of children with normal body weight had increased from 90.3% in 2005 to 90.7% in 2006. The percentage of moderately and severely underweight children had decreased from 8.1% in 2005 to 7.7% in 2006. The percentage of overweight children remained at 1.6% in 2005 and 2006 (Figure 15).

FIGURE 15
NUTRITIONAL STATUS OF CHILDREN BELOW 5 YEARS, MALAYSIA, 2000-2006



Source: Health Informatics Centre, Ministry of Health Malaysia

SCHOOL HEALTH SERVICES

The school health services had achieved the target set for the year 2008 where a total of 1.68 million preschool, primary and secondary school children were examined and screened. The coverage by school health nurses remained above 95% for all schools examined, while the doctors' coverage was less than 40%.

Students' Health Status

Visual acuity defect was the highest morbidity detected among the school children in 2008. The rate of visual acuity detection was 66.2, 68.3 and 52.7 for every 1,000 Standard 1, Standard 6 and Form 3 students examined respectively. Nutritional status of Malaysian students for 2008 is as shown in Table 6.

TABLE 6
DISTRIBUTION OF SCHOOL POPULATION NUTRITIONAL STATUS ACCORDING TO CLASS IN 2008

Nutritional Status	Standard 1	Standard 6	Form 3
Under weight	10.8 %	8.0 %	7.2 %
Normal Weight	75.0 %	67.0 %	72.1 %
At risk of obesity	7.6 %	10.6 %	10.5 %
Obesity	6.7 %	11.4 %	10.8 %

Source: Family Health Development Division, Ministry of Health

The detection rate for colour blindness was 6.1 and 4.6 for every 1,000 Standard 6 and Form 3 male students examined respectively. The detection rate was higher in Peninsular Malaysia compared to Sabah, Labuan and Sarawak. Morbidities related to personal hygiene indicated a general decline for all ages. Comparing the age groups, the preschoolers and Standard 1 students had higher incidence of scabies infection, head lice and worm infestation.

Scoliosis screening was approved by Public Health Technical and Policy Committee for implementation as a pilot study in Selangor, Kuala Lumpur and Kuala Terengganu.

School Immunisation

The coverage of school immunisation for Standard 1 was 96.4% for DT booster, 97% for Oral Polio booster, 96.6% for MMR. The ATT immunisation coverage for Form 3 was 97.6%.

Pilot Project On Healthy School Canteen

The Healthy School Canteen Project 2008 was piloted in 12 schools in the states of Melaka, Penang and Federal Territories of Kuala Lumpur and Putrajaya. This projects was aimed to improve the knowledge and skills of canteen operators, students, teachers and parents in preparing and selection of healthier food choices.

ADOLESCENT HEALTH PROGRAMME

In 2008, a total of 249,054 adolescents aged 10 to 19 years had been screened for nutritional health, physical health, mental health, sexual and reproductive health as well as risk behaviours at health clinics nationwide. This accounts for 4.7% of total the population of adolescents screened. A total of 64,048 adolescents had been counselled and 6,689 were referred to hospitals or other agencies for further management. A total of 18,831 adolescents participated in health promotion activities at the clinic and community levels such as health talks, health camps, nutrition counseling, healthy cooking demonstrations and aerobic exercises.

In 2008, a total of 105 trainings sessions on adolescent health care and counseling were conducted at national, state and district levels involving 1,337 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 and Training of Trainers on Engaging the Adolescent Using HEADSS Framework.

The Ministry of Health had collaborated with other agencies to organise the 6th National Adolescent Health Symposium which was held in Sarawak on 22 to 23 Mac 2008 and the National Youth Carnival "*Jom Tangani Stres*" which was launched by the Honorable Minister of Health Malaysia on 14 June 2008 at Sekolah Menengah Seri Permaisuri, Cheras, Kuala Lumpur. This effort was followed in other states focusing on improving mental health of adolescents, their families and communities. Various health and nutrition education materials to promote health and nutrition among adolescents were produced such as posters, pamphlets and booklets as well as via online information in the MyHealth portal www.myhealth.gov.my, www.nutrition@moh.gov.my and www.nutriweb@org.my

WOMEN'S HEALTH PROGRAMME

The main activities were cervical cancer screening, family planning, breast cancer prevention and activities related to reproductive health and gender. Cervical cancer screening and family planning services were available in almost all MoH health clinics in Malaysia. Pap smear screening had increased from 385,090 number of slides in 2007 to 436,797 in 2008. Assuming the figure represented the number of women screened, it accounted for 19.7% 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 10.6% of all eligible women for this age group. The percentage of unsatisfactory slides had reduced from 1.5% in 2007 to 1.3% in 2008. The positive smear rate in 2008 was 0.64% compared to 1.04% in 2007.

In keeping with international standards, the Pap Smear Request Form and Cytology Report were revised according to Bethesda Classification 2001, and used by all government facilities in 2008. A total of 4,000 units of flip chart on pap smear were printed and distributed to all health clinics. A pilot project on population-based cervical cancer screening was implemented in Mersing and Klang using SIPPS (application software for call-recall system). A demonstration project on Visual Inspection with Acetic Acid (VIA) for early detection of cervical cancer was initiated in Sik, Kedah in 2008.

There were a total of 75,316 new family planning acceptors registered in the MoH clinics in 2008. The most popular contraceptive method was contraceptive pill (74.0%) followed by progestogen-only injection (11.9%), male condoms (9.9%) and intrauterine device (2.5%). The National Family Planning Training for Trainers Teaching Module was revised and updated in 2008.

A national training module on clinical breast examination (CBE) was developed in 2008 as a move towards adopting CBE as a screening tool for down staging breast cancer detection. The Women's Health Unit had conducted and facilitated courses on Pap Smear screening, Family Planning and Gender and Rights in Maternal and Reproductive Health for all categories of staff in clinics, hospitals and training institutions.

HEALTH CARE SERVICES FOR THE ELDERLY

In 2008, a total of 553 (68.6%) health clinics had provided health care services for the elderly, an increase by 1.4% compared to 2007. About 20,600 health personnel at primary health care level had undergone training for health care for the elderly. Five most common morbidities among the elderly recorded in the health clinics were hypertension, diabetes mellitus, osteoarthritis, asthma/chronic obstructive airway diseases (COAD) and eye problem. Screening and management of dementia was emphasised in selected health clinics. About 17,300 health personnel and care givers from institutions, NGOs, voluntary bodies and other agencies had been trained for care for the elderly. A total of 16 health education materials had been produced since 2008 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 physiotherapists at the clinic.

HEALTH CARE FOR PERSONS WITH DISABILITIES

The Programme was initiated in 1996 with a focus on development of services for children with special needs (CWSN) in the first phase (1996-2005). Services for prevention and control of blindness and deafness were also initiated during this period. In the second phase beginning 2006, services were extended to adults with disabilities.

Among children 0-18 years, a total of 1,412 new cases of children with disabilities were detected of which 681 (48 %) were followed up for rehabilitation. As of December 2008, 242 (30%) health clinics provided rehabilitation services for CWSN, of which 81 (10%) used the multidisciplinary team management approach. Services of 31 physiotherapists and 20 occupational therapists were made available at the clinics. Outreach rehabilitation activities were provided to 30% of the existing 380 Community-based Rehabilitation Centres of the Department of Social Welfare, registering 11,750 children for clinical follow up. A total of 15,109 home visits were carried out to ensure continuity of care at home.

The main activities in 2008 included promotion and prevention of disabilities, early detection and rehabilitation services. Health education materials on Down's Syndrome and cerebral palsy were developed and distributed to the states. The revised Child Health Record had incorporated autism screening for children at 18 months of age. Four manuals on the care of CWSN, English version, were translated into Malay language.

Training on multidisciplinary team management approach (2 sessions), neurodevelopment and sensory integration in the care of cerebral palsy, sexual health for disabled children and adolescents and play in the management of CWSN were conducted. The latter was an introductory course for health staff to learn to utilise play such as puppeteer, clay play, sand play, drawing, artwork, music, dance and storytelling in the management of CWSN. Training on eye care, management of ear disease and hearing impairment and management of people with disabilities in institutions and homes were also conducted. A total of 441 persons were trained at the national level and 4,838 trained through echo courses throughout the country.

A "JOM DENGAR" campaign on the prevention of noise induced deafness for tertiary education students was launched by the Minister of Health Malaysia in July 2008 at UKM Bangi campus in Selangor.

PRIMARY HEALTH CARE ACTIVITIES

Integrated services at Primary Health Care Clinic using Reviewed Approach, REAP.

The concept of delivery of integrated services in health clinics was implemented in phases. National training was conducted for state representatives using screening tools and manuals for four age-groups namely, adolescents, adult men, adult women and elderly. To facilitate data analysis, the "Tally Sheet" was introduced. As of December 2008, 266 health clinics had initiated the integrated

clinic as one approach towards screening for risk factors to initiate early intervention and moving the wellness initiatives more aggressively. Preliminary analysis in one of the states showed that they could screen 5% of the total attendees. Of those screened, 73.1% were detected with risk factors, the common ones being overweight, obesity, unhealthy eating and smoking.

National Service Programme (PLKN – Programme Latihan Khidmat Negara)

A Technical Committee chaired by the Deputy Director-General of Health was established to look into improving health services for the NSP trainees, aiming towards “zero preventable deaths”. The Ministry of Health placed 745 paramedics (Assistant Medical Officers and Nurses) on rotation from the nearest health clinics (82.4%) and hospitals (17.6%) to all NSP camps to deliver 24 hours services. The MOH also played a technical advisory role on the upgrading of the NSP clinics, in terms of infrastructure, medical equipment, pharmaceuticals and ambulance services. The health services provided in the NSP clinics include health promotion, prevention, adolescent screening, curative and emergency. The paramedics were expected to look into risk improvement among the trainees. The common morbidities diagnosed were diseases of the respiratory system, digestive system, followed by musculoskeletal and connective tissue and injuries. Two training sessions, involving 650 participants, were conducted with the Department of National Service Training. A “Guideline on Health Services in National Service Camps” was printed and distributed to all camps.

Sanitary and Health Monitoring at National Service Training Centres (PLKN) 2008

A total of 84 PLKN camps were operated in 2008 with 247 training sessions being conducted in 3 consequent sessions. Ministry of Health, as a healthcare provider for the trainees in the camps, implemented several healthcare services to ensure the health of the trainees while in the camps. The services comprised of the health risk assessment of the camps and intervention action, medical services and health education of HIV/AIDs.

The inspection of PLKN camps is a routine activity to ensure the sanitation and hygiene of premises. In general, 192 health risk assessments done in 2008. The majority (50% or 96 assessments) of the assessments gave an excellent score with low risk of diseases, while a small number of camps (6.3% or 12 assessments) gave a score less than 50% and were directed to make improvements.

Health risk identified in 2008 assessments were:

1. Camps’ canteen operated by food handlers without proper food handlers training.
2. PLKN camps using untreated water for non drinking purposes.
3. PLKN camps with low sanitation and hygiene status which exposed the trainees to the diseases.

There were 19 episodes of diseases which occurred in PLKN camps for the year 2008. The major contributors were food poisoning (42.1% or 8 episodes), rubella (21.5% or 4 episodes), conjunctivitis (10.5% or 2 episodes), Influenza-like Illness (10.5% or 2 episodes), viral fever (10.5% or 2 episodes) and Dengue (5.3% or 1 episode).

A total of 247 health education sessions regarding HIV/AIDS were conducted in 2008 throughout 3 consequent training sessions. In order to strengthen the assessment practice, Disease Control Division has produce a guideline of PLKN Health Risk Assessment and a standardise format for the assessment.

Healthy Eating

Healthy eating is advocated in all camps to improve the trainees' health status through consuming safe, nutritious and quality food. The menu for the six daily meals provided to the trainees was revised based on the caloric and nutrient needs of the adolescents, resulting in a total of 320 healthy menus for a four-week cycle, including vegetarian menu.

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 neighboring hospitals. A total of 16 health clinics continue their operational hours till 9.30pm. The number of cases treated at clinics during the extended hours had steadily increased over the months as shown in Figure 16.

FIGURE 16
NUMBER OF PATIENTS SEEN IN HEALTH CLINICS DURING EXTENDED HOURS IN 2008

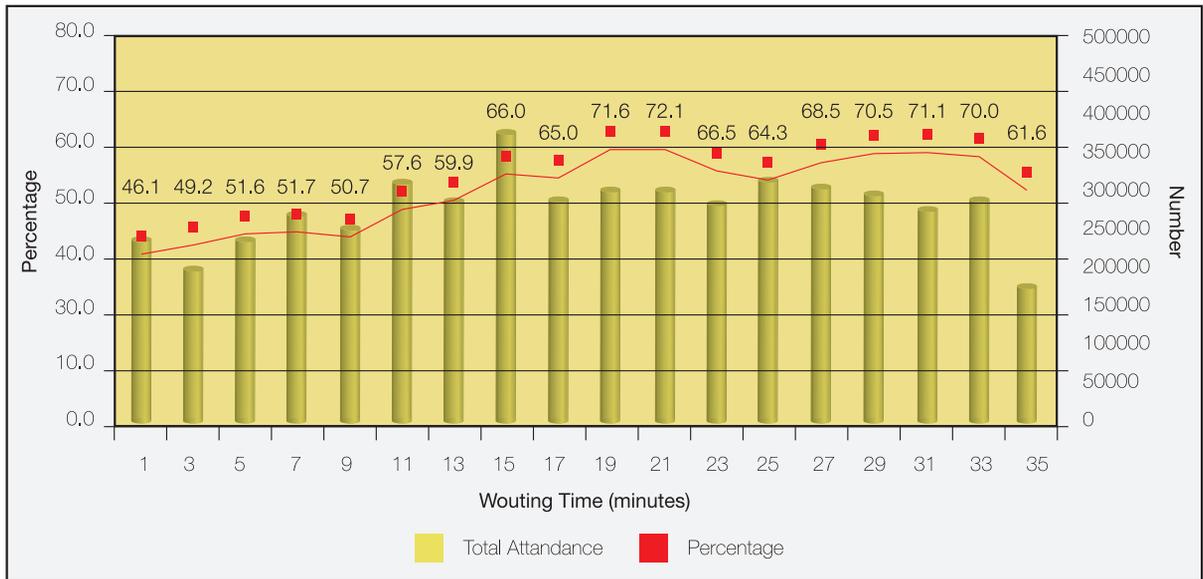


Source: Family Health Development Division, MoH

Monitoring of waiting time in health clinics (eMASA)

This was started in May 2008 and by the end of December 2008, 90% (834 out of 929) of the eligible facilities (health clinics, outpatient clinics and non-trauma emergency clinics of hospitals) monitored the waiting time by using the web-based "eMASA" application. More than 60% of the clients waited less than 30 minutes before being treated by the health care provider.

FIGURE 17
 PERCENTAGE OF CLIENT ACHIEVING WAITING TIME <30 MINUTES VS TOTAL ATTENDANCE, 2008



Source: Family Health Development Division, Ministry of Health

Routine Medical Examination (RME)

In 2008, about 21,616 civil servants were examined where 6,958 (32.2%) and 6,697 (52.9%) were identified with morbidities and referred for further assessment respectively as compared to 2007. A guideline on general medical examination has been developed, with inputs from the relevant agencies, and will be circulated as a reference.

Advisory Panels for Health Clinics

The members for the Advisory Panels for the new term 2009-2011 was appointed by the Health Minister in phases from 2008 to 2009. A total of 1,026 members were appointed.

Primary Emergency Care Services

To further improve the delivery of primary emergency care services at health clinics, the upgrading of physical infrastructure and human resource training were continued. In 2008, there were 14% (113) of treatment rooms and 54 ambulances at health clinics were upgraded. Four training courses were conducted for paramedics and ambulance drivers involving 212 staff. The trainings were jointly organised by the Public Health Institute, Family Health Development Division, A&E Department of Hospital Sultanah Bahyah, Alor Star and Selangor State Health Department. The call centre network has 26 main centres based in hospitals and 235 health clinics providing ambulance response throughout the country.

Radiology Services

In 2008, there were 134 clinics providing radiology services. Of these, 86% of the radiographer posts were filled. A total of 371,905 X-ray examinations were performed in 2008, with chest X-rays the most commonly done at 201,366.

Pharmacy Services

The pharmaceutical services are a mainstay of primary health care services. More than 20.5 million prescriptions were produced annually (20,536,809 in 2008 and 20,507,072 in 2007). Methadone Maintenance Therapy clinics had totalled 25 in 2008, an increase of 25% from 2007. In 2008, the electronic clinic procurement system had been implemented in 679 clinics as compared to 598 in 2007.

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 2008, there were 1,365,520 patients registered with TPC System with 53% male and 47% female. The ethnic composition was made up of 50% of Malays, 19% of Chinese, 9% of Indians and 21% of indigenous groups from Sabah and Sarawak. The majority were in age group 0-19 (35%) followed by 20-29 (19%). Records showed that majority of the patients came for curative treatment (70%) and 24% came for wellness purposes.

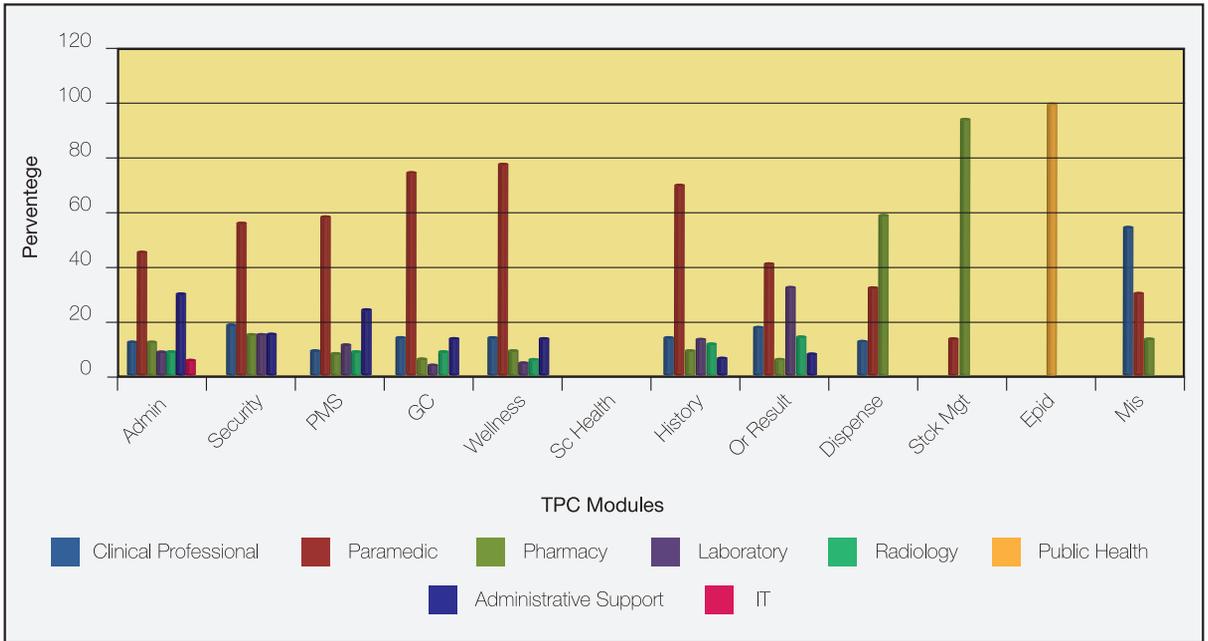
In 2008, 372 tele-consultation requests were made which involved 4 hospitals and 58 health clinics in Johor, Sarawak and Perlis, and of those, 368 responded via the TPC System. Tele-consultation was performed for Continuous Medical Education (CME), Counseling and Patient Education, Diagnostic Assistance, Management Assistance and on Patient Request.

The top common diagnosis for 2008 differed in every state. However, there were a few common diagnoses seen across all the states. These included chronic diseases such as diabetes and hypertension. Upper respiratory tract infection was also commonly seen followed by fever and headaches. Johor had the highest number of chronic diseases while Perlis had the highest number of acute nasopharyngitis cases seen.

Tele Primary Care (TPC) is the back-end application used in health clinics under the electronic-Kuala Lumpur (eKL) initiative, specifically in Selangor and WPKL. By the end of 2008, all the health clinics were already registering patients into TPC. Throughout 2008, the front end i.e. e-Appointment system was built with inputs from the clinic users.

The TPC Proficiency Survey on general ICT skills and aptitude of using the various TPC modules was conducted in 2008. The survey showed that the majority of staff were moderately proficient in using the modules.

FIGURE 18
 PROFICIENT GROUP BREAKDOWN BY CATEGORY IN ALL STATES FOR 2008



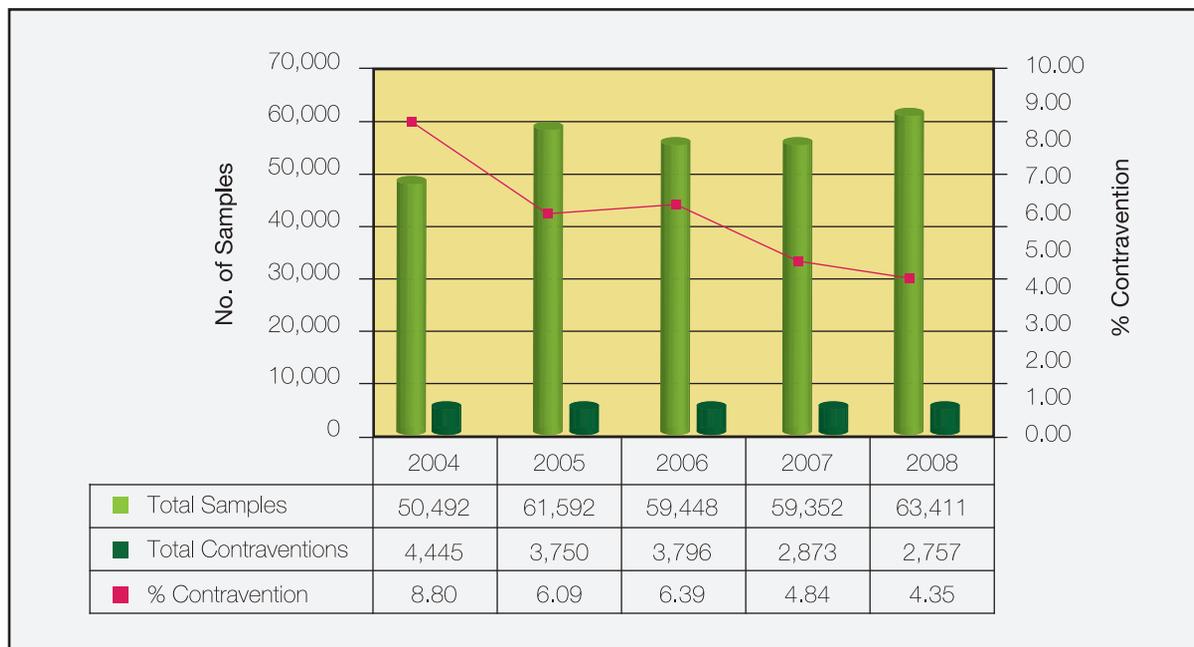
Source : Family Health Development Division, Ministry of Health

FOOD SAFETY AND QUALITY ACTIVITIES

Food Sampling

In 2008, a total of 63,411 food samples were taken for analysis and 2,757 (4.35%) of the samples contravened certain requirements under Food Act 1983 and Food Regulations 1985 (Figure 19). Contravention percentage is decreasing since 2004 i.e. from 8.8% to 4.35% in 2008. A total of 536 offenders were fined to a sum of RM909,290.00 and 10 offenders were jailed. Meanwhile, 90 offenders were discharged not amounting to acquittal and 10 offenders were acquitted.

FIGURE 19
FOOD SAMPLING, 2004 - 2008

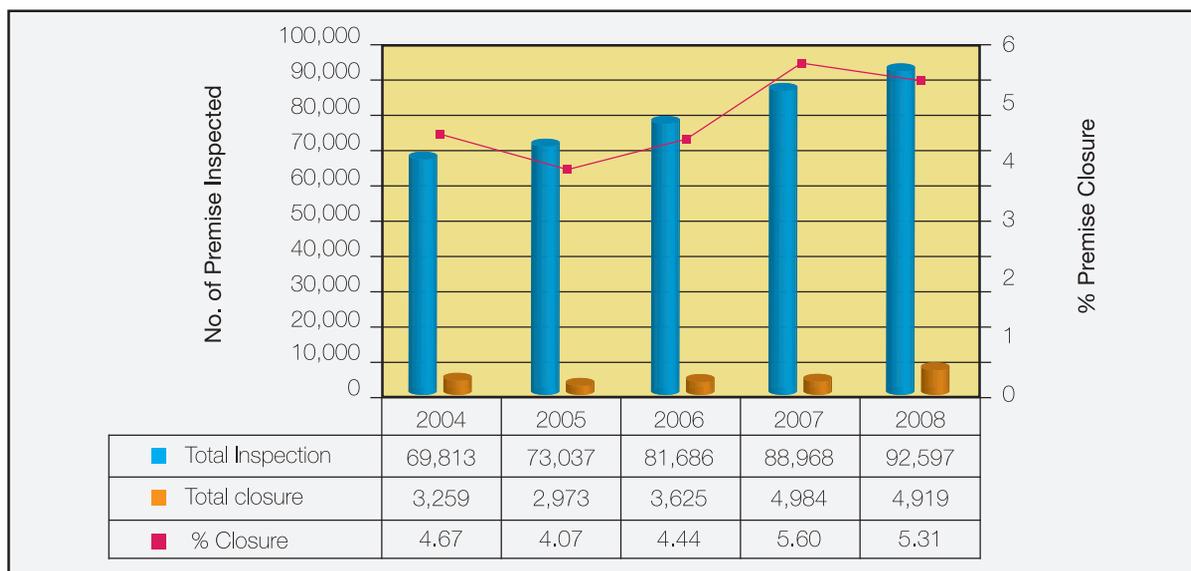


Source: Food Safety and Quality Division, MOH

Inspection and Closure of Food Premises

In 2008, a total of 92,597 food premises were inspected and 4,919 unsanitary food premises were closed under Section 11, Food Act 1983 (Figure 20).

FIGURE 20
INSPECTION AND CLOSURE OF FOOD PREMISES, 2004 - 2008



Source: Food Safety and Quality Division, MOH

Pesticide Residue

In 2008, a total of 5,900 food samples (Figure 21) were taken for pesticide residue analysis in which 3,373 of the samples were vegetables and 2,527 remaining samples were fruits. Results of the analysis indicate that 138 (2.34%) of the vegetable samples and 150 (2.54%) 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 21
SAMPLING OF FRUITS AND VEGETABLES FOR PESTICIDE RESIDUE, 2004 - 2008



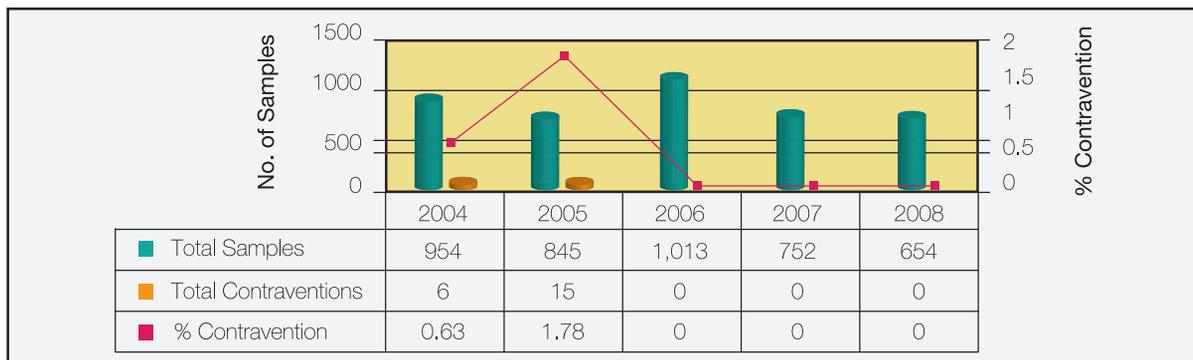
Source: Food Safety and Quality Division, MOH

DRUG RESIDUE

Nitrofuran

A total of 605 poultry samples and 40 egg samples were taken for analysis of nitrofuran residue and no contravention was detected (Figure 22).

FIGURE 22
SAMPLING OF POULTRY AND EGGS FOR NITROFURAN ANALYSIS, 2004 - 2008

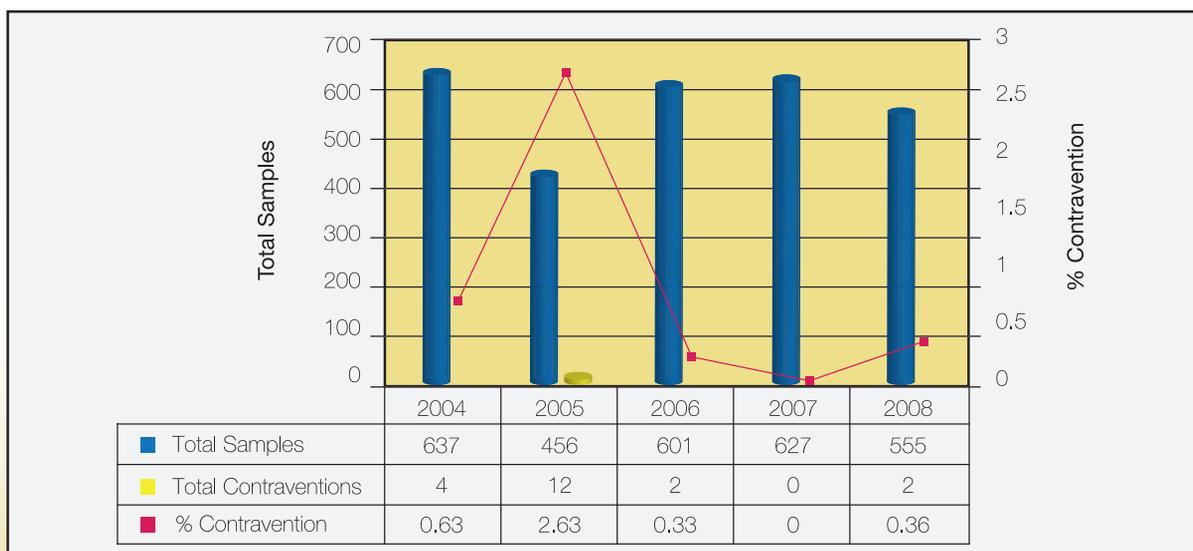


Source: Food Safety and Quality Division, MOH

Chloramphenicol

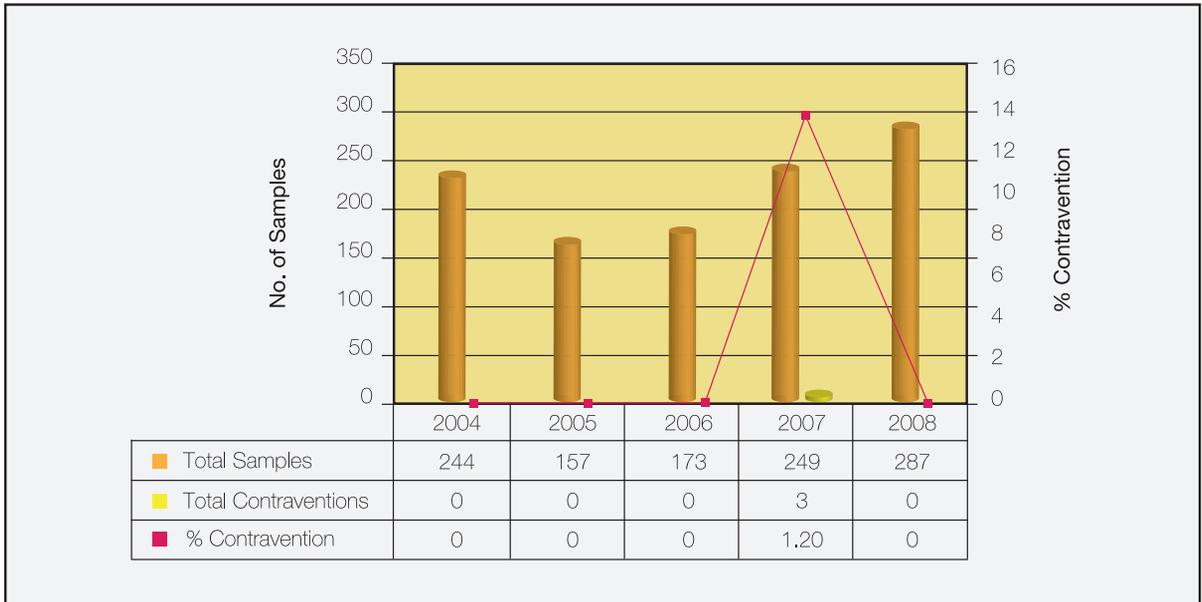
A total of 555 poultry samples were taken and 2 (0.36%) samples were detected to contain chloramphenicol (Figure 23). On the other hand, no contravention was detected in all 287 fish samples taken (Figure 24).

FIGURE 23
SAMPLING OF POULTRY FOR CHLORAMPHENICOL, 2004 - 2008



Source: Food Safety and Quality Division, MOH

FIGURE 24
 SAMPLING OF FISH FOR CHLORAMPHENICOL AND BETA-AGONIST, 2004 - 2008



Source: Food Safety and Quality Division, MOH

In 2008, a total of 983 samples were taken for beta-agonist analysis (Figure 25). These include ham (409 samples), beef (363 samples), lamb (114 samples) and duck (97 samples). Only 1 sample (0.10%) i.e. a ham sample was detected positive for beta-agonist.

FIGURE 25
 MONITORING OF BETA-AGONIST, 2004 - 2008



Source: Food Safety and Quality Division, MOH

LICENSING ACTIVITIES

Natural Mineral Water

Only 24 out of 44 licensees were still active in 2008. 22 of the 24 licenses are for local sources while the remaining licenses are for foreign sources. Meanwhile, 13 natural mineral water licenses were revoked in 2008 which involved 7 licenses for local sources and 6 licenses for foreign sources. There were 5 applications for natural mineral water license received but no new licenses were issued during the period.

Packaged Drinking Water

Until 2007, a total of 173 applications for packaged drinking license were approved. However, only 157 licensees remained active as at end of 2008.

Non Nutritive Sweetener

In 2008, a total of 26 licenses for non nutritive sweetener were issued which contributed to RM4,750 in fee collections.

Domestic Enforcement Activity

A total of nine (9) enforcement operation activities were carried out during the year 2008 as shown in Table 7 below.

TABLE 7
OPERATIONS CARRIED OUT IN 2008

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 and Quality Division, MoH

Melamine Crisis

During the 3rd quarter of 2008, the world was shocked with the melamine crisis. In Malaysia, the crisis management of melamine in food commenced on 22 September 2008 until 7 November 2008. In response to the melamine issue, melamine crisis operations room was established at the Food Safety and Quality Division (FSQD) and at the state level to facilitate monitoring and enforcement activities undertaken across the country involving imported food products suspected of containing melamine. Ministry of Health (MoH) immediately took proactive action by seizing all the tainted products and conducted monitoring activities by taking samples from factories and retail outlet for testing for the presence of melamine.

The monitoring and sampling activities conducted by MoH revealed that melamine was present in ammonium bicarbonate imported from China. As a result of this, effective from 1st December 2008, every consignment of ammonium bicarbonate imported from China was required to be accompanied with a Health Certificate issued by the Competent Authority to certify that the ammonium bicarbonate is of food grade standard and safe for use in the food industry. In addition to that, a copy of Certificate of Analysis (COA) from the approved laboratories by the Competent Authority was necessary to be submitted along with the Health Certificate.

During the whole period where the crisis was monitored, 2,981 food products with the value of RM5,065,577.42 from China suspected to contain melamine were sealed. 116 imported food products costing RM3,286,727.43 were rejected at the entry points. As at 3 November 2008, it was reported that 389 food products were analysed of which 38 products were found to be contaminated with melamine.

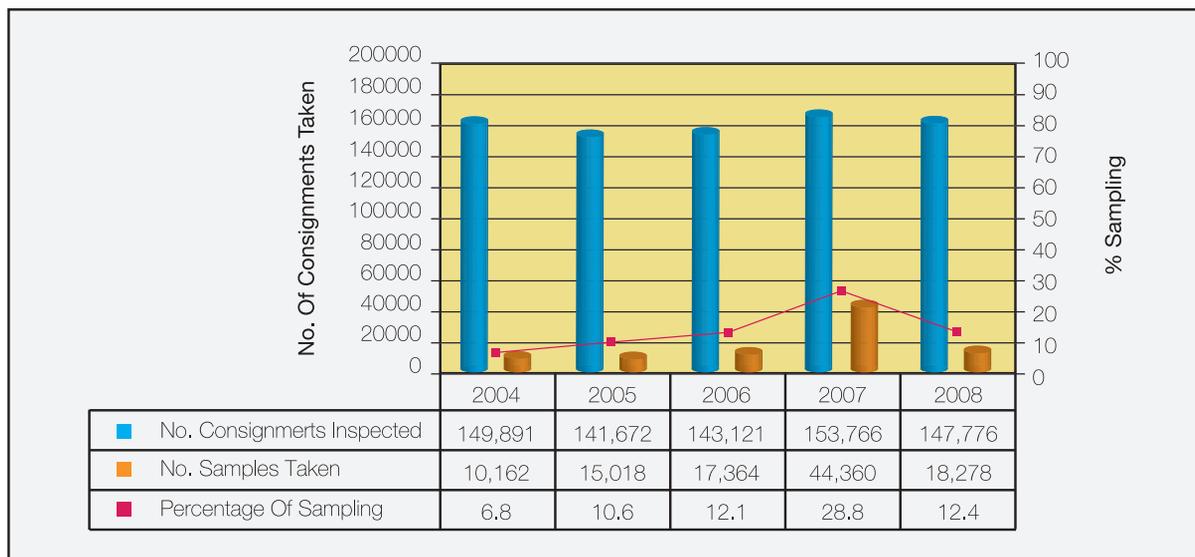
To keep the public informed on the status of melamine contamination, MoH had updated the report of melamine in the media and FSQD website regularly. In addition to that, hotlines were established in FSQD and all the State Health Departments to provide advisory assistance to the public. In an effort to disseminate the information regularly to the public on the status of monitoring, MoH had organised 6 press conferences, 8 dialogues and issued 34 press releases to address the issue pertaining to melamine.

In order to prevent the possible occurrence of melamine contamination, biscuit manufacturers were directed to implement risk-based food safety assurance system. To ensure that the products manufactured were safe for consumption, verification on the safety of the products was conducted on all the existing stocks of biscuits before it was allowed for sale. The FSQD in this regard has demonstrated its ability to act swiftly and effectively in resolving the melamine crisis in a relatively short period of time.

IMPORT ENFORCEMENT ACTIVITIES

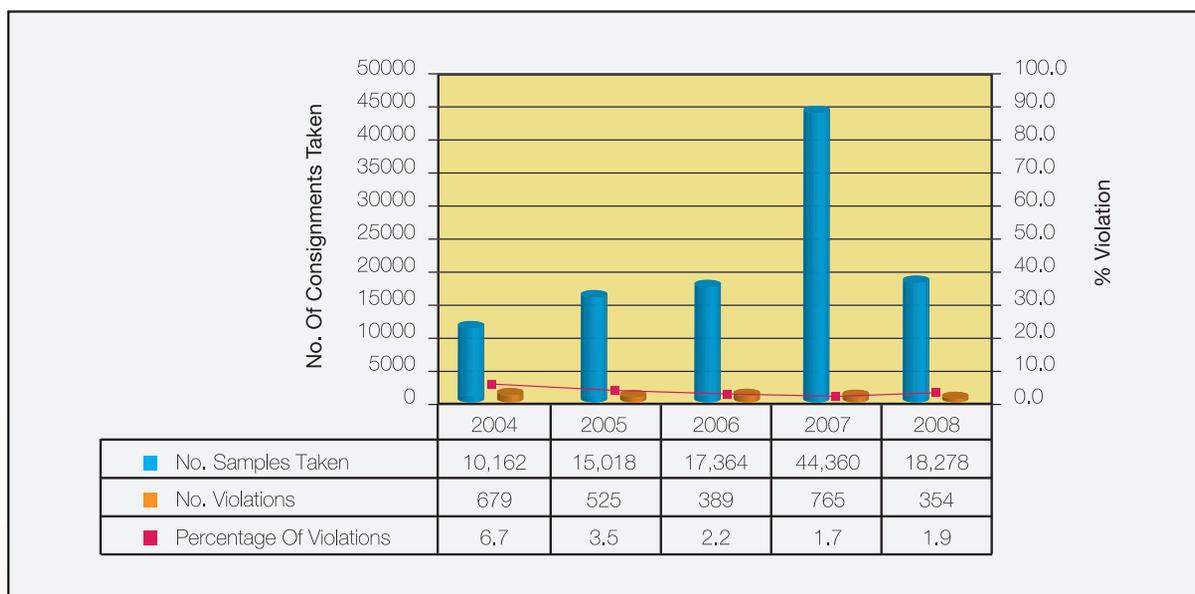
In 2008, 147,776 consignments were inspected and 18,278 samples (12.4%) were taken for analysis (Figure 26). From the total samples taken for analysis, 354 samples (1.9%) were found to contravene the Food Act 1983 and its Regulations 1985 (Figure 27).

FIGURE 26
TREND OF FOOD IMPORT CONSIGNMENT INSPECTION AND SAMPLING ACTIVITIES, 2004 - 2008



Source: Food Safety and Quality Division, MoH

FIGURE 27
TREND OF FOOD IMPORT VIOLATIONS, 2004 - 2008



Source: Food Safety and Quality Division, MoH

INDUSTRY ACTIVITIES

Exportation

An inspection mission had been carried out in Malaysia from 8 to 18 April 2008 by the Food and Veterinary Office (FVO) of European Commission to evaluate the Competent Authorities (CAs) i.e. Ministry of Health, Department of Fishery and Fisheries Development Authority of Malaysia (LKIM) in the control of fishery products along the supply chain. Nine (9) export establishments, three (3) fishing vessels, seven (7) official laboratories and an aquaculture farm were inspected during the mission. Based on the inspection mission findings, the official controls put in place by the CAs cannot provide the guarantee which meets the European Union (EU) requirements. As a result, Malaysia voluntarily de-listed 45 export establishments and a freezer vessel from the EU approved list in order to avoid the ban on the importation of fishery products from Malaysia.

In an effort to address the deficiencies identified in the inspection mission, Ministry of Health had taken corrective actions to ensure full compliance to the EU requirements so that the complying establishments can be re-listed in the shortest possible time. The corrective actions taken include the strengthening of the control system and the development of procedures and protocols for official controls namely inspection and approval of export establishments as well as sources of raw materials, issuance of health certificates and implementation of monitoring programmes.

Inspection of export establishments and transport vehicles were carried out for purposes of approval and to ensure continuous compliance to the EU requirements. For purposes of re-listing, the CAs focused on six (6) complying establishments which produced fishery products using local aquaculture raw materials and imported fishery raw materials obtained from EU approved sources. The establishments had full control over the sources of raw materials and ice as well as the transportation of raw materials. Both the CAs and the industry in the EU supply chain were fully committed in complying with the EU requirements so as to be able to re-export fishery products to the EU soonest possible.

Export Certificate

Export certificates namely Health Certificate, Free Sales Certificate, Non Genetically Modified Food (Non Starlink Corn), Malaysian Certification Scheme For Hazard Analysis and Critical Control Point (MCS), Good Manufacturing Practice (GMP) Certificate, Melamine Content Certificate as well as other certificates are issued to fulfill the various requirements of importing countries. The number of certificates issued is indicated in Table 8.

TABLE 8
NUMBER OF EXPORT CERTIFICATE ISSUED, 2004 - 2008

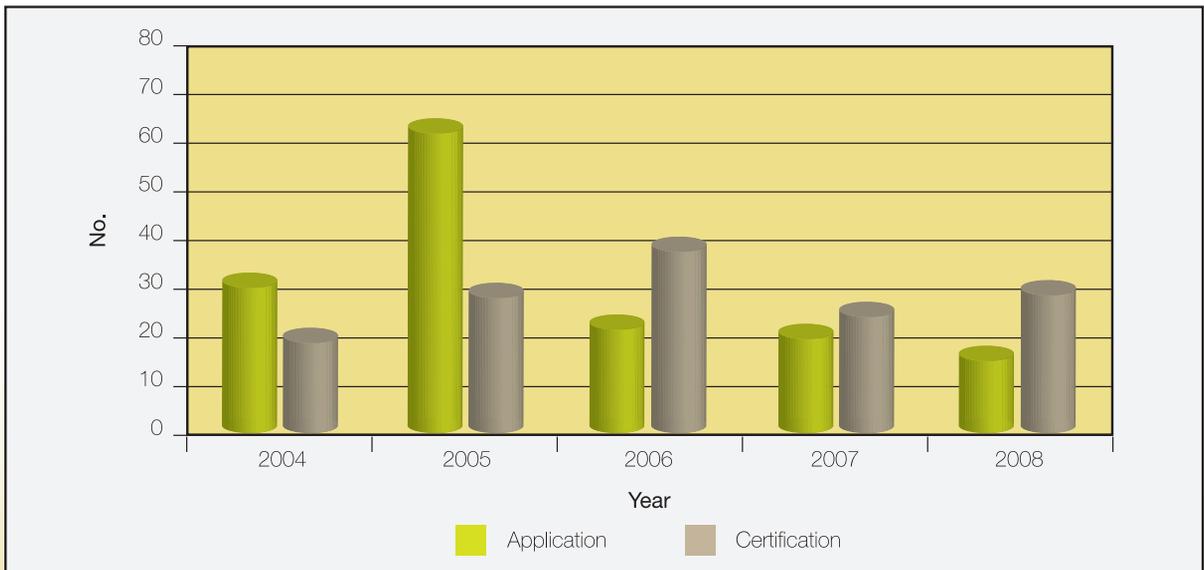
Type of Certificate	Year					Total
	2004	2005	2006	2007	2008	
Health Certificate	14,938	16,907	17,805	19,409	22,551	91,610
Free Sale Certificate	1,326	1,078	1,261	1,539	1,240	6,444
Non Genetically Modified Food (Non Starlink Corn)	142	50	64	56	65	377
Melamine Content Certificate	(initiated in 2008)				123	123
Total	16,406	18,035	19,130	21,004	23,979	98,554

Source: Food Safety and Quality Division, MoH

Malaysian Certification Scheme For Hazard Analysis of Critical Control Point (MCS)

Malaysian Certification Scheme For Hazard Analysis and Critical Control Point (MCS) was introduced by the Food Safety and Quality Division (FSQD) at the end of 1997 to fulfill the requirements for the exportation of fish and fish-based products to the European Union (EU) and other products to the United States of America. To date, 207 food industries are certified. To strengthen the MCS, FSQD is collaborating with SIRIM QAS International Sdn. Bhd. Other collaborations of SIRIM QAS International Sdn. Bhd include the integration of the HACCP-ISO system under the Integration Certification Scheme ISO 9000/HACCP which was launched in 2002. This is beneficial to industries especially those involved in exports as the integration scheme expedites the accreditation process. Figure 28 showed the number of HACCP certified companies from 2004 to 2008.

FIGURE 28
APPLICATION AND CERTIFICATION OF HACCP, 2004 - 2008



Source: Food Safety and Quality Division, MoH

GMP (Good Manufacturing Practice) Certification Scheme

The Good Manufacturing Practice (GMP) Certification Scheme was launched by the Health Minister on 19 December 2006. To date, 14 food industries are certified. This scheme was developed based on the request for GMP certificates by many importing countries as well as requests from small and medium enterprises (SMEs) in Malaysia. This certification schemes will enhance consumers' confidence that the food produced by SMEs are safe. To facilitate the certification process, 'Guidelines on GMP' and 'Guidelines on GMP Certification Scheme' have been developed.

Food Handlers Training Programme

The objective of this programme is to provide knowledge and create awareness of the food handlers on the importance of food hygiene, personal hygiene and sanitary premises. This programme, managed and implemented by *Akademi Latihan Kebersihan dan Keselamatan Makanan (ALKEM)*, had, until December 2008, appointed 96 SLPM and trained 47,327 food handlers. FSQD certifies SLPM and conduct surveillance on ALKEM's activities.

Food Hygiene and Safety Policy In Institution

FSQD plays an active role in ensuring the hygiene and safety of food prepared in institutions such as school canteens and hostel kitchens. Several programmes and activities for schools were developed through joint efforts between the Ministry of Health (MoH) and the Ministry of Education (MOE) such as the *Pemeriksaan Sendiri di Kantin dan Dapur Asrama Sekolah* programme (KENDIRI) and school milk programme.

The KENDIRI programme was fully implemented in July 2008 by the Ministry of Education (MOE). The important element is the monitoring by school teachers and through this programme, food handlers are more responsible and sensitive to the hygienic requirements during the preparation and handling of food. The school administration would be able to identify risk factors that contribute to food poisoning objectively and corrective actions could be undertaken.

FSQD also continues to ensure that the school milk programme is safe. The activities involved auditing of the HACCP system of the companies and verification of the storage of milk in school.

LEGISLATION (STANDARD DEVELOPMENT) ACTIVITIES

The Technical Advisory Committee on the Food Regulations 1985 (JPPM)

JPPM is the committee which endorses amendments to the Food Regulations 1985. The committee consists of representatives from government bodies, universities, industries as well as professional bodies. There are six (6) working groups under JPPM as follows:

a) Working Group on Nutrition/Health Claims/Advertisement (JKKN)

This working group held twelve (12) meetings in 2008. Two (2) applications for the new nutrients listing into the Table 1 of the Twelfth Schedule (permitted nutrient supplement) were received and one of which is D-ribose was approved under the category of other food component. For nutrient function claim, seven (7) applications were received, out of which only four (4) applications were approved and three (3) applications were rejected. There was also approval for amendments on the minimum level for Inulin claim. The committee also discussed proposals for the amendment of regulation 389 (infant formula) for the purpose of harmonisation with Codex which consist of Section A: Infant Formula and Section B: Infant Formula for Special Medical Purposes.

b) Working Group on Food Additives and Contaminant

This working group held five (5) meetings in 2008. There was no new application for food additive received for the year. The applications that have been reviewed were neotame, chlorine dioxide and natamycin. Contaminant issues that were discussed included mycological contaminants and proposal for amendment of the 14th A Schedule on the maximum permitted proportion of 3-Monochloropropane-1,2-Diol (3-MCPD) in foods.

c) Working Group on Microbiology

The committee held two (2) meetings in 2008. The issues discussed included amendments to Regulation 26A, Twelfth A Schedule on probiotic cultures added to food and Regulation 26B, Twelfth B Schedule on microbial cultures for food fermentation. Three (3) applications were received from industries of which two (2) applications have been approved and another is pending due to additional supporting documents to be provided by the industry.

d) Working Group on Food Commodity Standard

This working group had four (4) meetings in 2008. Thirteen (13) applications for amendments of current standards and proposed new standards in the Food Regulations 1985 were received from the industries. Applications for amendments to the current standards which are currently being reviewed by the committee are amendments to standards for oyster sauce, ice cream, fat spread, soy bean milk, shellac as an additive in hard and soft candy and chewing gum, vodka, benzoic acid as preservative in fish ball and fish cake, surimi based product and cocoa. Apart from those, applications for new standards being reviewed by the committee are standards for anchovy in hot sauce, thick sauce, canned fish with other food and processed filled cheese.

e) Working Group on Drinking Water

This working group which was formed in 2005 held two (2) meetings specifically to discuss on the requirement for licensing of ice factories in Malaysia to meet the requirements of the European Union (EU) for export of fish and fish product.

f) Working Group on Genetically Modified Food (GMF)

Expert Working Group on Genetically Modified Food which was formed in 2005 to draft Regulation on Genetically Modified Food held three (3) meetings in 2008. The draft regulation has been sent to the Legal Advisor for vetting.

ii) Draft Gazette to the amendment of the Food Regulations 1985

The draft gazette for the amendment of the Food Regulations 1985 for the year of 2008 includes Regulation 18E, 25, 25A, 32, 63, 65, 89, 91B, 106, 109, 113, 116, 146, 147, 160, 167, 185, 186, 225, 269A, 333, 390, 393, 395, Table 2 of the 5A Schedule, Table 3 of the 5A Schedule, Table 1 of the 6 Schedule, Table 2 of the 7 Schedule, Table 2 of the 11 Schedule, Schedule 11A, Table 1 of the 12 Schedule, Schedule 16, Schedule 16AA, Table 2 of the 17 Schedule, Table 1A of the 21 Schedule, Table 3 of the 21A Schedule.

iii) 'Food Drug Interface' (FDI) Product Classification

In 2008, a total of 955 applications have been discussed in the "Food Drug Interface (FDI)" Product Classification Committee. Products are either classified as food or pharmaceutical products according to the "decision tree" that is under the jurisdiction of either the Food Safety and Quality Division or the National Pharmaceutical Control Bureau, Ministry of Health.

iv) Labelling and Food Labelling Advisory Services

In 2008, 78 labels were vetted by Food Labelling Advisory Committee to ensure compliance with the provisions in Food Act 1983 and Food Regulations 1985.

v) Food Import Regulation

Four (4) meetings were held in 2008 for updating Food Import Regulation.

vi) Food Irradiation Regulation

This committee held one (1) meeting in 2008. There was no application received in 2008. The draft Food Irradiation Regulation was also discussed in the committee and it has been sent to the Legal Advisor for vetting.

vii) Food Hygiene Regulation

Six (6) meetings were held in 2008. The draft regulation has been submitted to the Attorney General Chambers for gazettelement.

viii) Food Analyst Act and Food Analyst Regulation

A detailed discussion with the Legal Advisor and Attorney-General Chambers was held in 2008. The draft regulation has been submitted to the Attorney General Chambers for vetting.

CODEX AND INTERNATIONAL ACTIVITIES

The Food Safety and Quality Division (FSQD) which acts as 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.

In 2008, Malaysia participated in 16 Codex meetings at the international level. The Malaysian delegation consisting of representatives from the Ministry of Health and various other agencies are selected based on expertise in relevant disciplines so as to ensure Malaysia's position on issues of interest is safeguarded.

At the national level, two (2) NCC meetings, 40 NCSC meetings including WG meetings and nine (9) TF meetings were held in preparation for and as follow-up to international Codex meetings.

At the 31st Session of the Codex Alimentarius Commission (CAC) in Geneva, Switzerland, from 30 June to 4 July 2008, Malaysia contended for the post of Chairperson of the CAC, against the United States of America.

Having held the post of Vice-Chairperson of the CAC for 3 consecutive years, for the terms 2005-2006, 2006-2007 and 2007-2008, Malaysia saw this opportunity as the best time to take another step further in her involvement in Codex.

Despite all efforts in running for the post, the election which proceeded via a secret ballot, concluded with the United States of America attaining the majority of votes and was subsequently elected as the new Chairperson of the CAC.

FSQD also plays an active role at the ASEAN level, in the capacity as the Coordinator of the Food Inspection and Certification Programme under the ASEAN Expert Group on Food Safety (AEGFS), National Focal Point of the ASEAN Task Force on Codex (ATFC), National Focal Point for the ASEAN Consultative Committee on Standards and Quality (ACCSQ) Prepared Foodstuff Product Working Group (PFPWG) and National Coordinator of the ASEAN Coordinating Committee on Food Safety (ACCFS). In 2008, Malaysia participated in five (5) meetings and hosted three (3) workshops at the ASEAN level.

FSQD is also responsible as the National Enquiry Point for all Sanitary and Phytosanitary Measures (SPS) activities and acts as the Regulatory Agency that is responsible for providing technical inputs on food safety to the WTO/SPS National Committee under the Department of Standard Malaysia (DSM). In this role, FSQD attended two (2) WTO/SPS National Committee meetings in 2008, held at DSM on 28 February and 16 June 2008.

In 2008, FSQD engaged in five (5) Free Trade Agreement (FTA), bilateral and multilateral negotiations and provided inputs pertaining to SPS issues on food safety.

NUTRITION SPECIAL PROGRAMME

National Plan Of Action For Nutrition Of Malaysia (NPANM)

NPANM is a phased ten year strategic plan which seeks to achieve the objective of the National Nutrition Policy of Malaysia. In 2008, advocacy of NPANM 2006-2015 was carried out at the national level for the food industry. At the state level, two workshops on NPANM 2006-2015 were carried out in Sabah and the northern peninsular region namely, Perlis, Kedah and Pulau Pinang. These workshops were attended by State Education Department and State Health Department staff. The workshops led to the development of an Integration Plan to overcome malnutrition among school children. For 2009, advocacy will continue to be targeted at the Ministry of Education. Besides that, under NPANM, there are five Technical Working Groups (TWG) on Nutrition which comprise of:

i. Technical Working Group on Nutrition Policy Development

ii. Technical Working Group on Nutrition Guidelines

The Malaysian Dietary Guidelines which was published in 1999 was reviewed by the TWG on Nutrition Guidelines. The proposed dietary guidelines were based upon the current Recommended Nutrient Intake (RNI, 2005) which was formulated according to the average nutrient requirements of the Malaysian population and current scientific evidence for nutrient needs on a population basis. Projections for 2009 include the publishing of the new dietary guidelines and some educational materials relevant to the new guidelines.

iii. Technical Working Group on Nutrition Research

The TWG on Nutrition Research had compiled data consisting of titles of research projects in nutrition from year 2000-2008, produced by post-graduate students from all universities, government and also non governmental agencies. The available information will be used as a yardstick to determine needs for the upcoming Nutrition Priority Research in Malaysia, 2011-2015, for incorporation into the 10th Malaysia Plan.

iv. Technical Working Group on Nutrition Training

The TWG on Nutrition Training had conducted a nutrition training course for the Association of Registered Childcare Providers Malaysia. The objectives of this course were to increase the nutrition knowledge of the participants and to improve the management of child care centres from the aspect of nutrition. There were 36 teachers or child care providers from the association who took part in this course. All the participants had expressed satisfaction with the course.

v. Technical Working Group on Nutrition Promotion

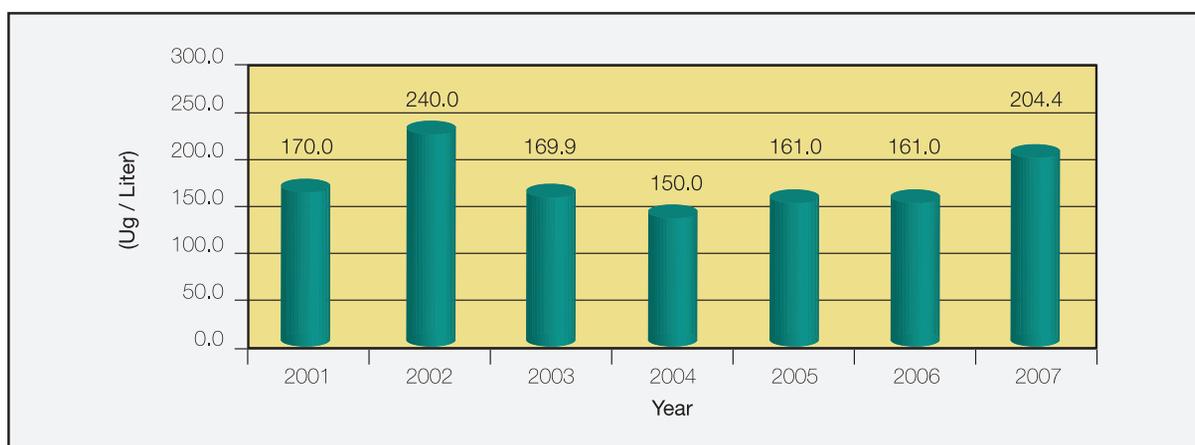
In planning for 2009, this TWG will focus on promoting and disseminating information to various agencies, in conjunction with the publishing of the new Dietary Guidelines.

PROGRAMME FOR THE PREVENTION AND CONTROL OF IODINE DEFICIENCY DISORDER (IDD)

In 2008, the National IDD Survey was conducted to assess the current status of IDD in Malaysia. In this survey, the median urinary iodine concentration amongst school children of 8 to 10 years was determined. The result of this survey will be used as a baseline to justify the need for Universal Salt Iodisation (USI) for Peninsular Malaysia.

Universal salt iodisation has been implemented in Sabah since 1999 and the monitoring started in 2001 (Figure 29). It has been proven as an effective strategy to help increasing urinary iodine to the optimal level (100-199 $\mu\text{g}/\text{litre}$). Sarawak has also implemented universal salt iodisation, which was gazetted on July 2008 under Subsection 285(3) Food Act 1983 and the Food Regulations 1985. The monitoring and enforcement will start in June 2009.

FIGURE 29
MEDIAN URINARY IODINE CONCENTRATION AMONGST SCHOOL CHILDREN AGED 8 TO 10 IN SABAH



Source: State Health Department of Sabah

Health education has been carried out by health staff to promote iodine-rich food and the use of iodised salt. Distribution of iodised salt to pregnant mothers and malnourished children in endemic areas was continued. In 2007, 16,294 kilogrammes of iodised salt were distributed to 21,401 recipients.

FOOD FORTIFICATION PROGRAMME

Fortification of food with micronutrients is a valid technology for reducing micronutrient malnutrition. It is part of a food-based approach at a very reasonable cost. This strategy can lead to relatively rapid improvement in the micronutrient status of a population.

The National Technical Committee of Food Fortification was formed and a proposal paper on mandatory fortification of wheat flour with iron and folic acid was produced. The objective of mandatory fortification of wheat flour with iron and folic acid is to increase iron and folic acid intake amongst the population. The proposal had been approved by the Public Health Programme Exco Meeting and the Director General's Special Meeting. This proposal had also been approved in the National Food Safety and Nutrition Council chaired by the Minister of Health.

This Programme involves various government agencies and private entities such as Ministry of Domestic Trade and Consumer Affairs, Economic Planning Unit, Ministry of Finance, Ministry of International Trade and Industry and Ministry of Agriculture and Agro-based Industries, wheat flour millers and companies dealing in flour fortification.

HEALTH PROMOTION SPECIAL PROGRAMME

Let's Manage Stress

Healthy Lifestyle Campaign is a campaign that encourages the public to practice healthy eating, exercise and physical activity, not smoking, managing stress and reducing alcohol intake.

'Let's Manage Stress' was introduced as a package to implement the Healthy Life Style Campaign in 2008. This package was to enable the public to practice managing stress as one of the components in Healthy Lifestyle. It was aimed to make the target groups aware of the factors or causes of stress, know their own levels of stress and develop skills in managing stress. The main skills were to think and act positively, improve interpersonal communication and adapting to the environment. The tagline of the package was "Let's Manage Stress, Practice 10 B's" which underlined 10 ways to manage stress in the right way.

This package covered dissemination of information through the mass media, carnivals, health camps and "Managing Stress" skills training to specific target groups. The main target groups of the package were adolescents (secondary school students), adult workers and the elderly. A convoy of vehicles carrying the message "Let's Manage Stress" was used as publicity drive. This convoy was flagged off by the Honourable Minister of Health at Sekolah Menengah Kebangsaan Seri Permaisuri Cheras, Wilayah Persekutuan on 16th of June 2008. There were 14 carnivals and 1,244 health camps held at state levels. A total of 50 skills training sessions with 3,456 participants were conducted.

A survey was conducted involving 2,068 respondents at 14 locations of the carnivals. The respondents were adolescents, adults and elderly. The results of the survey were as follows: 76.9% of respondents have seen the vehicles, 95.8% said that the vehicles were attractive, 86.5% have seen the exhibition, 78.5% have watched the sketch, 69.5% did the DASS test and 65.3% have tried the mind therapy that was provided in these carnivals. The main sources of information for the visitors to know about the carnivals were through: health staff (53%), fliers (46%), television (42%) and banners (37%). Among the respondents in this survey, 80% of them expressed their desire to practice managing stress and more than 80% of them were confident in managing stress.

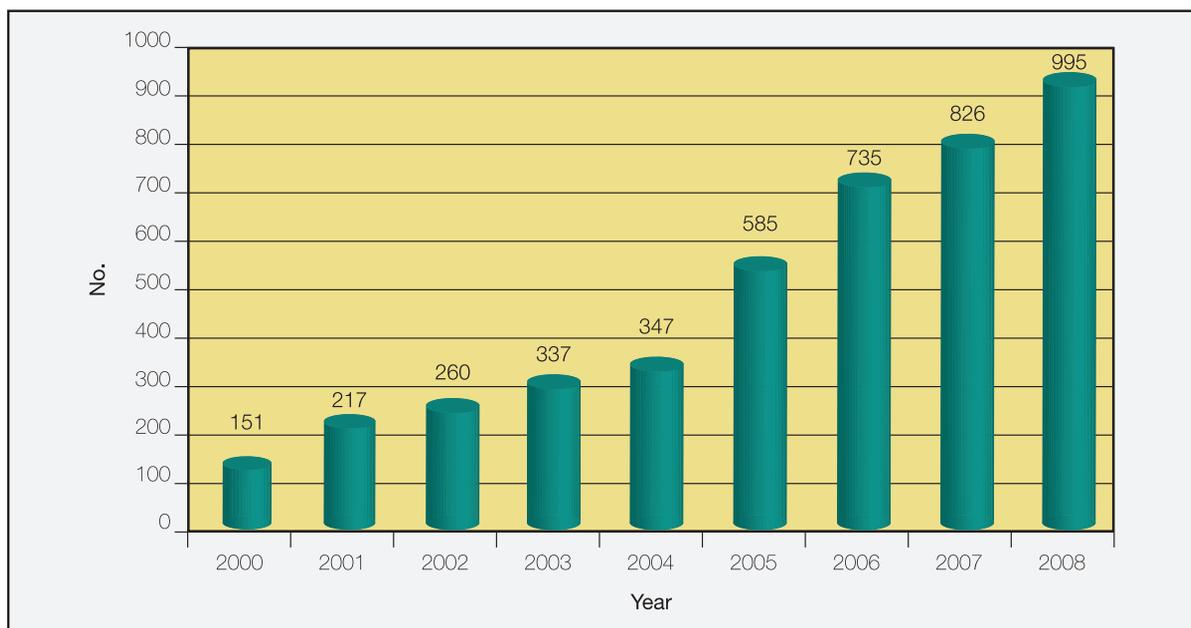
The Young Doctor Programme

The Young Doctor Programme is carried out at primary schools in order to enhance students with information and health skills to increase their self-empowerment. Health Education Division mainly carries out this Programme in collaboration with Sport, Art and Curriculum Division, Ministry of Education, Malaysia.

Young Doctor Clubs' Achievements

The Young Doctor Club has been implemented as a curriculum activity at primary schools. Members of this club, called "Young Doctors" are school students from Standard 4, 5 and 6. They will be given basic training on health to enable them to act as peer educators. They also will act as role models, promoters and motivators to their peers. The number of schools implementing the Young Doctor Club is increasing year by year. As of December 2008, 955 schools have already implemented the Young Doctor Club with 26,572 members.

FIGURE 30
NUMBER OF SCHOOLS IMPLEMENTING YOUNG DOCTORS CLUB, 2000 - 2008



Source: Health Education Division, MoH

Capacity Building

There are 227 facilitators throughout Malaysia who were given training in conducting Young Doctor Club activities based on the Young Doctor Club Curriculum Guidelines. This training is to empower the selected teachers (advisors) to educate “Young Doctors” through their school curriculum activities.

TABLE 9
BREAKDOWN OF TRAINED YOUNG DOCTOR FACILITATORS ACCORDING TO ZONE, 2008.

Zone	State	Date	MOE	MOH	Total
North & Centre	Perlis, Kedah, Perak, P. Pinang, Selangor, WPKL	16 - 19 March 2008	53	29	82
East Coast & South	Melaka, N. Sembilan, Johor, Pahang, Terengganu, Kelantan	13 - 16 April 2008	85	29	114
East Malaysia	Sabah, Sarawak W.P Labuan	27 - 30 April 2008	18	13	31
		Total	156	71	227

Source: Health Education Division, MoH

The Third National Young Doctors Club Convention

This was organized from 17th June to 20th June 2008 at Grand Water City Hotel, Malacca. This convention was to evaluate the ability, creativity, sensitivity and skill of the “Young Doctor” who acts as the agent in delivering health messages to the target group. There were 1,250 participants from 15 states who joined the convention, which included 750 ‘Young Doctors’, 250 teachers (advisors) and 250 health staff.

Website www.drmuda.gov.my

The Director of Health Education Division launched this website on 18th June 2008. It is one of the communication channels between ‘Young Doctors’ and teachers (advisors). This website also provides teaching materials to be used by the Young Doctor Club’s teachers (advisors) at school.

PUBLIC HEALTH QUALITY IMPROVEMENT ACTIVITIES

In 2008, Public Health quality improvement activities included National Indicator Approach (NIA), Counter Service Quality Award, MS ISO 9001:2000 Certification and Quality Improvement Efforts.

National Indicator Approach (NIA)

Since July 2007, sixteen (16) indicators were monitored, of which five of the indicators belong to the support services respectively (pathology, radiology and pharmacy). The summary of the NIA achievement is as shown in Table 10.

TABLE 10
NIA ACHIEVEMENT 2007 AND 2008

No.	Indicator	STD	ACHIEVEMENT	
			2007	2008
1.	TB Sputum Conversion Rate (SCR)	85%	91.7%	93.2%
	Peninsular Malaysia		84.5%	89%
	Sabah		95.8%	92.7%
	Sarawak			
2.	Dengue Notification Time Index	80%	94.6%	94.3%
	Peninsular Malaysia		98.3%	89.6%
	Sabah		97.9%	97.5%
	Sarawak			
3.	Dengue Outbreak Control Index (DOCI)	100%	89.1%	93.5%
	Peninsular Malaysia		98.2%	100%
	Sabah		85%	86.7%
	Sarawak			
4.	Malaria Deaths	0 death	6	12
	Peninsular Malaysia		9	12
	Sabah		3	5
	Sarawak			
5.	Incidence Rate of Needlestick Injuries (NSI) among the health care workers (HCW) within the MoH Malaysia	0 Cases	1.6 per 1000 HCW	4.4 per 1000 HCW
6.	Incidence Rate of Severe Neonatal Jaundice	<100 cases per 10000 live births	103.2	93.75
	Peninsular Malaysia		84.4	82.7
	Sabah		10.1	94.6
	Sarawak			
7.	Visual defect detection rate among standard one schoolchildren	> 5%	5.8	5.3
	Peninsular Malaysia		4.3	5.7
	Sabah		3.8	9.3
	Sarawak			

No.	Indicator	STD	ACHIEVEMENT	
			2007	2008
8.	% of Asthmatic patients received appropriate management at the health clinic	% respondents achieving 6 / 6	23.3% (median) achieving the standard	30% (median) achieving the standard
9.	% of Diabetic patients receiving appropriate management at the health clinic	% respondents achieving 80%	14.4 (median) achieving the standard	15 (median) achieving the standard
10.	% of clients perceived the service provided as client friendly	% respondents voting >75%	80.5 (median) achieving the standard	84 (median) achieving the standard
11.	Proportion of radiograph accepted		Monitered annually by the relevant support service together with Family Health Development Division, MoH	
12.	TTAT for Full Blood Count Test (Automation and Manual)			
13.	TTAT for Urine FEME			
14.	Proportion of wrongly filled prescription detected before dispensing			
15.	Proportion of prescription intervened by the pharmacist			
16.	Rate of closure of Unsanitary premises:			
	Pen. Msia		90.5	98.3
	Sabah	>80%	100	69.1
	Sarawak		100	

Counter Service Quality Award

The eighth series of the Award was conducted in 2008 using a new format; whereby for the first phase of judging, each state were represented by two presenters (one for each category i.e hospital and health clinic) where they had to give a short presentation on their facilities followed by Q & A session. Five top facilities for each category (hospital and health clinic) will be selected for the second (final) phase involving site visits. The emphasis was on client's satisfaction and quality of counter services. The winner for clinic category in 2008 was Klinik Kesihatan Putrajaya, JKWP Kuala Lumpur followed by Klinik Kesihatan Putatan, Sabah as runner-up and Klinik Kesihatan Port Dickson, Negeri Sembilan in the third place. For hospital category, Hospital Kuala Krai, Kelantan was the winner followed by Hospital Tuanku Jaafar Seremban, Negeri Sembilan as runner-up and Hospital Tuanku Fauziah Kangar, Perlis in the third place.

Accreditation and Certification MS ISO 9001:2000

Public Health Programme strives to ensure all Health Divisions and Health District offices achieve MS ISO 9001:2000 certification status. Up to 2008, the Public Health Development section, Family Health Development Division and Disease Control Division has managed to acquire the certification while both the Health Promotion Division and Food Safety and Quality Division are in the process of certification. Meanwhile, 77 (71.03%) District Health Offices has managed to obtain the certification.

Quality Improvement Efforts

For 2008, Quality Improvement efforts that have been implemented involved preparation of Key Performance Indicators, enhancing Quality Assurance Programmes, activities related to health economy and improving skills in scientific writing.

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

Public Health Physician

The gazettement of Public Health Physician started in 2000. In 2008, 85 officers have been gazetted as Public Health Physician and this contributed to a total number of 505 Public Health Physicians in the country.

Family Medicine (FMS)

Gazettement of Family Medicine Specialist is done by Family Health Development Division. The number of Family Medicine Specialists (FMS) serving within the Ministry of Health until 2008 was 162, an increase of 8% as compared to 2007. However, because there were more posts in 2008 as compared to 2007, there was an increase of only 1% in the filling of the posts.

WAY FORWARD

In line with the midterm review of the 9th Malaysian Plan and the various International obligations, the strategies and activities related to the prevention and control of diseases will be further strengthened. This is in addition to the anticipated future challenges posed by zoonotic, novel and emerging diseases. 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 2008, 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.

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ORAL HEALTH PROGRAMME

ORAL HEALTH

INTRODUCTION

The Oral Health Division (OHD) of the Ministry of Health (MoH) is the lead agency in providing oral healthcare for the Malaysian population. The OHD in its endeavor to assist the nation to achieve a developed nation status by year 2020, has a well designed organizational structure to facilitate effective and efficient delivery of oral healthcare services. The OHD is headed by the Principal Director of Oral Health and is divided into two main sections: Oral Health Development and Policy; and Oral Health Promotion, Regulation and Practice of Dentistry.

The roles and responsibilities of the OHD include formulation and development of policies related to the oral health of the general population, management of oral health services which includes the planning, organizing, monitoring and evaluation of primary and specialist healthcare as well as promotion of oral health. The Malaysian Dental Council (MDC), housed within the OHD undertakes the enactment and enforcement of laws and regulations regulating the practice of dentistry. The MDC utilizes the operating budget of the OHD.

Strategies and activities of the public sector oral health programmes have been meticulously planned and reviewed with the ultimate aim of achieving optimum oral health for improved general health and enhanced quality of life. These activities focus on specific target groups such as preschool children, primary and secondary school children, antenatal mothers and the mentally and physically disadvantaged groups. The increase in the elderly population aged 60 years and above has also led to the implementation of oral healthcare programmes for this group. In addition, the findings of the National Oral Health Survey for preschool children in year 2005 have indicated that a significant proportion of 5 year olds are afflicted with dental caries. In response to this, a structured programme for Toddler Oral Healthcare was developed and launched in 2008.

To ensure better implementation of planned activities, the OHD functions in collaboration with other government agencies, private dental practitioners, the Malaysian Dental Association and other professional bodies, universities, industries, nutritionists, water authorities, consumer associations and other related agencies.

ACTIVITIES AND ACHIEVEMENTS

Professional Development

With increasing numbers of dental officers pursuing postgraduate degrees, efforts are continually undertaken by the OHD to obtain recognition of these degrees.

- Recognition of Post Graduate Dental Qualifications

The following dental specialist qualifications were granted recognition in 2008:

- o Master of Science in Dental Public Health, University College of London, United Kingdom
- o Master of Science in Dental Public Health, Queen Mary, United Kingdom
- o Master of Science in Dental Public Health, King's College, United Kingdom
- o Membership of the Faculties of Dental Surgery of the Royal Colleges of Surgeons (MFDSRCS) and Master Program from United Kingdom
- o Membership of the Joint Dental Faculties of Surgery of the Royal College of Surgeons (MJDSRCS) and Master Program from United Kingdom
- o Fellowship of the Royal Australasian College of Dental Surgeons (FRACDS) and Master/Doctor in Clinical Dentistry from Australia and New Zealand
- o Master of Dental Surgery (Oral-maxillofacial Surgery) University Hong Kong
- o Doctor in Clinical Dentistry (Special Care Dentistry) University of Melbourne, Australia
- o Doctor in Clinical Dentistry (Special Care Dentistry), University of Otago, New Zealand
- o Master in Public Health (Oral Health) University of Malaya

- Recognition of the Dental Public Health Specialist

A proposal paper on Charting the Future for Dental Public Health Specialist in MOH was submitted for consideration by senior management in MoH. The DPH Specialist logbook was also completed as addendum to the proposal paper. A Technical Advisory Committee to gazette the DPH in MOH was established.

- Post Graduate Training for Dental Officers

Out of a total of forty (40) officers who pursued post graduate training, only twenty nine (29) were awarded Federal Scholarships; 8 for Oromaxillofacial Surgery, 7 for Orthodontics, 4 for Periodontics, 3 for Pediatric Dentistry, 2 for Restorative Dentistry and 5 for Dental Public Health. The remaining eleven (11) dental officers were self sponsored and one (1) was sponsored by Yayasan Sarawak.

- Post-basic Training for Dental Auxiliaries

Post-basic training in Orthodontics was conducted from June to December 2008 at the Childrens' Dental Centre and Dental Training College Malaysia in Penang. Twenty two (22) candidates enrolled and completed their course.

- Continuing Professional Development (CPD)

In-Service Training Programmes

- Financial Allocation under the 9th Malaysia Plan as well as resources from the operating budget were distributed to all states and institutions to be utilized for in-service training both locally and abroad as shown in Table 1.

TABLE 1
IN-SERVICE TRAINING PERFORMANCE (2008)

Performance In-service Training	Number of Courses	Number of Dental Officers and Dental Auxiliaries Involved	Expenses (RM)	Percentage
Local	192	8106	1,192,942.16	99.4
Overseas	13	23	711,252.12	96.93

Source: Oral Health Division, MOH (2008)

Credentialing for District Dental Officers

- A training module for Healthcare Governance for Oral Healthcare Managers namely credentialing for District Dental Officers was developed in collaboration with the Institute for Health Management in the Ministry of Health. Part I and Part II of the training module were conducted in May and July 2008 respectively involving twenty seven (27) participants.

Integrated CPD-PTK (Penilaian Tahap Kecekapan) Programme

- Training modules related to core subjects and competencies previously prescribed for PTK at the relevant levels were compiled and disseminated nationwide to be implemented within the current CPD programmes. As of 31 December 2008, approximately 1,267 Dental Officers (86.8%) in the Ministry of Health had registered with the CPD on-line (myCPD)

• Career Pathway for Dental Nurses and Dental Technologists

Proposal papers for Integrated Service Scheme for Dental Nurses and Dental Technologists (*Skim Perkhidmatan Bersepadu*) were approved by the Panel for Human Resource Development, Ministry of Health Malaysia in December 2008 and forwarded to the Public Service Department. Proposal for the change of nomenclature from Dental Nurses to Dental Therapist was approved at MOH level and submitted to the Public Service Department for final approval.

• Follow-up Actions on Resolutions Made at the Symposium On Dental Manpower Development in Malaysia 2007

A National Oral Health Human Capital Development Committee was established in July 2008 and subsequently a workshop on Projection of Oral Health Human Capital Needs for Malaysia till year 2020 was conducted involving twelve (12) members with the guidance of a Consultant and two (2) Advisors.

Oral Health Promotion

- Inter-agency Collaboration

In 2008, the Health Promotion Unit of the OHD collaborated with the Schools Division, Ministry of Education in the preparation of questions for the national level health quiz for primary schools. Subsequently, the Oral Health Promotion Unit in collaboration with the Management Division of the MOH participated in five sessions of *Sehari Bertemu Pelanggan* (Meet the Client Day) in 2008.

- Dissemination of Oral Health Information

Media Talks on Oral Health Topics was planned together with the Health Education Division, MoH. Five topics were identified with emphasis on early childhood oral healthcare. Besides this, eight topics and writers were identified and accepted by MyHEALTH editorial board. The unit also coordinated the updates of existing oral health topics.

Several Health Promotion materials were also produced. An oral health education kit for anticipatory guidance for early childhood oral healthcare was designed. Five posters were also designed and printed. The oral cancer pamphlet was translated into Bahasa Malaysia, Tamil, and Chinese which were printed and distributed.

- Training

Courses were held on Enhancing Community Participation and on the role of Oral Health Personnel in Tobacco Cessation. Besides this, training sessions were also conducted for Trainee Teachers and preschool teachers.

- Monitoring Of Oral Health Promotion Activities

The OHD organized and participated in several exhibitions in 2008 as follows:

Exhibitions/Healthy Lifestyle Campaigns/ Oral Health Campaigns

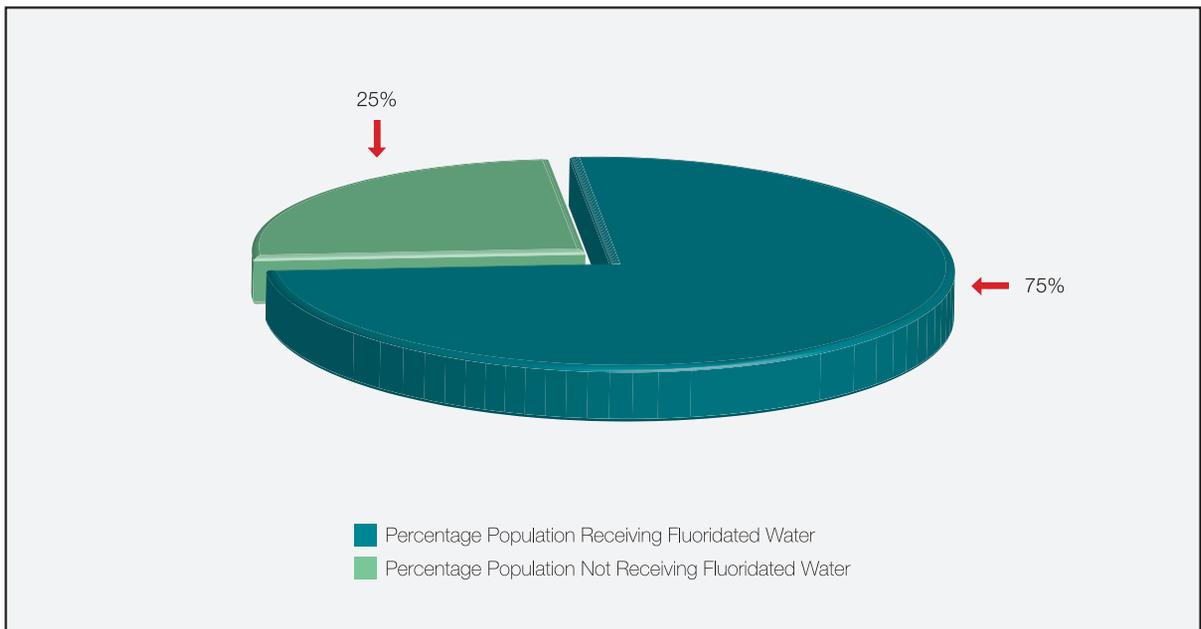
- “Smart Kids 2008” on 21 to 23 March 2008 at the Putra World Trade Centre.
- “*Minggu Kesihatan Bersama I-Sihat*” in conjunction with the International Book Exhibition 2008 on 7-11 April 2008 at PWTC.
- Community Health Campaign organized by the *Persatuan Pengasuh Berdaftar Malaysia* (PPBM) at Kompleks Penyayang Bakti, Sri Damansara, Selangor on 16 November 2008.

Community Oral Healthcare

- Fluoridation of Public Water Supplies Programme

Water fluoridation is a public health measure that contributes to the improved oral health care of schoolchildren and young adults in Malaysia. In 2008, generally about 75% of the Malaysian population received fluoridated water (Figure 1), an increase of approximately 2% compared to the year 2007 (73.3%).

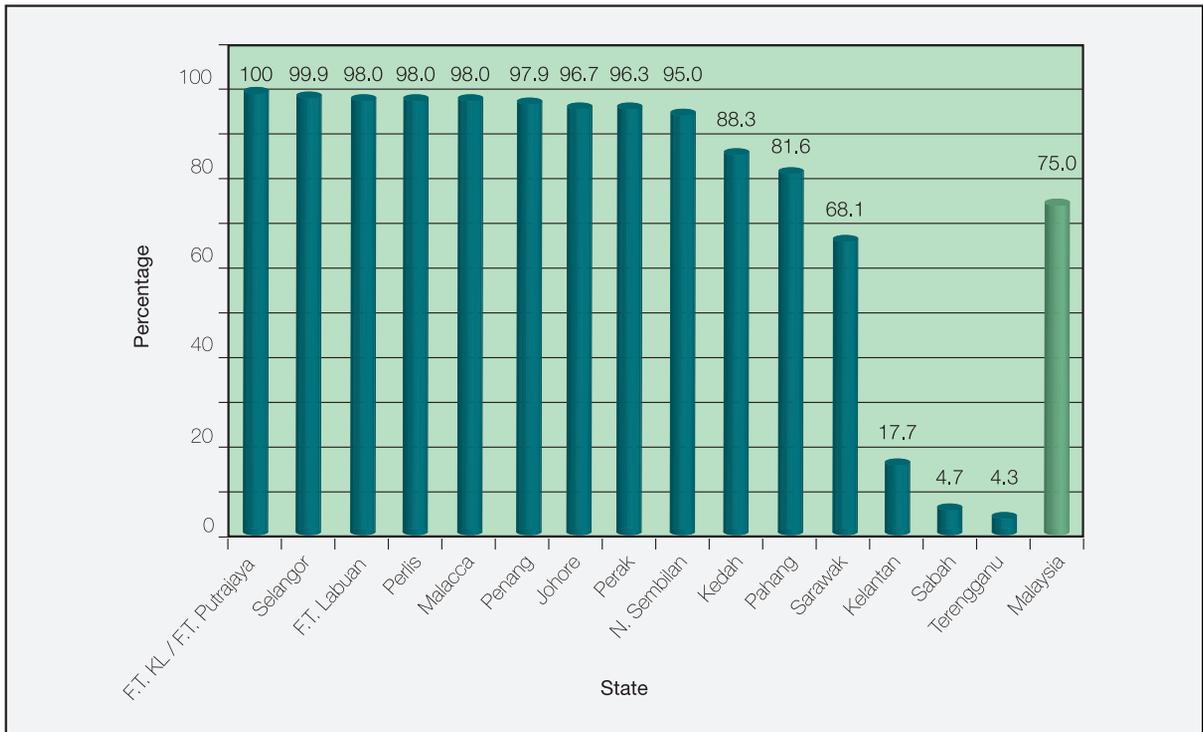
FIGURE 1
PROPORTION OF POPULATION RECEIVING FLUORIDATED WATER IN MALAYSIA, 2008



Source: Oral Health Division, MOH (2008)

In most of the states, more than 80% of their population receives fluoridated water except Sarawak, Sabah, Kelantan, and Terengganu. In Sarawak, about 68% of the population received fluoridated water. In Kelantan, approximately 18% of the population receives fluoridated water while in Sabah it was less than 5% (Figure 2). In the year 2008, there was a major breakthrough in the continuous efforts undertaken by OHD when one of the water treatment plants in Terengganu resumed its fluoridation, thereby supplying about 4.3% of the population.

FIGURE 2
 PERCENTAGE OF POPULATION RECEIVING FLUORIDATED WATER BY STATES, 2008

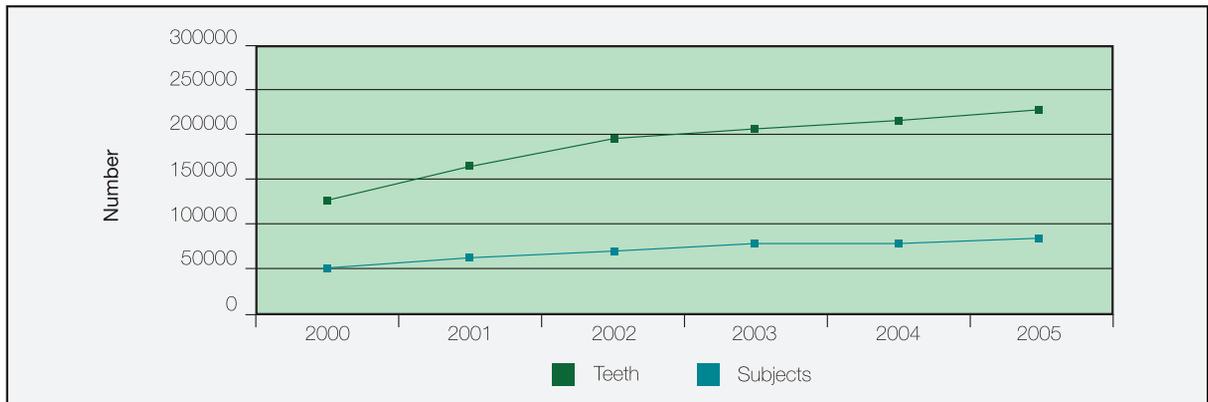


Source: Oral Health Division, MOH (2008)

- Clinical Prevention/Fissure Sealant Programme

Pit-and-fissure sealants can be used effectively to prevent caries initiation and to arrest caries progression by providing a physical barrier that inhibits microorganisms and food particles from collecting in pits and fissures. In cognizance of the results of the National Oral Health Survey of Schoolchildren 1997 (NOHSS '97) that majority of caries was on the occlusal surfaces of the teeth affecting the posterior teeth, the School Based Fissure Sealant Programme was introduced in 1999 and reviewed in 2002.

FIGURE 3
TOTAL SUBJECTS / TEETH RENDERED FISSURE SEALANT, 2000 - 2008



Source: State Oral Health Department, 2008

Generally, there is an increasing trend of subjects and teeth provided with sealant fissure beginning from the year it was first implemented in 2000 up till 2008. In addition, the number of subjects who had benefited from this programme was more than two thirds while the number of teeth that received fissure sealant was more than double in 2008 as compared to year 2000 (Figure 3). In 2008, a total of 122,638 (4.4%) primary schoolchildren were examined for requirement of fissure sealant. Of those, 88.5% was provided with at least one fissure sealant.

- Primary Prevention and Early Detection of Oral Precancer and Cancer Programme

In Malaysia, the MoH has decided to adopt a high-impact strategy involving early screening for oral mucosal lesions in captive communities i.e. in estates augmented by opportunistic screening of patients in dental clinics.

In 2008, the Oral Cancer and Precancer Screening and Prevention Programme was conducted in 424 villages/estates including a total of 58 villages/estates which were visited within the last six years. A total of 4,878 individuals were screened for oral cancer and precancer lesions. In addition, 165 oral health promotion activities were conducted and 248 oral health talks focusing on oral cancer and pre-cancer were given to 4,403 participants (Table 2).

TABLE 2
ORAL CANCER AND PRECANCER SCREENING AND PREVENTION PROGRAMMNE 2008

No. of Estate / Villages Visited		No. of Patients Screened	Number of Health Promotion Activities Held	Dental Health Talks	
New	Repeat			No. of Talks Given	No. of Participants
366	58	4878	165	248	4403

Source: State Oral Health Departments, 2008

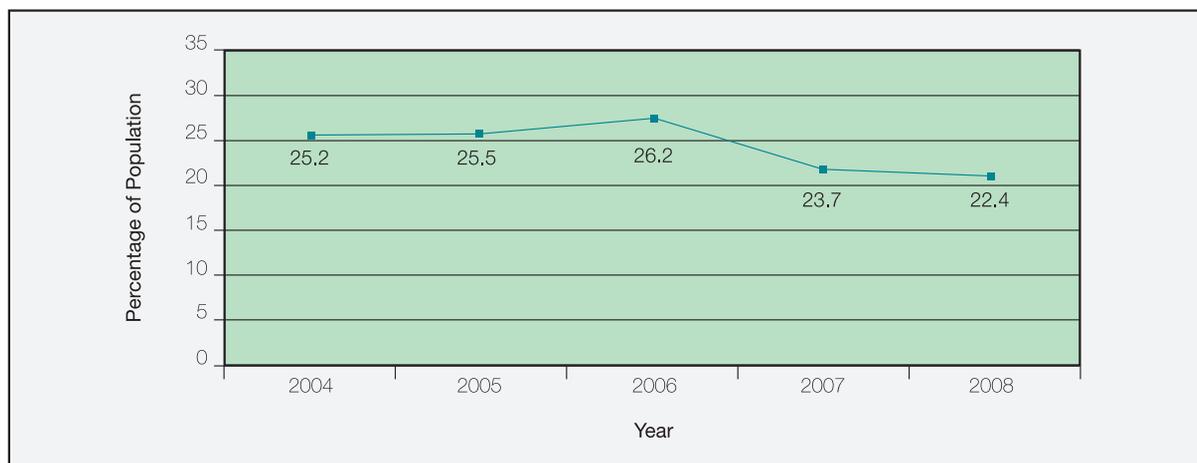
In addition, various activities such as promotion through the mass-media, public campaigns, health talks and free screening programmes were conducted by oral health personnel nationwide during the Mouth Cancer Awareness Week held between 16 to 22 November 2008 with the aim to raise the awareness of mouth cancer and its associated risk habits.

Primary Oral Healthcare

- Utilization of Oral Healthcare

On the whole, the proportion of the Malaysian population who attended primary oral healthcare facilities for year 2008 is 22.4%, a decrease of 1.3% from the previous year (Figure 4).

FIGURE 4
PERCENTAGE OF POPULATION GIVEN PRIMARY ORAL HEALTH CARE, 2004 - 2008



Source: Health Informatics Centre, Ministry of Health

Figure 5 shows the utilization of primary oral healthcare by the different categories of patients. Based on the total estimated population for each target group, the proportion who attended MoH dental facilities in 2008 showed 100% utilization by primary school children while secondary schoolchildren showed 69.8% utilization. The proportion of adults' attendance for oral health care was 5.4%. The preschool group indicated an increase in coverage of 4.4% between 2004 and 2008. As for the antenatal group, a gradual increase in attendance is seen from 2006 onwards.

FIGURE 5
 PERCENTAGE POPULATION BY CATEGORY OF PATIENTS GIVEN PRIMARY ORAL HEALTH CARE, 2004 - 2008



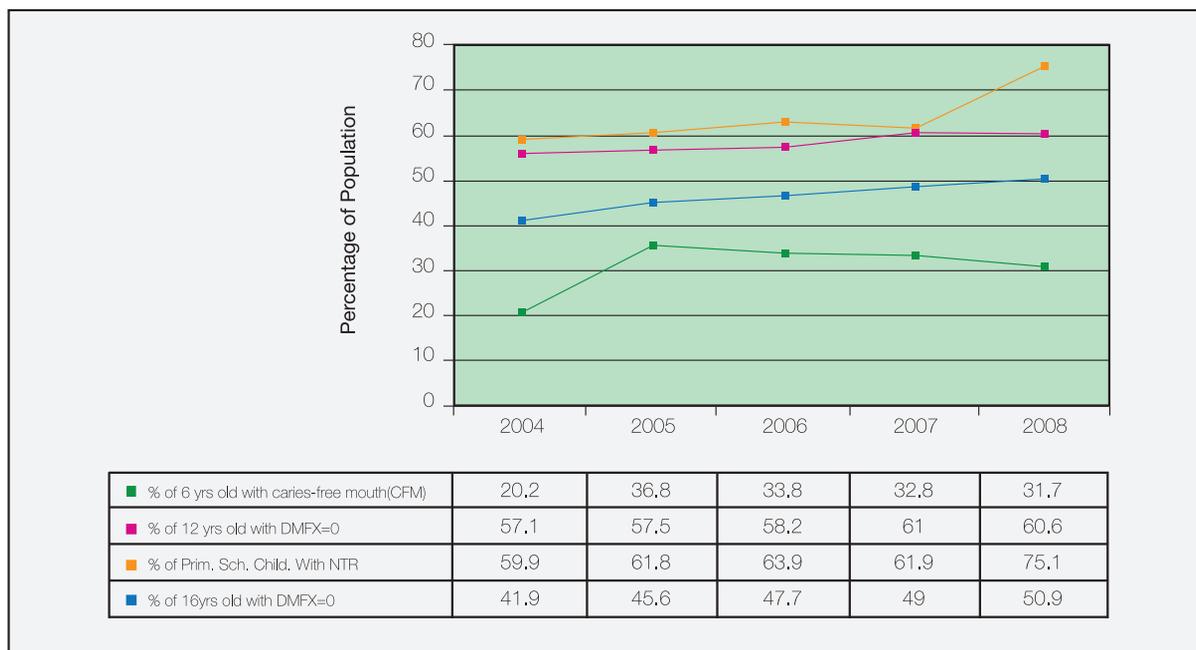
Source: Health Informatics Centre, Ministry of Health

Various programmes have been designed and implemented to ensure the best possible oral healthcare for the population. In 2008, seminars on the Effective Implementation of Early Childhood Oral Healthcare and also on Oral Healthcare for Children with Special Needs were held involving all respective State coordinators and state dental nurses as well as from the Dental Training College, Penang. The aim of the seminars was to enable more effective and efficient delivery of Oral Healthcare for these target groups.

- Impact Indicators

Impact indicators have been used to monitor the oral health status of 6, 12, and 16 year-old schoolchildren. There was a decrease in the proportion of 6 year olds with caries-free mouths to 31.7% in 2008. The proportion of caries-free 12 year-olds and 16 year-olds have shown a gradual increase in the last 5 years with more than half the population of 12 year-olds being caries-free. It is hoped that with the implementation of early childhood oral healthcare and more structured pre-school programme, further improvements to the oral health status of the child on the threshold of entering school-life will be achieved (Figure 6).

FIGURE 6
IMPACT INDICATORS FOR SCHOOL DENTAL SERVICES, 2004 - 2008



Source: Health Informatics Centre, Ministry of Health

Specialist Oral Health Care

- Oral Healthcare Specialist Services

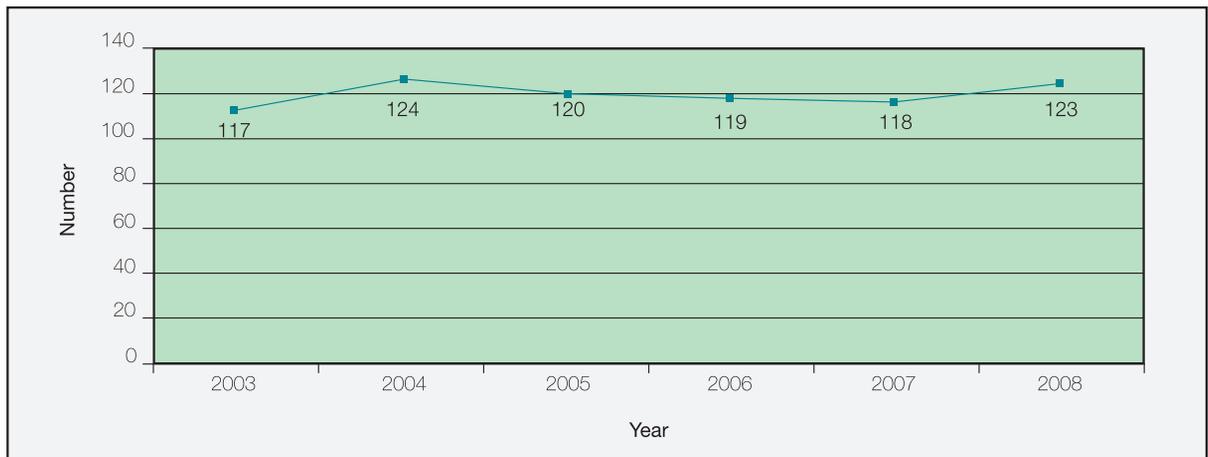
Currently, the Oral Healthcare Specialists' services provided by the MoH include Oral Surgery, Orthodontics, Pediatric Dentistry, Periodontics, Oral Pathology/Oral Medicine and Restorative Dentistry. This will be further complemented by specialists in Forensic Dentistry and Special Needs Dentistry who are expected to complete their training soon. Besides clinical specialists, Dental Public Health Officers also render their services to the community especially through provision of clinical preventive care and management of oral health programmes. In 2008, the number of clinical dental specialists in the Ministry of Health has increased to 137 (Table 3) while the number of Dental Public Health Officers has increased to 123 (Figure 7).

TABLE 3
CLINICAL DENTAL SPECIALISTS BY DISCIPLINE IN MOH, 2004 - 2008

Discipline	Year	Number of Specialists				
		2004	2005	2006	2007	2008
Oral Surgery		34	34	36	42	45
Orthodontics		31	28	26	31	30
Pediatric Dentistry		13	16	20	21	23
Periodontics		10	12	17	19	18
Oral Pathology / Medicine		5	4	6	6	6
Restorative Dentistry		2	3	9	10	15
Total Clinical Specialists		95	97	114	129	137

Source: Oral Health Division, MOH (2008)

FIGURE 7
NUMBER OF DENTAL PUBLIC HEALTH OFFICERS (2003 - 2008)



Source: Oral Health Division, MOH 2008

Complex cases seen at primary care level that require further management are referred to these various disciplines. Currently, the hospital based specialties are Oral Surgery, Oral Pathology/oral Medicine and Pediatric Dentistry whilst the rest of the disciplines are located at primary oral health care facilities. In 2008, a proposal is in the pipeline to establish Non-Hospital based Oral Health Specialist Centre, whereby specialists from disciplines such as Orthodontics, Periodontics, Restorative Dentistry and Dental Public Health are housed together. The objective is to have a one-stop ambulatory centre to facilitate more effective multi-disciplinary management of patients. For 2008, under the 9th Malaysia Plan, Alor Setar and Seremban have been identified for the establishment of Non-Hospital based Oral Health Specialist Centres.

- Clinical Practice Guidelines

The Dental Specialists have commenced the review of 3 Clinical Practice Guidelines, which are Management of Early Childhood Caries', 'Management of Avulsed Permanent Anterior Teeth' and 'Antibiotic Prophylaxis against Wound Infection for Oral Surgical Procedures'. The reviews are expected to be completed by the end of 2009. Meanwhile, a multi-site study on the "Effectiveness of the MoH CPG on Prophylactic Antibiotic Usage for Oral Surgery Procedures" is being conducted.

- Establishment of Centers for Management of Selected Dental Conditions

Works are in progress for the establishment of dedicated Centres for the management of certain health conditions. These centres are Hospital Sungai Buloh for the management of trauma; Hospital Tuanku Jaafar, Seremban and Hospital Selayang for orthognathic surgery; General Hospital Kuching and HTAR Klang for oral oncology; Hospital Raja Perempuan Zainab II Kota Bharu for cleft lip and palate and Paediatric Institute, HKL for managing oral healthcare for children with special needs. In addition, HKL has also been identified as a tertiary centre providing advanced oro-maxillofacial surgical care.

Oral Health Epidemiology And Research

- Research Projects

National Health and Morbidity Survey 2006 (NHMS III)

The following two chapters related to oral health were submitted to the IPH in December 2007 for the final report on "Oral Health: The Third National Health and Morbidity Survey 2006". These were finalized for publication in January 2008:

- Chapter I: Population Practices, Load of Illness and Its Impact, and Oral Healthcare Utilization
- Chapter II: Oral Healthcare Out-of-Pocket Expenditure

The NHMS III reports have been published separately by modules and subsequently circulated in 2008.

Research Projects on Patient Safety and Health

The project on 'Cost for Provision of Optimal Instruments to Mobile Dental Squads' was started in 2008 with the objectives to quantify the instruments available in the existing mobile dental squads, estimate the daily work burden in the mobile dental squad, to determine optimal instruments (numbers and types) for daily workload in the mobile dental squad and to furnish cost estimates to provide all mobile dental squads in the country with the optimal number of instruments.

The first three objectives of the study were completed in 2008. Instruments shortfalls from the optimum were determined. Subsequent cost derivation for their provision and the preparation of the report for stakeholders remained the objectives to be covered in 2009.

Young Adults Survey

The young adults survey that involved 494 young adults aged 18 to 29 years was conducted in year 2004 in collaboration with the IHSR. The editorial group for the manuscripts met three times in 2008 and completion of the following papers for journal submission is expected in 2009:

- Comparison of Young Adult's Oral Health Knowledge, Perception and Behavior By Exposure To School Dental Programmes In Federal Territory, Kuala Lumpur.
- Oral Health Knowledge, Perception and Behavior Between Trainees And Employed Young Adults In Federal Territory, Kuala Lumpur.
- Oral Health Utilization Between Trainees And Employed Young Adults In Federal Territory, Kuala Lumpur.

Collaborative Project on the Orang Asli Programme under Jabatan Hal Ehwal Orang Asli (JHEOA)

This collaborative project for the preparation of the Technical Report on the Orang Asli Programme (2003-2007) was initiated in 2008 between the MOH and the Department of Aborigines Affair in the Ministry of Rural and Regional Development. The project is coordinated by the Institute of Public Health. This Report will conform to the World Health Assembly Resolutions on Indigenous Health Global Plan of Action and is expected to be ready in 2009.

National Healthcare Financing Mechanism (NHFM)

In a pro-active response towards the country's NHFM, two cost studies with the objective of estimating relative costs of dental treatment procedures were identified in 2008 for the States of Selangor and Sabah (one in each State). Clinical pathways for Examination & Diagnosis, Scaling & Prophylaxis, Fissure Sealants, acrylic denture procedures and laboratory procedures for acrylic dentures were refined and pre-tested in 2008. Clinical pathways for restorations and extractions previously used in 2005 were also revised. The draft protocol for Selangor was finalized in 2008. Micro-cost data collection will begin in January 2009 subject to further feedback on logistics. The protocol for Sabah will be finalized early 2009.

National Oral Health Survey of Preschool Children (NOHPS 2005)

The completion of the preliminary draft report on perception and behavior of kindergarten teachers awaits the continuation of data analysis, which had to be deferred to year 2009 due to other competing priorities and research commitments

National Oral Health Survey of Schoolchildren 2007 (NOHSS 2007)

The data collection for NOHSS 2007, which involved more than 26,000 school children, aged 6, 12 and 16 years was completed in October 2007. Data entry continued into 2008 with the completion of the 6 year old group database in May 2008; and in October 2008 for the 12 and 16 year old groups.

National Oral Health Survey of Adults (NOHSA 2010)

Planning was initiated in 2008 for the National Oral Health Survey of Adults (NOHSA 2010) in year 2010. The National Steering Committee for NOHSA 2010 was formed comprising of officers from the MOH, University of Malaya, International Islamic University Malaysia and the Department of Statistics Malaysia. Subsequently, the preparation of the NOHSA 2010 protocol was initiated and the first draft was completed in December 2008.

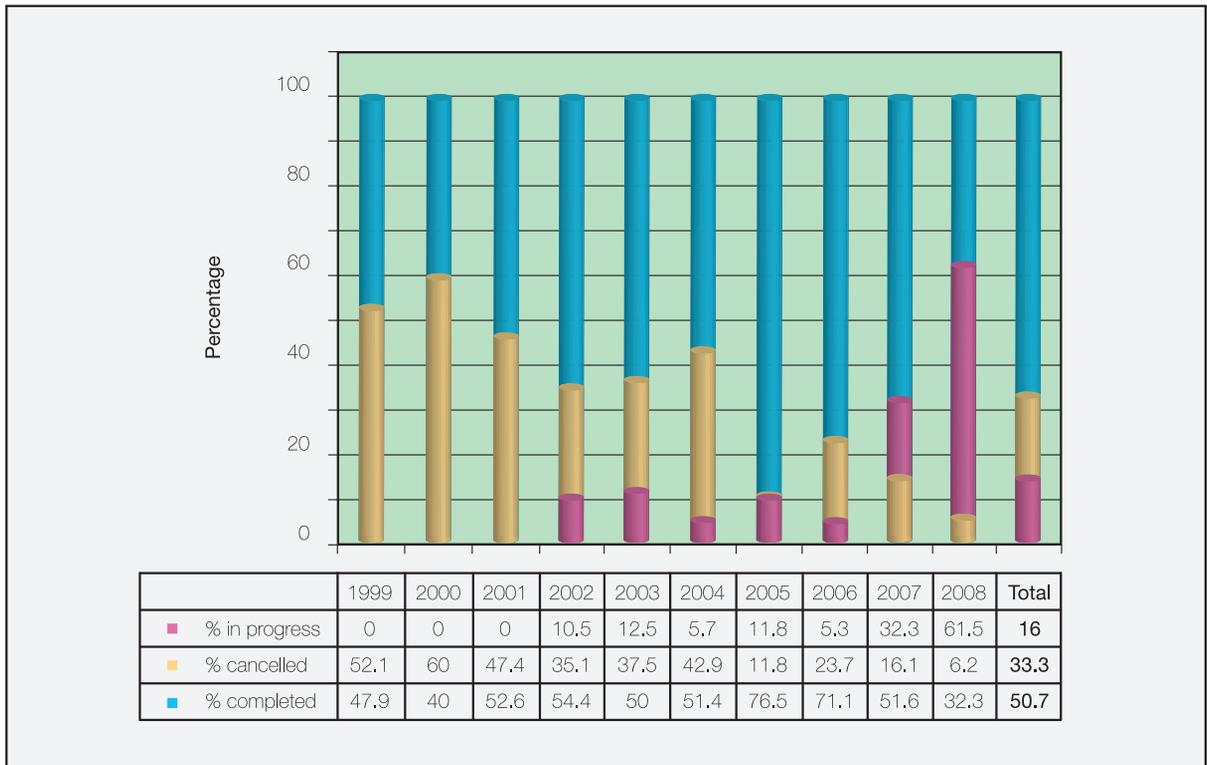
- **Health Systems Research (HSR) for Oral Health**

The Oral Health Division continues to promote a research culture within the organization and in terms of health systems research; the following activities took place in year 2008:

- i) *Monitoring of Health Systems Research (HSR) Projects*

Monitoring of HSR Projects conducted by the States began in 1999. The status of projects for the period 1999 – 2008 is shown in Figure 8. By December 2008, slightly more than half of the projects for the period 1999 – 2008 (244, 50.7%) had been completed.

FIGURE 8
STATUS OF ORAL HEALTH RESEARCH PROJECTS, 1999 - 2008



Source: State Oral Health Division, 2008

ii) Continuation Of Research Projects Under The IHSR

Research projects which started under the Health Outcomes Methodology/HSR Methodology training sessions in 2006 / 2007 organized by the IHSR continued into 2008 as follows:

- Analysis and interpretation of data was completed for the 2007 project 'Kebolehan Jururawat Pergigian Mengenalpasti Kes-kes Interseptif Ortodontik yang Perlu Dirujuk'.
- Field data collection was completed for the multicentre-study project 'Health Outcomes of Various Methods of Mandibular Fracture Treatment' started in 2006. Training was given to RAs on merging of data files and data cleaning. Data analysis and report writing continues into 2009.

iii) Human Resource Development And Capacity Building

Several activities were organized in 2008 towards human resource development and capacity building in oral health research :

- 'Research Methodology and Complex Sampling', jointly planned and subsequently organized by the OHD, Johor on 10-12 March 2008 in Johor Bahru. The majority of participants were from the host state, with participation of 10 other Dental Officers from the states and the Oral Health Division, MOH.

- Workshop on 'Building Questionnaire Using Microsoft Access 2007' held on 19-21 November 2009 with facilitators from the Institute of Health System Research (IHSR) for a total of 23 participants from the whole country.
- The Oral Health Research Conference 2008 was organized with the theme "Consolidating Management of the Research Agenda for Oral Health". This Conference has proven a synergistic event towards continuous professional development and networking of oral health personnel, and continues to serve as a platform for the dissemination of oral health research findings.

Oral Healthcare ICT

- Oral Health Clinical Information System (OHCIS)

The project development and implementation started in January 2008. The OHCIS team comprising of members of the OHD and the Information and Communication Technology Division (ICTD) of the MoH together with the appointed vendor, Global Technological Support Sdn Bhd (GTS), were driven to complete the project according to the required specification and timeline. By the end of December 2008, an overall system implementation of 94% was achieved.

- 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 OHD in collaboration with the Information Communication Technology (ICT) Division, held discussions to develop a Dental Practitioners Information Management System (DPIMS) with an online Annual Practicing Certificate application. The vendor appointed for the development and implementation of the system was Persiskom Sdn Bhd. The project started in early September 2008.

- e-Reporting

Submission of all oral health HIMS returns through the e-Reporting system began in a year 2007 and followed through this year. A list of indicators for the generation of reports from the e-Reporting database was submitted to the HIC. The list included indicators for all specialty care, primary oral health care, KPIs, Oral Health Goals, Oral Health Promotion, NIA and the Oral Health Community Programmes i.e. Fluoridation Programme, Clinical Prevention, Oral Cancer.

An instruction manual for the specialist e-forms was prepared with inputs from all the heads of specialty. The final draft was compiled and submitted to HIC for printing.

- Oral Health Division Web Website

The OHD website is updated twice weekly. As end of 2008, there have been total hits of 79,350 with 3,975 total page loads. The majority of website visitors were mainly locals forming 75% of the total hits, while others were from countries led by the USA, UK and Australia. Links to other government websites such as MAMPU, MoH and PSD have been established with the latest addition of the Institute of Integrity, Malaysia (IIM). Visitors to the website have access to many useful dental guidelines and brochures which may be downloaded and a search engine is available for local government dental clinics.

Quality Assurance Programmes

The objective of the QAP in the Oral Health Services is to attain and maintain the quality of oral health care services that would ensure optimum achievable benefits to the patient, family and community. In 2008, six NIA indicators were monitored (Table 4). Four indicators were from the school dental service while the remaining two were from community dental service. This is the second consecutive year where all indicators achieved the required standards. However marginal shortfall in quality still exist in some states.

TABLE 4
NIA INDICATORS MONITORED IN 2008

Indicators	Standard	Achievement
Percentage of repeat fillings done on posterior permanent teeth	≤1%	0.3%
Percentage of primary schoolchildren maintaining orally fit status	≥55%	64.0%
Percentage of secondary schoolchildren maintaining orally fit status	≥70%	75.1%
Percentage of 16-year-olds free from gingivitis	≥85%	94.8%
Percentage of non-conformance to fluoride level <0.4ppm at reticulation points	≤25%	24.0%
Percentage of non-conformance to fluoride level >0.6ppm at reticulation points	≤7%	4.8%

Source: State Oral Health Division, 2008

- MS ISO 9001: 2000

In 2008, the OHD, seven states and four districts have undergone surveillance audit. Three states and three Divisions in Sarawak have undergone re-certification audit.

Kedah has expanded its ISO certification to all districts and has converted to multi-site certification making a total of 13 out of 15 states with multi-site certification. Several states have expanded the scope to include more districts and facilities. Sarawak has included Limbang while Pahang has expanded its scope to Cameron Highlands. States with multi-sites certification achieved 100% coverage of districts (87 districts) and 82.8% of clinics.

Apart from OHD and Selangor, Johor has also adopted a web-based Interactive ISO system in 2008. The ISO interactive system at the OHD has undergone improvement and is now fully utilized and running smoothly.

- Innovation

Oral health personnel throughout the country have developed a total of 70 innovation projects where several of these projects received awards at state, zone and national level. The I-retractor for tracheostomy from Specialist Dental Clinic, General Hospital Sarawak won the first place (technical category) at the Ministry of Health Quality Award 2008. This innovation also won two other major awards namely Sarawak State Secretary Award for Innovation and Creativity Public Sector Quality Award

- Other Quality Awards

The Dental Office in the Division of Miri (*Pejabat Pergigian Bahagian Miri*), Sarawak bagged the Ministry of Health's 2008 Financial Management Quality Award (*Anugerah Kualiti Pengurusan Kewangan KKM 2008*). The Pontian Dental Clinic (Klinik Pergigian Pontian, KK3) won second place for National Counter Quality Award (*Anugerah Kaunter Berkualiti Peringkat Kebangsaan*).

Professional Dental Practice

- Laws and Regulation

Inspection of the premises of 45 registered dentists was undertaken for the year 2008 for the purpose of renewal of the Annual Practising Certificate as required by Section 31(5) of the Dental Act 1971. Besides this, the registration of private dental clinics was undertaken as required under the Private Healthcare Facilities and Services Act 1998. A total of 367 private dental clinics were registered for the year 2008 bringing the total number of private dental clinics registered under this Act to 1435.

- Globalization and Liberalization of Oral Health Care

Malaysia submitted its schedule of commitment for liberalization of dental healthcare services under ASEAN Framework Agreement on Services (AFAS) for the 7th package of commitments in December 2008. The offer allows market access to establishment of foreign oral healthcare centers in Malaysia by joint-venture with Malaysian dentists, with not more than 51% foreign equity and not more than two dental specialists with additional expertise in orthognathic surgery, dental oncology, forensic odontology or geriatric dentistry.

- Accreditation of Dental Degree Programme

The Joint Technical Committee on Accreditation of Dental Programme (JTCDP) had made recommendations for course approval, for continuance of programme implementation and for recognition. In addition, three sets of guidelines were reviewed for dental degree, diploma (dental technology) and certificate (dental surgery assistant) programmes. These guidelines will be used as reference by the panel of assessors for institutions of higher education.

- Gazettement of Dental Specialists

All dental officers who have finished their postgraduate studies in recognised clinical fields are required to undergo a period of gazettement of at least six months before they are considered as Dental Specialists in the MOH. In 2008, a total of fourteen (14) specialists were gazetted; five oral surgeons, five orthodontists, two periodontists, one restorative specialist and one pediatric dentist.

- Contract Dental Officers

Dental officers comprising both citizens and non-citizens are employed as contract officers as an interim measure to help overcome the critical shortage of dental officers especially in areas where the service is most required. A total of 80 applications comprising both new applications and contract renewals were received by the Human Resource Division, MOH. Of these, 39 were new applications; eight were pensioners, three foreign spouses and 28 foreign dental practitioners. Nine applications for renewal of contract were not supported by the OHD and the main reasons were failure of applicants to adapt to the service and communication problems with both patients and staff.

WAY FORWARD

The current economic downturn affecting the nation will pose even greater challenges in the forthcoming years. We need to intensify efforts and strive to improve our performance in line with the strategic thrusts of the 9th Malaysia Plan of which the primary goals are to reduce the contagion of diseases and enhance the healthcare delivery system.

Financial management has to be strengthened in view of the greater autonomy, responsibility and accountability expected with the new 'programme' status of the OHD. Strengthening organisational governance at the district and state levels especially in terms of the new financial structure for the oral health programme is also needed.

The OHD will also need to focus on human capital development to ensure that the appropriate quantum and mix of oral health human capital is available to effectively deliver oral healthcare to the population. Recommendations from the 'Projection of Oral Health Human Capital Needs' workshop held in December 2008 will be followed-up in the forthcoming year. In addition to this, efforts will be continued to enhance skills and competencies of oral health personnel through sustained centralised identification and co-ordination of Continuing Professional Development (CPD) by which in-service trainings are conducted locally and abroad. Meanwhile, MOH is constantly reviewing the service schemes, remuneration and incentives for all categories of oral health personnel to increase commitment and to ensure sustainability of the service.

The oral health service delivery system will be further improved and strengthened to increase coverage of oral healthcare to the population, in particular pre-school children, toddlers, ante-natal mothers and the elderly. In addition, re-strategising provision of oral healthcare will be undertaken through emphasising evidence-based decision-making and expansion of scope of management. In line with policies of the MOH, the OHD will facilitate all efforts towards liberalisation of oral healthcare especially among ASEAN member countries.

Evaluation of the 9th Malaysia Health Plan (2006-2010) will also be conducted in 2009 to review performance and map out the agenda for the 10th Malaysia Health Plan.

CONCLUSION

The OHD 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.

An abstract graphic design featuring a dense, curved pattern of thin red lines that create a sense of depth and movement, resembling a stylized 'S' or a wave. The lines are most concentrated on the left side and fade out towards the right. The overall color palette is a gradient of reds, from a deep magenta at the bottom to a lighter pink at the top.

MEDICAL CARE PROGRAMME

MEDICAL PROGRAMME

INTRODUCTION

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

Medical Development Division is responsible for policy formulation and development of the 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 of 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 Practice Division has the main objectives of drafting, amending and enforcement of any Act and Regulations under the Medical Programme. It also addresses complaints as well as medico-legal issues, and provides technical expertise in liberalizing the healthcare sector. The Medical Practices Division is divided into sections namely Private Medical Practice Control, Legislation and Globalization, and Complaints, Enforcement and Medico-legal. It is also the secretariat to the Malaysian Medical Council, Malaysian Optical Council and Medical Assistant Board.

Medical Resource Unit

The main functions of Medical Resource Unit are to plan for medical expenditure, procure medical devices, provide hospital support services and performing audit.

Management Expenditure (OA) for Medical Programme had raised 13.3% in 2008 compared to year 2007 (Table 1). In the same year, more than half (54.49%) of the total expenditure had been used for emolument payment, while the rest were for asset and service expenditure.

TABLE 1
MANAGEMENT EXPENDITURE (OA) FOR MEDICAL PROGRAMME, 2006 - 2008

Year	Allocation	Expenditure	% Increment in Expenditure
2006	5,015,477,836.00	5,391,216,252.00	8.0
2007	6,032,287,883.00	6,202,537,125.00	15.0
2008	6,469,758,900.00	7,025,071,865.00	13.3

ACTIVITIES AND ACHIEVEMENTS

Medical Services Development Section

Hospital Management Service

The functions of Hospital Management Service are to facilitate policy formulation and strategic directions related to medical services development, facility development, medical records, information technology and health financing.

Full Paying Patient Services Scheme

The Full Paying Patient Services Scheme was introduced in 2007 at Putrajaya Hospital and Selayang Hospital. Both hospitals within the implementation period of the pilot project showed the number of outpatient visits was the highest (72.9%), followed by inpatient visits (24.2%) and day care visits (2.9%). As a whole, 2,573 patients (new and follow-up cases) had participated in the scheme in 2008 of which 70.9% were Malaysians. Similarly, Malaysians formed the majority of new patients at 84.5% compared to 15.5% of foreigners. The number of new patients (Malaysian and foreigners) registered as full paying patient ranges from 8 to 74 patients per month. The scheme will be introduced in stages to several identified specialist hospitals in 2009 where steps had been taken to review related guidelines to improve the scheme prior to the implementation at other hospitals.

Medical Records

Medical records had been centralized progressively to optimize existing resources. As at December 2008, its implementation had covered 80 hospitals of which 30 of them had completed centralization of the records. Modified Terminal Digital Filing System (MTDF) will only be implemented at other MoH hospitals which have yet to centralize their medical records. To further improve management of medical records, sessions on audit trainings were provided in all MoH hospitals. Improvement efforts included review of guidelines pertaining to medical records management in 2008.

Nearly 150,000 medical report applications were received in 2008. MoH had taken positive steps to overcome delays in provision of the reports. The period to produce medical reports had been shortened to four weeks from eight weeks for state hospitals, four weeks for specialist hospitals and two weeks for non-specialist hospitals from October 2008. Non-specialist hospitals had recorded good achievement while about half of the state hospitals were able to complete their medical reports within the four weeks period (Table 2). The delay was partly contributed by lack of manpower.

TABLE 2
 AVERAGE PERIOD FOR COMPLETION OF MEDICAL REPORTS (OCTOBER 2008 TO APRIL 2009)
 FOR MOH HOSPITALS BY TYPE AND NUMBER OF HOSPITAL (%)

Type of Hospital	Reports Provision Period (Week)			
	2	4	6	>8
State Hospital (including HKL)	25%	30%	28%	17%
Specialist Hospital	61%	26%	8%	3%
Non-Specialist Hospital	94%	6%		

Source: Medical Development Division, MoH

Information Technology

Two main initiatives were being implemented, *Sistem Pengurusan Pesakit* (Patient Management System) and Hospital Information System. The former is a home grown hospital information system implemented in phases. Phase 1 in 2008 involved Hospital Tuanku Jaafar, Seremban and Hospital Port Dickson. The system will be rolled out to other MOH hospitals with the current system i.e. *Sistem Pengurusan Pesakit Dalam* (Inpatient Management System) in Phase 2. Hospital Tengku Ampuan Afzan, Kuantan had been selected for the new system in Phase 2 for 2009.

Three hospitals had been identified for the Hospital Information System project which involved three different contractors and applications. Initial plans were developed and cost evaluations were done in 2008. The three hospitals are Hospital Bintulu, Hospital Sultanah Nur Zahirah, Kuala Terengganu and Hospital Sultan Haji Ahmad Shah, Temerloh.

'Training of Trainers' programme for Case-mix project was completed in 2008 involving eight groups of medical records. It will be continued in 2009. Case mix project is scheduled to be implemented in 2009.

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 2008 (Table 3). The total inpatient beds of MOH hospitals had increased by 1.85% (37,836 beds) in 2008 compared to 2007. Hospital admission also increased by 5.84% compared to 2007. The bed occupancy rate for 2008 was 65.4% (Table 4).

TABLE 3
MOH HOSPITALS ACCORDING TO TYPES,2008

Specialist Hospital and Institution				Non-Specialist Hospital		
HKL + State Hosp	Major Specialist Hosp	Minor Specialist Hosp	Special Medical Institution			
14 Hospitals	21 Hospitals	20 Hospitals	7 Hospitals	75 Hospitals		
Kuala Lumpur	Putrajaya	Labuan	Institut	<u>Kedah</u>	<u>Melaka</u>	<u>Sarawak</u>
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 Mertajam	Negara	Sik	<u>Johor</u>	Kanowit
Klang	Teluk Intan	Sri Manjung	Pusat Kawalan	Yan	Kota Tinggi	Lawas
Seremban	Sg. Buloh	Slim River	Kusta		Pontian	Limbang
Melaka	Ampang	Banting	Negara	<u>Pulau Pinang</u>	Kulai	Lundu
Johor Bahru	Selayang	Port Dickson	Bahagia	Balik Pulau	Tangkak	Marudi
Kuantan	Serdang	Segamat	Permai	Sungai Bakap	Mersing	Mukah
Kuala Terengganu	Kajang	Kluang	Mesra			Saratok
Kota Bharu	Kuala Pilah	Kuala Lipis	Sentosa	<u>Perak</u>	<u>Pahang</u>	Serian
Kuching	Muar	Tanah Merah		Batu Gajah	Bentong	Simunjan
Kota Kinabalu	Pandan	Kapit		Cangkat	Cameron	ROCBM
	Batu Pahat	Bintulu		Melintang	Highland	
	Temerloh	Sarikei		Gerik	Raub	<u>Sabah</u>
	Kemaman	Sri Aman		Kampar	Pekan	Beaufort
	Kuala Krai	Lahad Datu		Kuala Kangsar	Jerantut	Beluran
	Sibu	Keningau		Parit Buntar	Muadzam	Kinaba-tangan
	Miri	Likas		Selama	Shah	Kota Belud
	Sandakan			Sungai Siput	Jengka	Kota Marudu
	Tawau			Tapah		Kuala Penyu
					<u>Terengganu</u>	Kudat
				<u>Selangor</u>	Hulu	Kunak
				Kuala Kubu	Terengganu	Papar
				Baru	Dungun	Pitas
				Tanjung Karang	Setiu	Ranau
				Sabak Bernam	Besut	Semporna
						Sipitang
				<u>N. Sembilan</u>	<u>Kelantan</u>	Tambunan
				Jempol	Tumpat	Tenom
				Tampin	Pasir Mas	Tuaran
				Jelevu	Gua Musang	
					Pasir Puteh	
					Jeli	
					Machang	

* Pusat Darah Negara, unlike other institutions, had 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 - 2008

Subject	2006	2007	2008
Bed Number (Hospital and Institution)	35,739	37,149	38,004
Bed Occupancy Rate (%)	65.07	64.23	65.46
Total Admission	1,905,089	1,964,903	2,072,633
Total Population	26,640,200	27,173,600	27,728,700

Source: Health Informatics Centre, MOH

Policy and Guidelines Development

Steps were taken to review a total of five policies and guidelines in the effort to improve the delivery of services at the hospitals and institutions in 2008. These services are Non Ambulance Vehicle Norms for Usage at Hospitals and Institutions, General Hospital Operational Policies, Incentives for Members of Hospital's Visitors Board, Inter Hospital Referral System and Hearse Services Management Guidelines at Hospitals and Institutions. The Inter Hospital Referral System and Incentive for Members of Hospital's Visitors Board guidelines had been reviewed and distributed to all MOH hospitals and institution. The review of other policies and guidelines are still in progress.

Medical Services

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

Some of the achievements in 2008 included:

- i. Establishment of Bone Marrow Transplant Service at Hospital Pulau Pinang
- ii. Establishment of Interventional Bronchoscopy Service at Hospital Queen Elizabeth, Kota Kinabalu
- iii. Establishment of Intensity Modulated Radiation Therapy at Sarawak General Hospital, Kuching
- iv. Provision of Interventional Cardiology Service at Hospital Raja Perempuan Zainab II, Kota Bharu in cooperation with Hospital Universiti Sains Malaysia, Kubang Kerian
- v. Provision of Interventional Cardiology Service at Hospital Tengku Ampuan Afzan Kuantan in cooperation with International Islamic University, Kuantan

The total number of patients treated at specialist clinics of various medical disciplines increased by 7.9% in 2008 as compared to 2007. This accounted for 35.7% of the total specialist clinic attendance for 2008. Attendances at all clinics showed an increase with the exception of Respiratory Medicine. Table 5 shows the total number of patients who received outpatient treatment at specialist clinics of various medical disciplines in 2007 and 2008.

TABLE 5
TOTAL NUMBER OF PATIENTS WHO RECEIVED TREATMENT AT MEDICAL SPECIALIST CLINICS
IN 2007 AND 2008 ACCORDING TO DISCIPLINE

Discipline	No. Of Patients At Specialist Clinics		% +/- Difference Between 2007 And 2008
	2007	2008	
General Medicine	778,851	820,189	+ 5.3
Dermatology	248,342	252,442	+ 1.7
Respiratory Medicine	238,893	217,097	-9.1
Psychiatry	324,344	379,010	+ 16.9
Nephrology	129,697	186,437	+ 43.8
Neurology	26,842	28,682	+ 6.9
Radiotherapy & Oncology	59,739	62,170	+ 4.1
Cardiology	74,639	84,615	+ 13.4

Source: Health Informatics Centre, MOH

Table 6 shows the total number of patients from various medical disciplines treated as inpatients. More than a quarter i.e. 26.8% of the total hospital admissions were from medical based specialties. The admissions for medical specialties increased by 8.7% from 511,254 in 2007 to 555,949 in 2008. Inpatients treatment increased for most of the medical specialties with the exception of Psychiatry and Herpetology. An increase in inpatients was most prominent for the disciplines of Cardiology and Infectious Diseases.

TABLE 6
TOTAL ADMISSIONS FOR THE SPECIALIST MEDICAL DISCIPLINES IN 2007 AND 2008

Discipline	Total Admissions		% +/- Difference Between 2007 And 2008
	2007	2008	
General Medicine	450,862	485,297	+7.6
Dermatology	979	980	+0.1
Respiratory Medicine	6,550	7,215	+10.2
Psychiatry	21,852	21,217	-2.9
Nephrology	9,780	10,481	+7.2
Neurology	3,780	3,996	+5.7
Radiotherapy & Oncology	11,302	12,251	+8.4
Cardiology	5,711	9,724	+70.3
Infectious Diseases	2,957	3,511	+18.7
Herpetology	1,481	1,277	-13.8

Source: Health Informatics Centre, MOH

Obstetrics & Gynecology and Pediatric Services

Obstetrics & Gynecology (O&G) Service Unit

A significant number of achievements were made in the Obstetrics & Gynecology Service in 2008. An allocation of RM1.5 million under *Dasar Baru* was utilized for the establishment of the Assisted Reproductive Technique Service in six MOH hospitals namely Hospital Kuala Lumpur (HKL), Hospital Likas and Hospital Sultanah Nur Zahirah, Kuala Terengganu as regional centers, and Hospital Selayang, Hospital Tengku Ampuan Rahimah, Klang and Hospital Raja Permaisuri Bainun, Ipoh as satellite centers. The charges on ART Service were approved by the Finance Division of MOH. Three new subcommittees under the National Committee of ART had been established to strengthen service delivery namely the Technical Accreditation Subcommittee, Implementation Services on ART Subcommittee and the ART Act Subcommittee. The first two subcommittees were under the purview of the Medical Development Division, while the third subcommittee was under the Medical Practice Division. In 2008, a total of 103 ART cycles were developed of which mostly were from HKL. Of these cycles, 81 had undergone embryo transfer procedure with 7 confirmed pregnancies. Other procedures conducted in HKL were 10 procedures for IVF, 67 ICSI, 19 IVF and ICSI and 1 for TESE-ICSI. The first successful pregnancy with an embryo frozen procedure was from HKL too.

There were plans to establish regional centers for Gynae-oncology Service in Hospital Kuala Lumpur, Hospital Likas, Hospital Melaka and Hospital Umum Sarawak with an approved allocation of RM300,000.00 under the *Dasar Baru*. On the other hand, Hospital Sultanah Nur Zahirah, Kuala Terengganu will have its own dedicated Uro-Gynaecology & Pelvic Reconstructive Surgery Service.

Table 7 shows an overall increase of normal deliveries (1.72%) from 2007 to 2008 with the exception in WP Kuala Lumpur, Johor, Terengganu and Negeri Sembilan. There was also an increase in the number of complicated deliveries (7.13%) in the same year as compared to 2007. However, WP Labuan, Pulau Pinang and Perak showed a decline of such deliveries.

TABLE 7
PERCENTAGE DIFFERENCE FOR NORMAL AND COMPLICATED DELIVERIES BETWEEN 2007 AND 2008

State	No. of Normal Deliveries		% +/- Differences 2007 / 2008	No. of Complicated Deliveries		% +/- Difference 2007 / 2008
	2007	2008		2007	2008	
Perlis	3,287	3,477	+5.78	964	1,092	+13.28
Kedah	21,543	21,874	+1.54	6,309	6,994	+10.86
Pulau Pinang	11,341	11,350	+0.08	3,290	3,272	-0.55
Perak	21,542	21,924	+1.77	8,483	8,436	-0.55
Selangor	35,348	38,206	+8.09	11,057	13,114	+18.60
WP KL	10,552	8,628	-18.23	4,517	4,150	-8.12
WP Putrajaya	3,310	4,074	+23.08	1,590	1,702	+7.044
WP Labuan	1,137	1,255	+10.38	252	221	-12.30
N. Sembilan	10,708	10,496	-1.98	3,147	3,187	+1.27
Melaka	7,847	8,344	+6.33	2,507	2,590	+3.31
Johor	36,779	35,015	-4.80	9,572	10,481	+9.50
Pahang	16,774	17,246	+2.81	4,201	4,400	+4.74
Terengganu	16,179	15,849	-2.04	2,777	3,047	+9.72
Kelantan	21,797	22,216	+1.922	3,230	3,384	+4.77
Sabah	37,884	40,379	+6.59	6,033	6,687	+10.84
Sarawak	30,276	30,902	+2.07	5,760	6,184	+7.36
Total	286,304	291,235	+1.72	73,689	78,941	+7.13

(Examples of Complicated Deliveries: Caesarian, Forceps, Vacuum, etc.)
Source: Health Informatics Centre, MOH

Other achievements of the O&G Unit:

- i. The Guidelines on the Management of Induction of Labor was published in mid-2008 and can be accessed on the MOH website (www.medicaldev.gov.my)
- ii. The Operational Policies for O&G Services in Malaysia is in the process of being published
- iii. The National Lactation Centre in Hospital Selayang was officially declared open by the Minister of Health in October 2008
- iv. The paper on the Obstetric Life Saving Skills Programme in six regional hospitals was agreed upon in principle by the *Mesyuarat KPK Khas* in December 2008

Paediatric Service Unit

Emphasis on improving service delivery was given to certain areas in Pediatrics. An allocation of RM6.3 million was approved under *Dasar Baru* and was utilized for Genetic and Inborn Error of Metabolism patients. Also, RM300, 000.00 was approved to outsource the genetic tests overseas via HKL. The policy on using Enzyme Replacement Therapy (ERT) drugs for Lysosomal Storage Disease (LSD) was approved by the Cabinet in November 2008 but due to financial constraints, the procurement of these drugs had to use the present allocations given for Genetic Services. The Technical Committee on ERT Treatment was established in September 2008 to review all the LSD cases that need financial assistance from *Tabung Bantuan Perubatan*, MOH.

Other achievements in the Paediatric Service included:

- i. An allocation of RM300,000.00 that was approved under *Dasar Baru* for the establishment of the Home Ventilation Programme in HKL and various other hospitals. The Paediatric Respiratory Services were also upgraded with an allocation of RM1.5 million for the replacement of equipments in Hospital Pulau Pinang and Hospital Raja Perempuan Zainab II, Kota Bharu.
- ii. The paper on Adolescent Medicine Services which was presented at *Mesyuarat KPK Khas* in February 2008 and two hospitals will serve as pilot projects for these services namely Hospital Sultan Abdul Halim, Sg. Petani and Hospital Raja Perempuan Zainab II, Kota Bharu.
- iii. The Manual myThalassaemia which serves as a guidance for synthesizing data for the National Thalassaemia Registry for Thalassaemia patients in Malaysia was made available on the MOH website www.medicaldev.gov.my.
- iv. Via a Cabinet Memorandum, an allocation of RM32 million was approved for the establishment of Stem Cell Services in Malaysia. The second edition of Guidelines on Stem Cell Research and Therapy was edited. A Public Forum was successfully held in Hospital Ampang on October 2008 to get feedback on these guidelines in view of ethics, moral and social aspects of the Stem Cell Services. Apart from that, other guidelines that were being produced or edited were National Guidelines for Haemopoietic Stem Cell Therapy in Malaysia (prepared by a technical working committee comprising of pathologists, paediatricians and researchers), Operational Policies for Paediatric Services and Guidelines For The Hospital Management of Child Abuse and Neglect in Malaysia (which will serve as a reference in managing and handling SCAN cases in MOH hospitals).

Table 8 shows that the total number of paediatric inpatients had increased by 7.67% in 2008 as compared to 2007. All states showed an increase in the number of patients admitted in 2008 except for Pahang and Sabah. The highest BOR was in WP Putrajaya, followed by Perlis and Melaka.

TABLE 8
TOTAL NUMBER OF PAEDIATRIC INPATIENTS AND BOR ACCORDING TO STATE FOR 2007 AND 2008

State	Total Number of Inpatients		% +/- Difference Between 2007/2008	Bed Occupancy Rate (BOR)	
	2007	2008		2007	2008
Perlis	4,935	5,692	+15.34	102.88	115.90
Kedah	27,575	31,862	+15.55	84.14	82.57
Pulau Pinang	19,054	20,116	+5.57	75.31	76.03
Perak	25,633	27,768	+8.33	49.98	53.73
Selangor	32,244	34,813	+7.97	80.22	75.12
WP KL	23,730	24,573	+3.55	81.44	81.74
WP Putrajaya	2,938	3,404	+15.86	114.99	119.27
WP Labuan	884	982	+11.09	59.51	59.35
N. Sembilan	14,860	15,764	+6.08	66.04	70.11
Melaka	9,653	12,355	+27.99	96.01	104.73
Johor	24,987	28,100	+ 12.46	50.45	66.01
Pahang	15,411	14,526	-5.74	74.29	71.13
Terengganu	13,277	13,439	+1.22	63.95	65.53
Kelantan	15,647	17,127	+9.46	66.87	70.29
Sabah	22,192	21,245	-4.27	61.47	63.28
Sarawak	24,757	27,223	+9.96	49.57	53.67
Total	277,777	298,989	+7.67		

Source: Health Informatics Centre, MOH

Surgical Services

The Surgical (Specialty) Services include general surgery, orthopedics, 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 number of outpatients in surgical (specialty) clinics as shown in Table 9 indicated an increased number of the patients except for Hand and Microsurgery discipline.

TABLE 9
NUMBER OF OUTPATIENTS AT SURGICAL (SPECIALTY) CLINICS, 2007 - 2008

Discipline	No. of Outpatients		% Of Changes
	2007	2008	
General Surgery	514,287	537,773	4.36
Orthopedic	639,222	679,930	5.98
Ophthalmology	620,649	653,065	4.96
Otorhinolaryngology	336,127	360,997	6.88
Urology	90,168	92,683	2.71
Neurosurgery	26,062	27,934	6.70
Cardiothoracic surgery	10,936	11,307	3.28
Plastic Surgery	34,939	39,094	10.6
Hand & Microsurgery	7,037	5,202	-35.2
Hepatopancreaticobiliary	NA	NA	NA
Total	2,279,427	2,368,891	3.92

NA = Not available
Source: Health Informatics Centre, MOH

The number of inpatients in all surgical (specialty) wards is shown in Table 10. Like surgical outpatient attendees, there was an overall increment in admission in 2008 as compared to 2007.

TABLE 10
NUMBER OF BEDS, INPATIENT AND BED OCCUPANCY RATE OF SURGICAL (SPECIALTY) WARD, 2007 - 2008

Discipline	No. of Beds		Total Number of Inpatients		Bed Occupation Rate	
	2007	2008	2007	2008	2007	2008
General Surgery	3,829	3,848	230,152	238,002	57.81	68.29
Orthopedic	2,745	2,819	122,235	125,841	67.97	68.29
Ophthalmology	679	677	31,749	34,224	51.98	45.87
Otorhinolaryngology	373	384	15,120	15,472	45.37	49.57
Urology	228	234	9,166	9,377	59.98	57.84
Neurosurgery	245	286	6,111	6,992	69.70	62.28
Cardiothoracic	68	68	573	750	32.28	41.37
Plastic Surgery	131	159	2,698	3,482	49.07	47.77
Hand & Microsurgery	18	18	231	470	29.79	42.36
Hepatopancreaticobiliary	28	34	1,126	1,482	67.23	81.22
Total	8,344	8,527	419,461	436,092		

Source: Health Informatics Centre, MOH

The core activity of all the surgical specialties were operations performed as shown in Table 11. Overall, there was an increase in number of operation performed in 2008 in both elective and emergency operation.

TABLE 11
NUMBER OF ELECTIVE AND EMERGENCY OPERATION PERFORMED IN 2007 - 2008

Type of Hospital	No. of Operation Performed			
	2007		2008	
	Elective	Emergency	Elective	Emergency
General Surgery	86,921	173,705	81,693	212,950
Orthopedic	51,984	181,445	61,464	182,269
Ophthalmology	33,743	7,247	38,177	6,766
Otorhinolaryngology	28,850	10,518	29,540	10,205
Urology	17,459	3,636	17,693	4,975
Neurosurgery	1,348	5,396	1,488	6,993
Cardiothoracic surgery	1,325	280	1,239	335
Plastic Surgery	4,130	2,236	5,679	3,951
Hand & Microsurgery	NA	NA	NA	NA
Hepatopancreaticobiliary	NA	NA	NA	NA
Total	225,760	384,463	236,973	428,444

NA = Not Available

Source: Health Informatics Centre, MOH

Achievements in 2008 included:

- i. Elective surgeries were performed on Saturday from February 2008 as a measure of reducing waiting time for operation. This is a very important milestone for Surgical (Specialty) Service and Anesthetic Service in compliance with the Director-General's circular.
- ii. A joint-effort on the Pediatric Cardiothoracic Surgery Programme which 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.
- iii. Cooperation between public and private sectors from pediatric cardiothoracic discipline of which Penang Adventist Hospital had offered to operate on 50 children for free starting October 2008. Patients would be joint managed by Pediatric Cardiologists and Pediatric Cardiothoracic Surgeons from MOH and a team from the private hospital. This measure was also taken to shorten the waiting list in Congenital Heart Surgery especially for cases of stable Tetralogy of Fallot.
- iv. Updating of the Implant and Prosthesis Guideline for orthopedic discipline that was issued in November 2008.

Anesthesiology Service

Anesthesiology Service consists of Anesthetic Operation Theatre Service, Intensive Care Service and Pain Service. In 2008, there were 79 MOH hospitals providing anesthetic services with 45 having resident specialists as compared to 77 hospitals with such services in 2007. For the rest of the hospitals, the services were given by anesthetic medical officers, visiting specialists and for 28 district hospitals in East Malaysia; they were given by trained assistant medical officers.

Workload for the Anesthesiology Services in 2007-2008 is depicted in Table 12. The number of times anesthetic were administered, inclusive of all modalities, showed an increasing trend. This is also reflected in attendances at anesthetic clinics and chronic pain clinics, and intensive care unit admissions.

TABLE 12
WORKLOAD FOR THE ANAESTHESIOLOGY SERVICES IN 2007 - 2008

Items	2007	2008
No. of Anesthetic Administered	286,324	310,487
No. of Attendance at Anesthetic Clinic	20,363	30,795
No. of ICU Admissions	20,075	23,928
No. of Attendance at Chronic Pain Clinic	1,785	3,199

Source: Anesthesiology Census 2007 and 2008, MOH

For the Intensive Care Service, there were 45 general intensive care units with 386 beds utilized as compared to 2007 where 275 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.

Another important milestone for the Anesthesiology Services was the Initiative of Pain as Fifth Vital Sign in 2008 following the issuance of the Director-General of Health's 9th Circular in August 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 the 10th Malaysian Plan, MOH has targeted to have emergency physicians in all specialist hospitals.

The number of patients who receive services from Emergency Department is increasing. There were 5,706,468 patients who seek medical treatment at the department in 2008 compared to 2007 (an increase by 7.7%). Table 13 states the number of cases at the Emergency Department and pre-hospital care services in the country.

TABLE 13
TOTAL CASES FOR EMERGENCY SERVICES IN 2008

Emergency Services						
State	Emergency & Trauma Department*		Pre-hospital Care**			No. of Emergency Physician
	No. Of Cases Seen	% Of Cases Seen	Emergency Calls	Inter-facility Transfer	Medical Standby	
Perlis	60,982	1.1	1,510	413	78	1
Kedah	390,966	6.9	10,127	12371	254	3
Pulau Pinang	329,763	5.8	12,164	12875	105	3
Perak	509,241	8.9	21,098	18856	307	3
Selangor	670,278	11.7	22,401	15626	327	6
W. Persekutuan	335,669	5.9	13,365	3168	212	10
N. Sembilan	260,633	4.6	6,911	8546	138	2
Melaka	157,471	2.8	7,192	4612	99	2
Johor	544,411	9.5	17,421	16525	275	4
Pahang	294,788	5.2	8,128	10932	243	2
Terengganu	216,670	3.8	5,286	7982	119	2
Kelantan	271,761	4.8	4,958	13246	94	2
Sabah	715,873	12.5	9,708	13350	696	2
Sarawak	467,292	8.3	9,161	5257	216	3
Total	5,225,798	100	149,430	143759	3163	45

Source: Health Informatics Centre, MoH

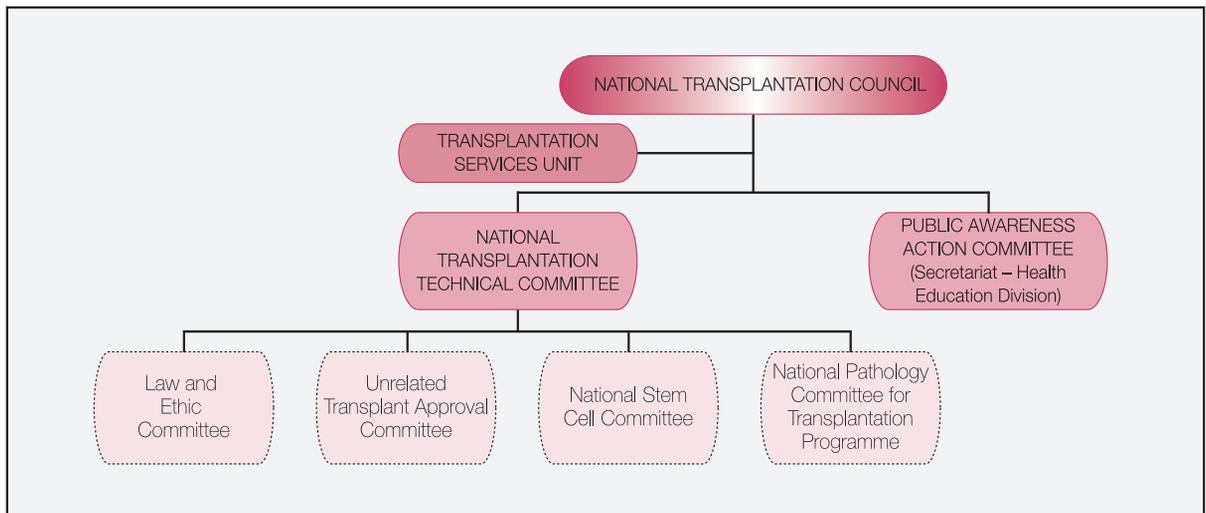
There were 45 gazette Emergency Physicians in the country compared to 35 last year. In addition to Universiti Sains Malaysia which has been offering Masters in Emergency Medicine since 2002, candidates from Universiti Malaya and Universiti Kebangsaan Malaysia are expected to graduate beginning June 2009.

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 the targeted response time of 15 to 30 minutes. A total of 25 hospitals have been identified as hubs for Medical Emergency Coordinating Centre throughout the country. The seven centers in Klang Valley area are 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.

Transplantation Service

The year 2008 witnessed the establishment of the National Transplantation Council, which is chaired by the Director-General of Health where committee members are appointed by the Minister of Health (Figure 1). The National Transplantation Council is the main governing body of the National Transplantation Programme and is responsible in determining the direction and policies of the programme.

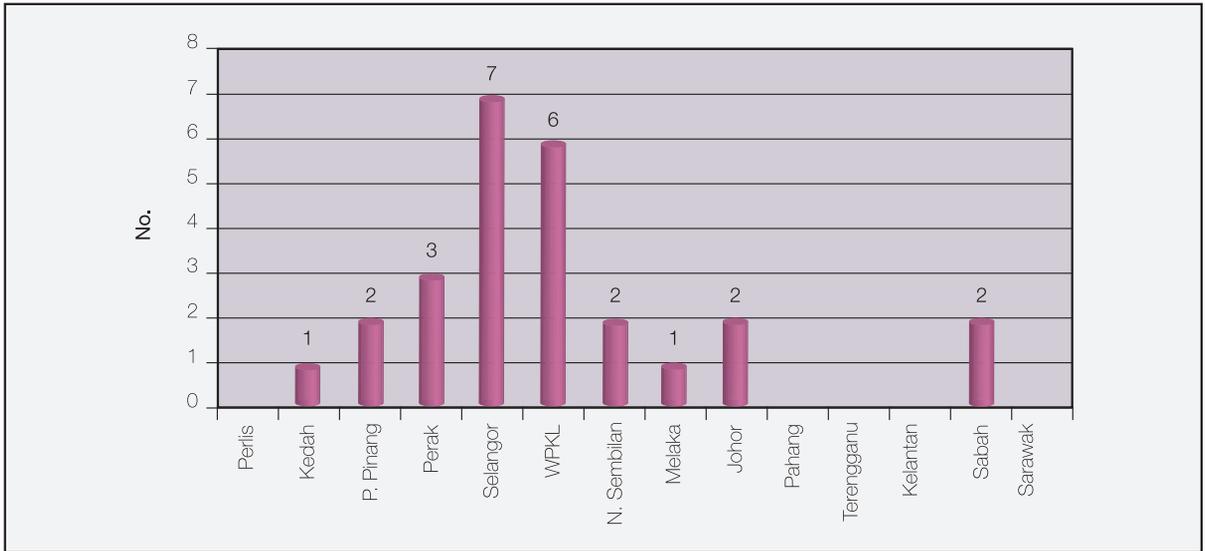
FIGURE 1
ORGANISATION CHART OF THE NATIONAL TRANSPLANTATION COUNCIL



The role of the National and Regional Transplantation Procurement Management Units had been enhanced and strengthened in 2008. The National Unit, which also coordinated organ/tissue procurement in the central region (Klang Valley, Selangor, Negeri Sembilan and Melaka), has a dedicated team of staff members. The Regional Units encompassed Northern (Penang, Kedah, Perlis, Perak), Southern (Johor, southern areas of Melaka and Pahang), East Coast (Pahang, Terengganu, Kelantan), Sabah and Sarawak regions. Each Regional Unit has its own dedicated coordinator.

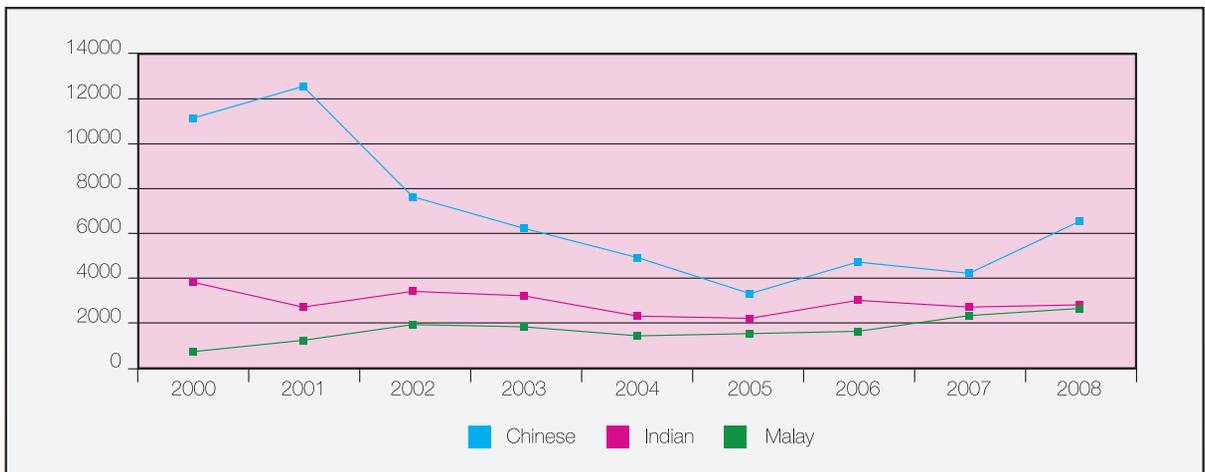
There was a total of 26 cases of cadaveric organ/tissue donation in 2008, donating 20 corneas, 13 kidneys, 13 heart valves, four livers and four bones. Apart from that, a total of 56 kidney transplants and 5 liver transplants had been performed in Malaysia in the same year. However, there was neither heart nor lung transplants performed. Most of the donors were from Selangor and Wilayah Persekutuan (Figure 2).

FIGURE 2
NUMBER OF CADEVERIC DONORS ACCORDING TO STATES IN 2008



The number of people (new pledgers) in Malaysia who pledged to donate their organs/tissues in 2008 was 11,605 which comprised of 6,352 Chinese, 2,533 Indians, 2,504 Malays and 216 of other ethnicities (Figure 3).

FIGURE 3
NUMBER OF NEW PLEDGERS BASED ON THE THREE MAJOR RACES (1 JAN 2000 - 31 DEC 2008)



Source: National Transplant Resource Centre

Pathology Service

Pathology Service is an important clinical support service and diagnostic aid that helps clinicians achieve an accurate, objective diagnosis. This service covers various sub-disciplines i.e. Chemical Pathology, Medical Microbiology, Hematology, Histopathology and Cytology. Pathology service may be obtained at each of the 126 hospitals, 6 special medical institutions and more than 800 health clinics run by the MOH.

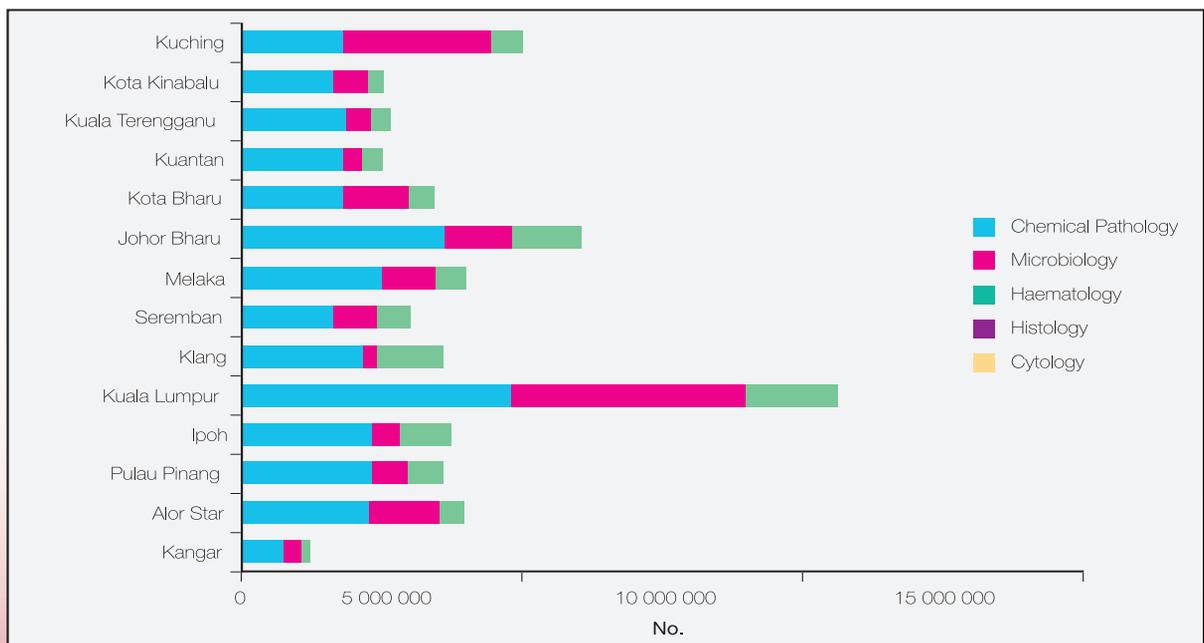
Each year, the workload increases in the range of 10% to 15% (Table 14). This is contributed by the diagnostic services (monitoring and verification) for outpatients and inpatients as well as referrals from nearby hospitals (specialized tests). Wilayah Persekutuan Kuala Lumpur had the highest workload in 2008 (Figure 4).

TABLE 14
WORKLOAD OF PATHOLOGY DEPARTMENT IN MOH HOSPITALS, 2003 - 2008

Year	Workload
2008	165,111,851
2007	137,656,713
2006	104,820,131
2005	97,981,039
2004	84,654,480
2003	74,397,822

Source: Health Informatics Centre, MOH

FIGURE 4
NUMBER OF TESTS DONE ACCORDING TO DISCIPLINE IN STATE HOSPITALS IN 2008



Source: National Advisor, Pathology Service, MOH

Blood Transfusion Service

National Blood Service Centre is the national referral centre for Transfusion Medicine Service. Services provided by the centre includes Blood Donation Service, Microbiological Transfusion, Medical Transfusion, Hematology, Immunohaematology, Production & Fractionation, Homeostasis, Inventory, Histocompatibility & Immunogenetics, Hemophilia, Quality/Biochemistry, Cord Blood Banking and Health Education.

Under Microbiological Transfusion Service, the main bulk of test done was Donor Screening (Table 15).

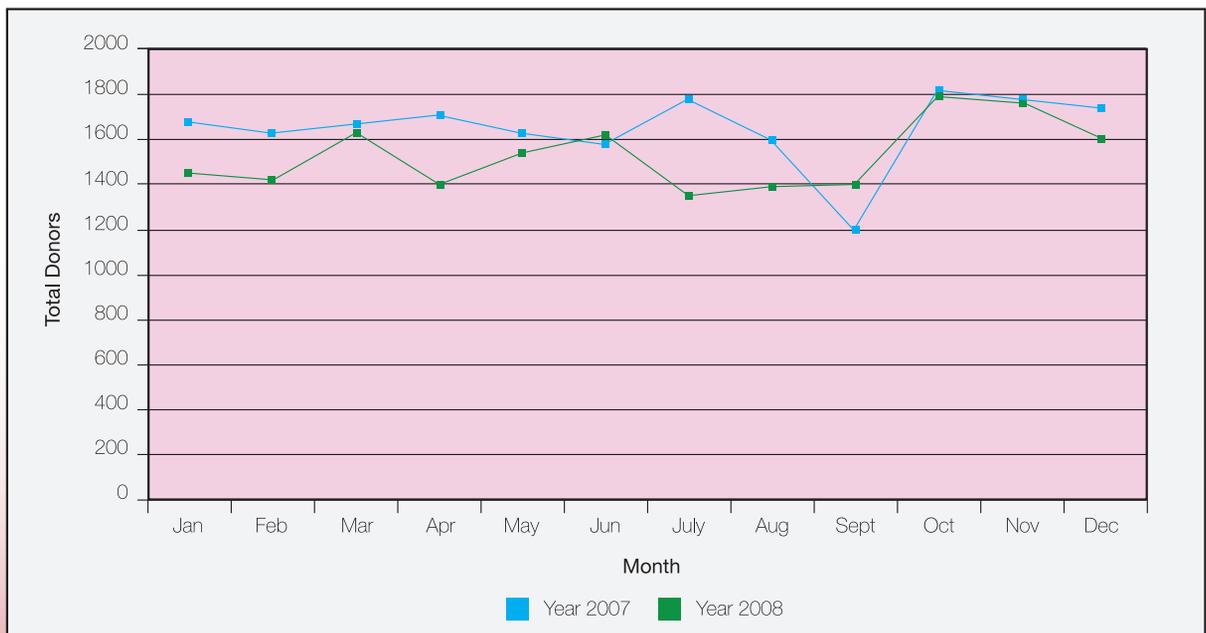
TABLE 15
TYPE AND NUMBER OF TESTS DONE IN 2008

Type Of Test	Number Of Test
Donor Screening	1,149,777
Conformation / Supplement	17,147
Cord Blood	9,808
Patient Screening	19,227
All Categories Screening	1,976
Total	1,197,935

Source: National Blood Service Centre

As for Blood Procurement and Donor, there was an increase in the total number of blood donors in 2008 compared to 2007 (Figure 5).

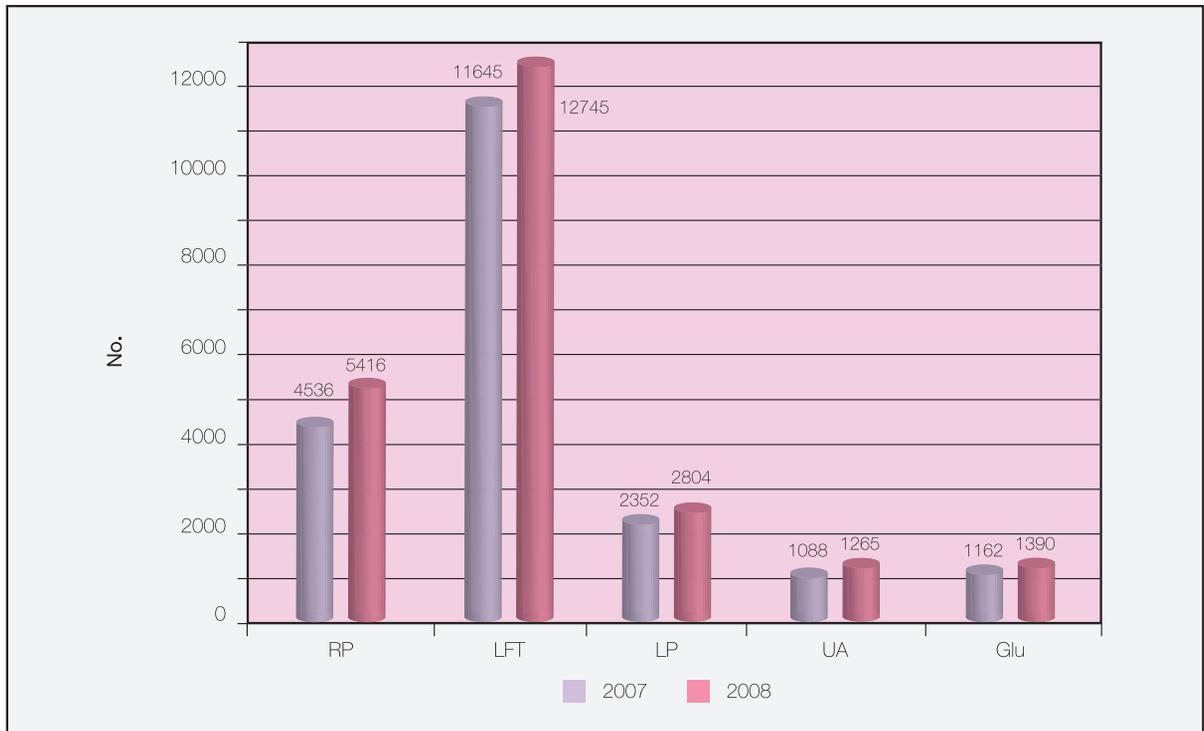
FIGURE 5
MONTHLY TOTAL DONORS IN 2007 AND 2008



Source: National Blood Service Centre

Biochemical tests are done on samples received from aphaeresis donors and hemophilia patients. The workload on all types of tests slightly increased in 2008 compared to 2007 (Figure 6).

FIGURE 6
WORKLOAD FOR BIOCHEMISTRY UNIT IN 2007 AND 2008



Source: National Blood Service Centre

Medical Forensic Service

Forensic Medicine Service began in 2002 with the separation of the department from the Pathology Department. The Forensic Medicine Service includes both Forensic Medicine and Forensic Sciences. The latter is under the purview of the Chemical Department of the Ministry of Science, Technology and Environment. On the other hand, Forensic Medicine is handled by the Forensic Medicine Specialists under MOH. 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) and Medico-legal Practice (involving aspects of law and ethics in medicine).

In 2008, the workload of the Forensic Services throughout the country was constituted mainly on normal cases and autopsy cases (Table 16).

TABLE 16
WORKLOAD OF FORENSIC SERVICE IN 2008

State	Normal Cases	Autopsy Cases	Clinical Cases	External Cases
Perlis	800	200	0	0
Kedah	3760	904	0	0
Pulau Pinang	3349	1029	5	5
Perak	7588	1571	0	116
Selangor	4842	2163	0	116
Hospital Kuala Lumpur	2565	743	17	116
Negeri Sembilan	1589	400	0	0
Melaka	1493	393	0	0
Johor	8818	1848	0	0
Pahang	1261	287	0	0
Terengganu	1465	233	0	0
Kelantan	2656	452	0	0
Sabah	696	232	0	0
Sarawak	832	131	0	0
Total	41,714	12,386	22	353

Source: National Advisor, Forensic Medicine, MOH

The achievements in 2008 included the following:

- i. Turn Around Time for Releasing Bodies (Non-police cases) Within 2 hours of Receiving Body: 90% achieved
- ii. Turn Around Time for Autopsies (Uncomplicated cases) Within 24 hours of Receiving Polis 61: 90% achieved
- iii. Turn Around Time for Autopsy Reports (Uncomplicated cases) Within 8 Weeks after Autopsy: 70% achieved
- iv. Percentage of Body Released to the Wrong Next-of-Kin Not more than 1%: 100% achieved
- v. Number of Incident Reporting for the Mortuary Services Not more than 1%: 100% achieved
- vi. Adequacy of Autopsy Reports on Road Traffic Accident Cases (Uncomplicated cases) 100% of Reports Should Be Good Or Satisfactory: 90% achieved

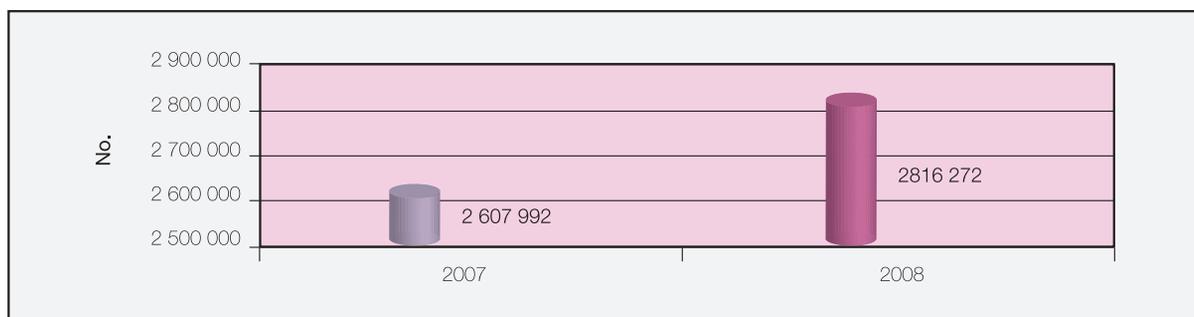
Diagnostic Imaging (Radiology) Service

Radiology Service is provided both in MOH hospitals and a large portion of health clinics. At tertiary hospitals and in most state hospitals, the service covers a wide spectrum of radiological modalities. New modalities of imaging obtained were:

- i. Two CT 128 Slice machines in Hospital Melaka and Hospital Tunku Jaafar, Seremban. With this high powered machine, examination had evolved from Cross-Sectional CT studies to 3-Dimensional and Volumetric Studies as well as increasing the diagnostic ability. More accurate coronary imaging can be done on selected patients replacing angiograms which were more invasive in nature.
- ii. 17 Full Field Digital Mammography machines for hospitals comprising 10 units with and seven units without biopsy instrumentation.
- iii. 33 ultrasound machines comprised of 20 with colour Doppler and 13 portable ultrasound machines.

The number of radiological examination in specialist hospitals had increased substantially in 2008 as compared to 2007 as shown in Figure 7.

FIGURE 7
TOTAL RADIOLOGICAL EXAMINATION IN SPECIALIST HOSPITALS IN 2007 AND 2008



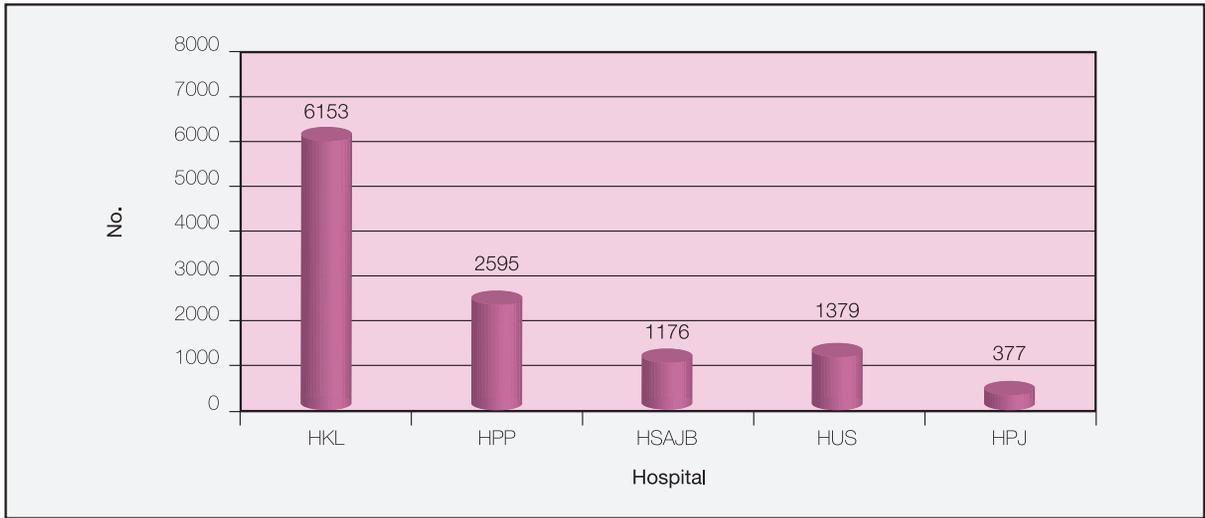
Source: National Advisor, Radiology Service, MOH

Nuclear Medicine Service

The Nuclear Medicine Service was started in Malaysia in 1964. It comprises of three main branches namely Clinical Department (Diagnostics, Treatment and Interventional), Radiopharmaceutical Department (supportive activity from pharmaceutical activity) and Physics Department (supportive activity from medical nuclear physicists).

The service is offered in Hospital Kuala Lumpur (HKL), Hospital Umum Sarawak (HUS), Hospital Pulau Pinang (HPP), Hospital Sultanah Aminah Johor Bahru (HSAJB) and Hospital Putrajaya (HPJ). In 2008, the service was mainly being provided in HKL (Figure 8).

FIGURE 8
NUMBER OF ACTIVITIES IN THE FIVE CENTRES OF NUCLEAR MEDICINE IN 2008



Source: National Advisor, Radiology Service, MOH

New services and developments in 2008 were:

- i. Hospital Pulau Pinang obtained approval to build radioiodine wards and the wards are expected to be completed in August 2009
- ii. PET-CT Services Centre Putrajaya had obtained GMP licensing from the Pharmaceutical Services Department for the transport of F-18 FDG to Hospital Pulau Pinang
- iii. Hospital Sultanah Aminah Johor Bahru had obtained a new Gamma Camera machine

Rehabilitation Medicine Service

Rehabilitation Medicine Services encompass the various units of Rehabilitation Medicine (Clinical) Physiotherapy, Occupational Therapy and Speech Therapy Services. The services provided are Rehabilitation Medicine Specialist Services, Rehabilitation Medicine Nursing Services, Prosthetics & orthotics, Clinical psychology and other clinical support services such as medical social services.

Achievements in 2008 included organisation restructuring to ensure client-focused services, ensuring level 4 of care as the basic level of care for state hospitals providing rehabilitation medicine services and implementation of subspecialty/area of interest programme for Rehabilitation Medicine. The workload of this service at the Rehabilitation Medicine centres is shown in Table 17.

TABLE 17
WORKLOAD FOR LEVEL 4 REHABILITATION MEDICINE CENTRES IN 2008

Hospital	No. of Specialists	No. of Outpatients	No. of Inpatients	No. of Patients Receiving Level 3 Treatment (district hospital visits)
Hospital Tuanku Ja'afar, Seremban	4	1568	241	189 (Port.Dickson, Jelebu, K Pilah, Tampin)
Hospital Kuala Lumpur	4	1150	313	-
Hospital Sungai Buloh	2	368	566	-
Hospital Tengku Ampuan Rahimah, Klang	2	1140	110	-
Hospital Serdang	2	545	111	NA (Hosp.Pulau Pinang)
Hospital Raja Perempuan Zainab II, Kota Bharu	0	588	112	-
Hospital Sultanah Aminah, Johor Bahru	1	Started end of 2008		
Hospital Queen Elizabeth, Kota Kinabalu	1	Started end of 2008		
Total	16	5359	1453	189

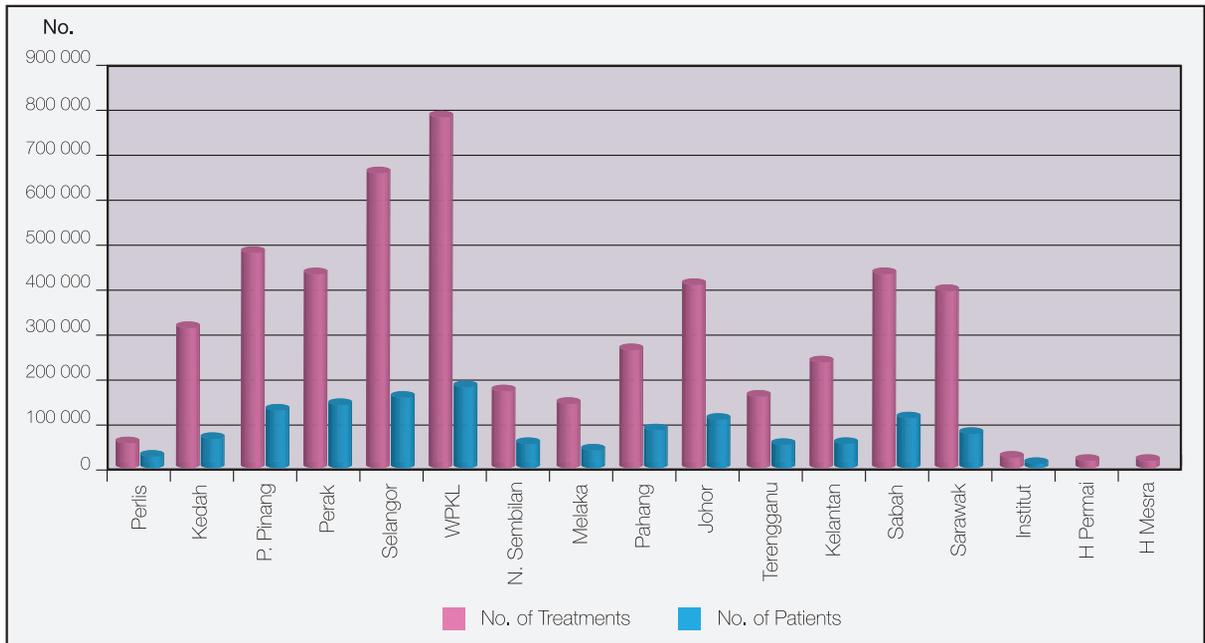
Source: National Rehabilitation, Forensic Medicine, MOH

Future planning include creating 'Rehabilitation Medicine Complex' facilities in each state hospital to accomodate the existing workload, developing clinical governance in rehabilitation medicine by recognising levels of care in clinical services and developing the Masters of Rehabilitation Medicine program as an Open Masters program to train more specialists.

Physiotherapy Service

Physiotherapy is concerned with the assessment, maintenance and restoration of the physical functions of the body. It is an important branch of Allied Health Care and may be done both in isolation and in conjunction with other types of medical management. In 2008, Hospital Kuala Lumpur remained the major contributor to the workload of physiotherapists in the country (Figure 9).

FIGURE 9
WORKLOAD OF PHYSIOTHERAPISTS IN 2008

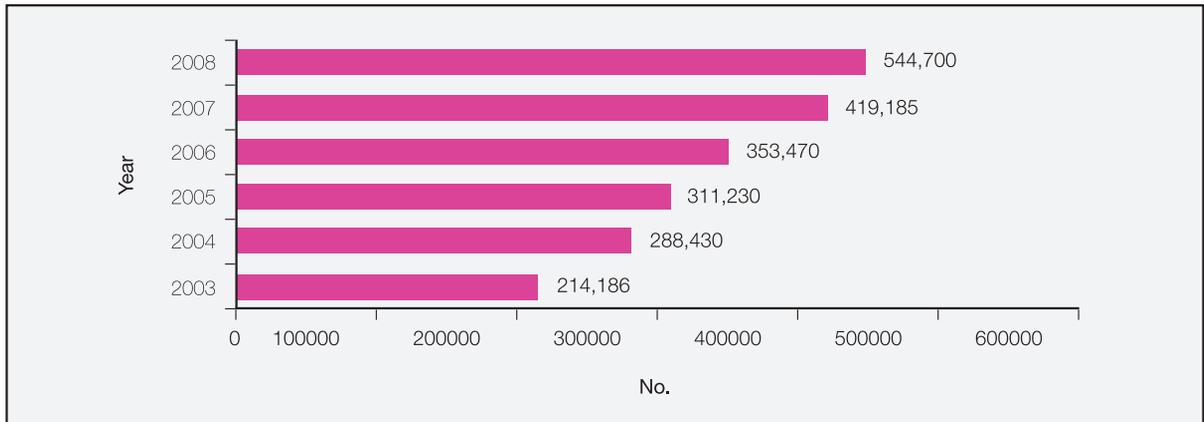


Source: Physiotherapy National Advisor, MOH

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 pediatrics and management of dyslexia in schools. The number of patients who received occupational therapy had substantially increased in 2008 compared to previous years (Figure 10).

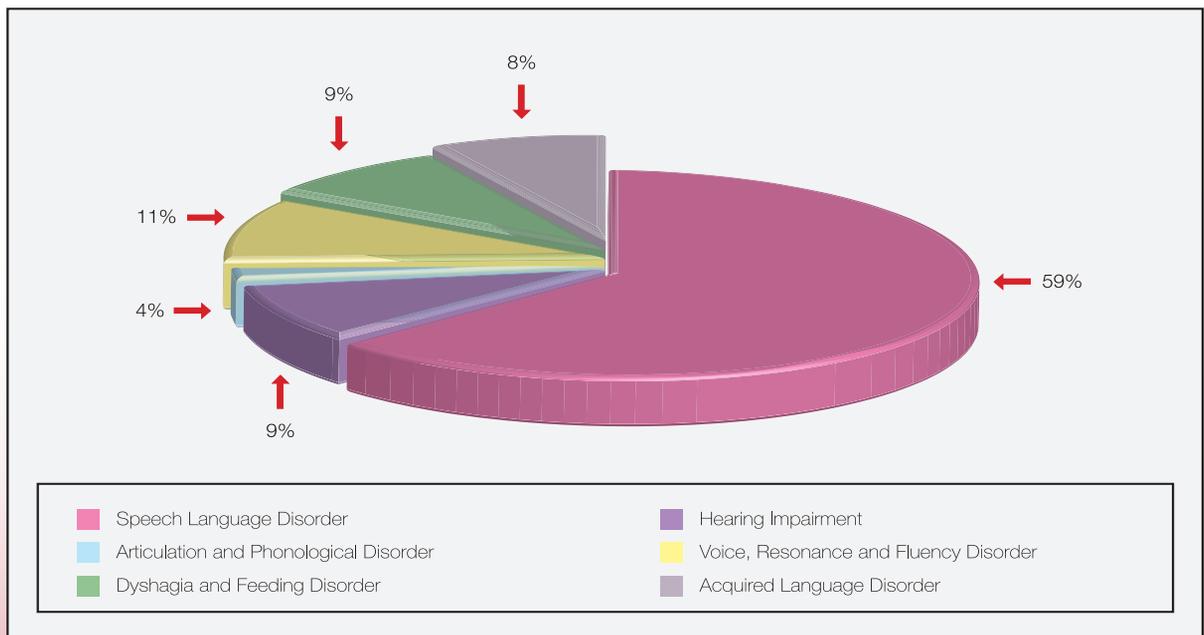
FIGURE 10
NUMBER OF PATIENTS RECEIVING OCCUPATIONAL THERAPY SERVICES IN 2003 - 2008



Speech Therapy Service

A speech language pathologist is a qualified professional in the study of human communication, its development and disorders; and is concerned with the prevention, identification, assessment of speech and language problems, and the rehabilitation of children and adults with such problems. Some speech-language pathologists may also work with people who have feeding and swallowing difficulties. In 2008, the number of patients attended to increased by 2,099 (7.58%) despite the service having the same number of 42 members. Most of the cases (59%) attended to had speech language disorder (Figure 11).

FIGURE 11
TYPE OF CASES SEEN IN SPEECH THERAPY SERVICE IN 2008

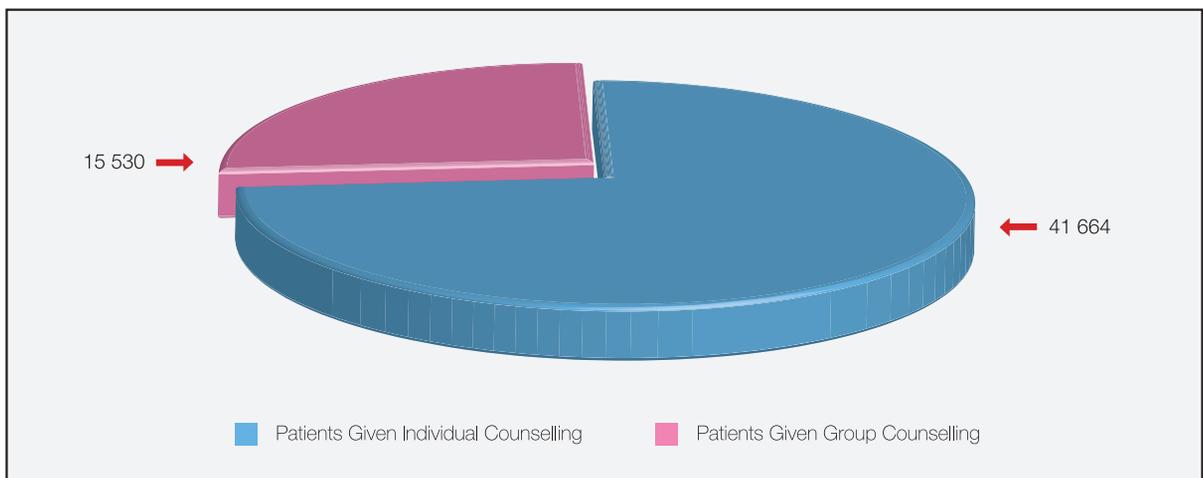


Source: Speech Therapy Unit, HKL

Dietetic & Catering Service

The Dietetic and Catering Service is responsible for providing both clinical dietetic services as well as catering to patients' needs. There are seven hospitals where catering services has been outsourced since 1999. Under Dietetic Service, "Nutrition Support Team" was formed in Hospital Kuala Lumpur and the "Delay In Response To Inpatient Referred By Dietitian" NIA was achieved in 2008. Nearly three-quarters of the outpatient counseling given was group counseling (Figure 12). As for Catering Service, the customer satisfaction survey yielded a score of 80.6% and also all hospitals in Selangor were in the final stage of implementation of HACCP while hospitals in Sarawak, Kelantan and Melaka were in the initial stage of implementation.

FIGURE 12
OUTPATIENTS DIETETIC COUNSELLING IN 2008

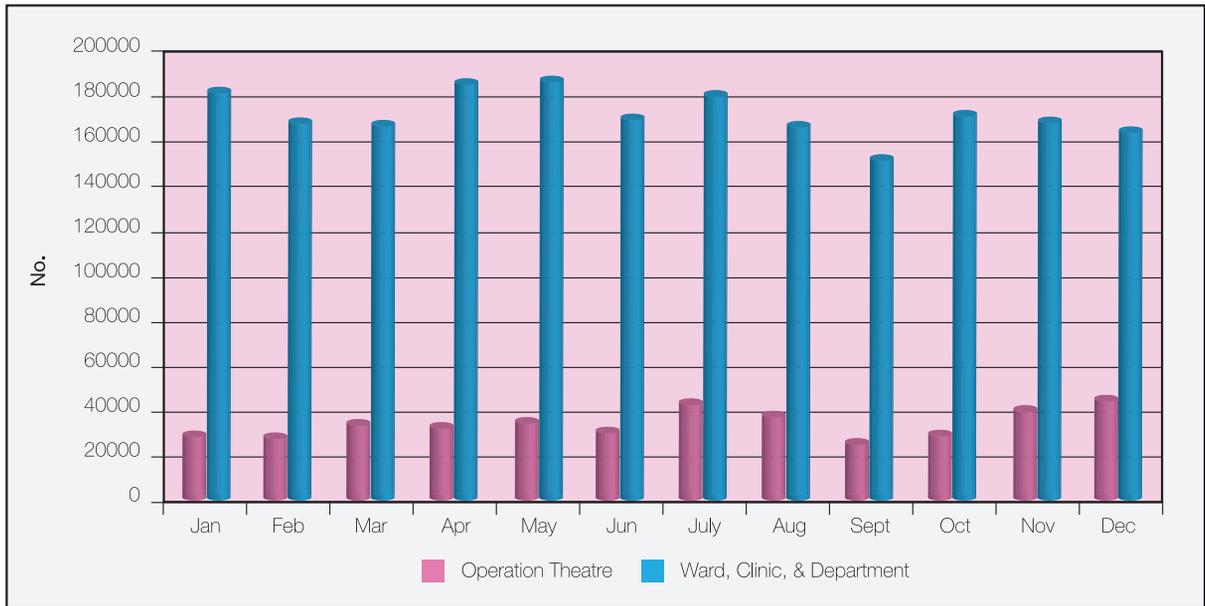


Source: National Advisor, Dietetics & Catering Service, MOH

Central Sterilization Supply Unit (CSSU)

The Central Sterilization Supply Unit (CSSU) is the backbone of any hospital as it serves all clinical disciplines. Apart from that, health clinics in the vicinity of the hospitals also receive CSSU service. The CSSU is responsible for processing and providing sterile instruments and equipment according to recommended needs and standards. In 2008, CSSU Hospital Kuala Lumpur produced 3.3 million sterile products for patient use which included surgical instruments, linen and soft dressing. The workload of the unit is shown in Figure 13. The total sterile products provided were commendable taking into account the current scenario and shortage of funds. The CSSU also achieved ISO 9001-2000 status on 16 October 2008. The challenge faced by the unit was increased in workload that resulted in increased need for consumables. Also, processing instruments and equipment which were old or beyond economic repair (BER) need replacement but this had to be postponed and done in phases in view of severe limitation of funds.

FIGURE 13
MONTHLY WORKLOAD IN CSSU HKL IN 2008

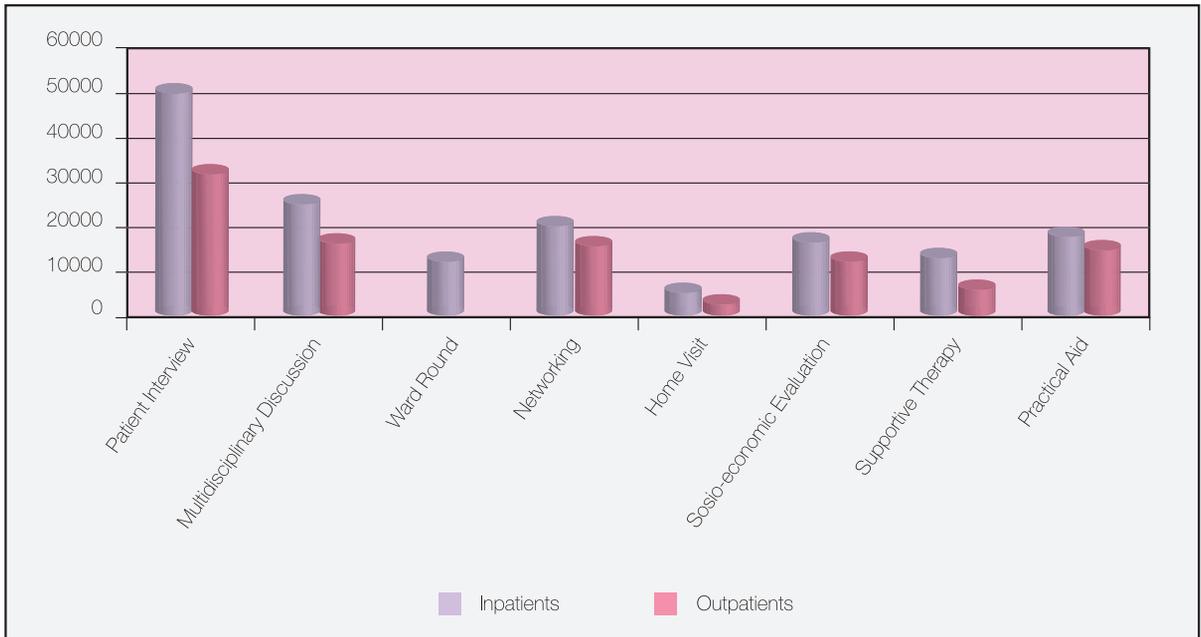


Source: CSSU HKL 2009

Medical Social Service

Medical Social Service is a sub-discipline of social work, also known as hospital social work. They assess the psychosocial functioning of patients and families and intervene as necessary. Interventions may include connecting patients and families to necessary resources and supports in the community; providing psychotherapy, supportive counseling or grief counseling; or helping a patient to expand and strengthen their networks of social supports in the community. Medical Social Workers work on an interdisciplinary team with professionals of other disciplines. Figure 14 shows the intervention work by them in 2008 on 172,150 inpatients and 111,917 outpatients. Among the achievements of the Medical Social Service in 2008 were developing Code of Ethics for Medical Social Services, Standard Operational Policy (SOP) and Key Performance Indicators for Medical Social Welfare Department, preparing Continuous Professional Development (CPD) points to replace the *Penilaian Tahap Kecekapan* (PTK) for Medical Social Workers, preparing and editing Guideline of Socio Economic Evaluation to aid MOH, preparing the Medical Social Services website www.msw.org.my and participating in activities of Social Workers in *Komuniti Bersama Persatuan Pegawai Pembangunan Masyarakat (Perubatan) Malaysia*.

FIGURE 14
INTERVENTION DONE BY MEDICAL SOCIAL WORKERS IN 2008



Source: Medical Social Service Department, HKL

Medical Professional Development

Clinical Specialists Requirement

In 2008, there was an increase of 5.3% in the number of clinical specialists working in MOH hospitals. The total number of specialists was 2,545 from various specialties and grades (UD 41 and above) including 226 specialists who were on contract basis (Table 18). Even though there was an increase in the total number of specialists, it has yet to meet the needs of the country.

TABLE 18
NUMBER OF SPECIALIST IN MOH HOSPITALS IN 2007 AND 2008

Discipline	No. of Specialist (Including Subspecialty Trainee)	
	2007	2008
Anesthesiology	260 (22)	272 (11)
Cardiology	33 (3)	38 (5)
Cardiothoracic Surgery	12 (2)	22 (2)
Dermatology	30 (8)	31 (8)
Emergency Medicine	36	44
Forensic	20 (2)	20 (3)
General Medicine	305 (39)	327 (40)
General Surgery	232 (41)	232 (37)
Hand & Micro Surgery	1	1
Nephrology	44 (1)	45 (1)
Neurology	18 (3)	15 (2)
Neurosurgery	20 (2)	21 (2)
Nuclear Medicine	-	6
Obstetric & Gynaecology	251 (22)	246 (20)
Ophthalmology	144 (18)	158 (17)
Orthopedic	177 (15)	189 (12)
Otorhinolaryngology	89 (14)	98 (11)
Paediatric	250 (18)	262 (17)
Paediatric Surgery	17 (6)	17 (6)
Pathology	138 (5)	140 (8)
Plastic Surgery	21 (2)	23 (2)
Psychiatry	93 (4)	94 (3)
Radiology	151 (6)	151 (4)
Radiotherapy & Oncology	11 (3)	14 (3)
Rehabilitation Medicine	14	21
Respiratory Medicine	17 (2)	23 (2)
Sport Medicine	4	6
Urology	25 (1)	26
Total	2413 (239)	2542 (216)

() contract officer

Source: Medical Professional Development Section, MOH

Engagement of Private Practitioners

Private practitioners continue to be employed on sectional basis considering the need for provision of certain specialty in some MOH hospitals. In 2008, there were only 16 applicants from private practitioners who provided service to MOH compared to 26 applicants in 2007 (Table 19).

TABLE 19
NUMBER OF PRIVATE PRACTITIONERS EMPLOYED ON SECTIONAL BASIS FOR 2008

Hospital	Discipline	Number
Hospital Umum Sarawak	Cardiology	1
	Nephrology	1
	Obstetrics & Gynecology	1
	Urology	1
	Ophthalmology	1
Hospital Sibul	Orthopedic	1
Hospital Kuala Lumpur	Medicine	1
	Obstetrics & Gynecology	1
	Surgery	1
	Urology	2
Hospital Selayang	Pathology	1
Hospital Raja Permaisuri Bainun Ipoh	Anesthesiology	1
Hospital Taiping	Oncology	1
Hospital Sultanah Aminah Johor Bahru	Cardiology	1
Hospital Raja Perempuan Zainab II Kota Bharu	Oncology	1
Total		16

Source: Medical Professional Development Section, MOH

Gazettement and Credentialing of Clinical Specialists

The Gazettement Committee meets at least 3 times a year. However, a monthly meeting is being scheduled to facilitate the gazettement process. The use of a log book which was introduced in 2005 has facilitated clinical specialist gazettement process. In 2008, 409 specialists were gazetted and this represented an increment of 38% compared to the previous year. The largest number of specialist being gazette was from the discipline of Internal Medicine followed by Anesthesiology and Obstetric & Gynecology as seen in Table 20. As in 2007, credentialing process was not done separately. All of the specialists will be automatically credentialed in their respective core procedures once they were gazette. In year 2008, 409 specialists were credentialed.

TABLE 20
NUMBER OF SPECIALISTS GAZETTE BASED ON SPECIALTY IN 2007 AND 2008

Specialty / Subspecialty	No. of Specialists* Gazette in 2007	No. of Specialists* Gazette in 2008
Anesthesiology	39	59
Breast & Endocrine Surgery	2	1
Cardiology	4	4
Cardiothoracic Surgery	2	2
Dermatology	3	-
Emergency Medicine	6	8
Endocrinology	2	1
Forensic	-	3
Gastroenterology	3	5
Geriatric	1	-
General Medicine	49	63
General Surgery	21	42
Hand & Micro Surgery	1	-
Nephrology	3	1
Neurology	3	1
Neurosurgery	1	4
Nuclear Medicine	-	1
Obstetrics & Gynecology	39	55
Ophthalmology	20	17
Orthopedic	17	18
Otorhinolaryngology	14	12
Pathology	9	18
Paediatric	20	31
Paediatric Cardiology	-	1
Paediatric Neurology	-	1
Paediatric Surgery	1	-
Plastic Surgery	3	3
Psychiatric	4	8
Radiology	22	35
Radiotherapy & Oncology	1	1

TABLE 20 (CONTINUED)
NUMBER OF SPECIALISTS GAZETTE BASED ON SPECIALTY IN 2007 AND 2008

Specialty / Subspecialty	No. of Specialists* Gazette in 2007	No. of Specialists* Gazette in 2008
Rehabilitation Medicine	4	2
Respiratory Medicine	1	-
Rheumatology	-	4
Sport Medicine	-	3
Upper Gastroenterology	-	3
Urology	1	1
Total	296	409

* Including Contract Specialists

Source: Medical Professional Development Section, MOH

Specialist Training Programme

The Master in Medicine Programme is generally managed by the Training Division and the technical input is given by Medical Development Division in order to implement a successful programme.

Starting from the 2008/2009 session, the total places for the Master in Medicine Programme had been increased to 600 as compared to 450 in the previous years. Out of the 600 places, 380 places (63.3%) were allocated for the Open System and the remaining 220 places (36.7%) were given for the Close System. Master in Nuclear Medicine was introduced in the 2008/2009 session. Thus, there were 22 disciplines offered in the programme altogether. Although a total of 614 offers had been sent out for the various disciplines, only 556 candidates had accepted to register in the programme. The detailed number of candidates offered and accepted to join the programme is shown in Table 21.

TABLE 21
DISCIPLINES OFFERED AND NUMBER OF TRAINEES FOR 2007/2008 AND 2008/2009 SESSION

Disciplines	2007 / 2008 Session		2008 / 2009 Session	
	No. of Offers	No. of Acceptance	No. of Offers	No. of Acceptance
Anaesthesiology	53	49	72	70
Clinical Oncology	4	4	4	4
Emergency Medicine	24	23	37	34
Family Medicine	34	32	52	36
General Surgery	43	42	42	41
Internal Medicine	40	38	56	51
Neuro Surgery	5	5	3	2

TABLE 21 (CONTINUED)
DISCIPLINES OFFERED AND NUMBER OF TRAINEES FOR 2007/2008 AND 2008/2009 SESSION

Disciplines	2007 / 2008 Session		2008 / 2009 Session	
	No. of Offers	No. of Acceptance	No. of Offers	No. of Acceptance
Nuclear Medicine	-	-	4	4
Obstetrics dan Gynaecology	25	25	43	40
Ophthalmology	25	24	32	31
Orthopedic	30	30	40	37
Otorhinolaringology	26	21	23	19
Pathology	32	31	44	41
Peadiatric	28	25	39	34
Pediatric Surgery	3	3	4	4
Plastic Surgery	2	2	6	6
Psychiatry	20	20	28	25
Public Health	27	24	28	23
Radiology	31	30	37	36
Rehabilitation Medicine	6	5	10	9
Sports Medicine	3	3	3	2
Transfusion Medicine	6	5	7	7
Total	467	441	614	556

Source: Medical Professional Development Section, MOH

In 2008, a total of 199 Medical Officers from 18 disciplines under Medical Programme reported back to MOH after completing their specialist training compared to 253 in 2007. To further improve the Master in Medicine Programme, more places for the open system will be made available, more disciplines will be offered and consequently the number of places for each discipline will also be increased.

Subspecialty Training

The application to join subspecialty training has been increasing year by year. In 2008, there were 354 specialists who underwent fellowship training compared to 359 specialists in 2007. The number of subspecialty discipline had also increased to 90. The most popular subspecialty was cardiology followed by urology, spine and nephrology. Other subspecialty that showed increasing trend were colorectal surgery, endocrinology, vitreo-retinal and feto-maternal medicine.

Continuous Medical Education (CME), Continuing Professional Development (CPD) and Development of Human Resource Activities

This section coordinates sponsorship and selection of the candidates to attend courses, workshops and seminars locally or internationally. From 2006, the total allocation for this purpose had been increased under the 9th Malaysia Plan for human resources development as a result of which, more candidates were sponsored to attend courses/workshops/seminars locally or internationally in 2008 compared to 2007.

In 2008, a total of RM24, 875,486.00 had been allocated for CME programme locally or internationally (Table 22). Out of that, RM20, 875,486.00 was for local training. With the amount of money, 9,886 courses were held with 133,118 participants. The number of candidates attending courses overseas also increased to 190 with a total amount of RM 5,711,389.74 in expenditure.

TABLE 22
CONTINUOUS MEDICAL EDUCATION (CME) ACTIVITIES FOR 2006 AND 2008

Year	Total Allocations (RM)	Expenditure (RM)	Number of CME	Number of Officers
2006				
Overseas Training	4,000,000.00	2,577,372.00	64	116
Local Training	18,912,766.00	17,335,394.00	9,368	127,207
Total	22,912,766.00	19,912,766.00 (88%)	9,432	127,319
2008				
Overseas Training	4,000,000.00	5,711,389.74.00	108	190
Local Training	20,875,486.00	18,493,255.00	9,886	133,118
Total	24,875,486.00	24,204,644.74 (97%)	9,994	133,308

Source: Medical Professional Development Section, MOH

Continuing Professional Development (CPD) is a form of 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.

PTK-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 i.e. Medical Officer, Dental Officer and Pharmacist. Points collected from courses attended will be recorded in a log book. As an improvement, CPD is being integrated officially as “PTK Khusus” to all the three categories and the usage will be extended to the paramedics and allied health personnel.

Housemanship Training Programme

Housemanship training is a period of apprenticeship after graduation from medical school before new graduates are registered to practice independently as doctors. The programme is formulated in such a way as to ensure that medical graduates gain the appropriate knowledge, skills and experience as well as to develop them with 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 doubled to 2,267 in 2008.

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 encompassed training in 6 disciplines namely medicine, paediatrics, surgery, orthopaedics, O&G and emergency medicine for a period of 4 months each. Currently, all house officers will be employed in the civil service on the scale of UD 41. Upon completion of the housemanship training, not only will they be confirmed in the service but also promoted to UD 44 subjected to fulfilment of other criteria.

Quality In Medical Care Section

The quality improvement programme in patient care service has gone beyond the QAP. Multiple approaches have been undertaken to realize the goal for achieving quality, which is Internalising and Institutionalising Quality in patient care services so that both clients and patients will receive high quality healthcare as well as attain good health outcomes.

National Indicator Approach (N.I.A.)

In 2008, 58 NIA indicators were being monitored for 20 disciplines (15 Clinical and 5 Allied Health). For the first half of the year, 44 out of 58 indicators of at least one hospital had “shortfall in quality” (SIQ) while 17 disciplines out of 20 had SIQ as well. The top 20 indicators with SIQs are shown in Table 23.

TABLE 23
NATIONAL INDICATOR APPROACH WITH SIQ, 2008

No.	Nia Indicator	No. of Hospitals with SIQ
1.	Incidence of Physical Food Contamination	39 hospitals
2.	Timeliness in Preparation of Medical Report	35 hospitals
3.	Timeliness of Dispatching Medical Records of Discharged Patients to the Medical Record Department	22 hospitals
4.	Waiting Time for Fixation of Long Bone Closed Fracture Within 3 Days	21 hospitals
5.	Incidence of Massive Post Partum Haemorrhage (PPH)	10 hospitals
6.	Percentage of ST Elevation Acute Myocardial Infarction (STEMI) Patients Receiving Thrombolytic Therapy Within 30 Minutes of Presentation at the Emergency Department	9 hospitals
7.	Incidence of Thrombophlebitis in Patients with I-V lines	8 hospitals
8.	Delay in Response to Inpatient Referral By Dietitian - Critical Case	8 hospitals
9.	Elective Operations Cancellation Rate (General Surgery)	8 hospitals
10.	Survival of Very Low Birth Weight (VLBW) Infants 1000gm to 1499 Ggm in Hospitals With Neonatologist	7 hospitals
11.	Rate of Posterior Capsular Rupture During Cataract Surgery	7 hospitals
12.	Delay in Response to Inpatient Referral By Dietitian - Non Critical Case	7 hospitals
13.	Percentage of Patients Awaiting Emergency Surgery for More than 24 hours	6 hospitals
14.	Death Due to Acute Gastroenteritis in Paediatric Patients	6 hospitals
15.	Delivered Kt/V in Patients on Centre Haemodialysis	6 hospitals
16.	Turn Around Time for Reports of Special Radiological Examinations for Inpatients	6 hospitals
17.	Defaulter Rate of Psychiatric Patients Attending Outpatients Clinic	6 hospitals
18.	Rate of Readmission Within 6 Months of Last Discharge	5 hospitals
19.	Percentage of Patients With Ischemic Stroke Treated with Anti-Platelet Therapy Within 48 Hours	5 hospitals
20.	Occurrence of Urinary Tract Injury Following Hysterectomy	5 hospitals

Hospital Accreditation

Out of a total of 134 MOH hospitals, 59 hospitals had successfully undergone the accreditation survey and attained accreditation status awarded by the Malaysian Society for Quality in Health (MSQH). Out of these 59 hospitals, 24 achieved accreditation for the first time, 20 achieved it for the second time and 15 were accredited for the third time. Results for another 15 hospitals were still pending.

MS ISO Certification

The Medical Programme had successfully attained ISO certification in late 2008.

Peri-Operative Mortality Review (POMR)

In the past, five key areas i.e. Pediatric Surgery, O&G, Colorectal Surgery, Polytrauma, Neurotrauma and Anesthetic Services were given emphasis. 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 registry was being piloted at all 40 participating hospitals while an electronic version was also being developed at the same time.

A survey on Acute Pain Service (APS), conducted in 2007, was published in 2008. Hospitals with APS were significantly better than hospitals without APS. In terms of percentage of patients experiencing moderate to severe pain in the first 12 – 36 hours after returning to the ward from the operating theatre and patient's satisfaction level. One of the most important recommendations to improve the service was the implementation of "Pain as the 5th vital sign", which means that pain levels being routinely monitored together with other vital signs. This was being implemented in all state hospitals. The Director-General's Circular on Pain Management was also distributed to highlight the importance of this effort towards enhancing patient-centred care.

National Audit on Adult Intensive Care Units (NAICU)

A total of 37 hospitals with four or more ICU beds were involved in the National Adult Intensive Care Audit, which aimed to improve the quality of care of Intensive Care Services in the country. Resulting from the audit, a number of important "Patient Safety Solutions" had been implemented such as Ventilator Care Bundle to prevent ventilator-associated pneumonia and Central Venous Catheter Care Bundle (CVCCB) to reduce catheter-related blood stream infections. CVCCB was implemented in four hospitals as a pilot project in 2008.

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 a "no blame, safety culture" and promoting organisational 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.

- ***Root Cause Analysis Training***

Root Cause Analysis training workshops had been successfully conducted for various categories of MOH staff to enable them to conduct investigations in a structured manner.

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

Safer Surgery through Better Communication Checklist was developed for Malaysia as a modification version from the WHO Safe Surgery Checklist. This initiative was established to improve the safety of surgery. The check list will be for piloted in early 2009.

Hospital Infection Control

Encouragingly, due to the continued efforts to strengthen the Hospital Infection Control Programme in the MOH hospitals, “Healthcare Associated Infections” (HAI) and MRSA rates in hospitals were on a downward trend, based on data compiled from the state hospitals. The national HAI prevalence rate over 5 years had shown progressive reduction from 5.44% in March 2004 to 3.19% in September 2008 and the national MRSA rates had decreased from 0.27% in 2004 to 0.18% in 2008. Two new and updated guidelines were published and distributed to all hospitals, namely the ‘MOH Guideline for Selection and Use of Disinfectants’ and the ‘National Antibiotic Guidelines’. Monitoring of hand hygiene compliance rates in accordance to the WHO’s “5 moments in hand hygiene” was initiated and data on hand hygiene compliance rates from state hospitals are now compiled 3 monthly. The ‘Infection Control Policy and Procedure Guidelines was being updated.

Occupational Safety and Health

The “Guidelines on Chemical Management in Health Care Facilities” was successfully produced so as to further strengthen occupational health and safety programme in hospitals. The guideline provides information to health care staff on the health effects as well as the proper methods of handling chemicals in accordance to the law. Working visits were conducted at four hospitals (Hospital Kajang, Hospital Tunku Jaafar, Seremban, Hospital Banting and Hospital Selayang) to identify issues related to chemical exposure among the staff and the management of chemicals. Training session on various aspects of occupational health and safety in hospitals were also given to increase awareness of the healthcare workers.

Patient Centered Services - Complaints Management

Various efforts had been made for the management of hospital complaints. These included daily surveillance of complaints/praises in the newspaper, informing the hospital involved, establishing a more systematic database of complaints, providing feedback to the relevant State Health Department/hospital, producing complaints reports and following up to determine that the complaints were amicably resolved to the satisfaction of the clients. In 2008, a total of 523 complaints and 19 praises were received. A total of 122 complaints were published in the newspapers. The main issues involved problems with communication, attitude and ethics of staffs, administrative matters and delays in providing service.

STAR Rating

The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) initiated the Star Rating System as a mechanism to measure and rate the performance of Public Sector agencies. The office of the Director General of Health, with its core technical services/programs, was one of the Government Agencies assessed from 1 to 9 December 2008. A 5 STAR status was awarded to the office of the Director-General of Health Malaysia.

Health Technology Assessment Section

The main activities of Health Technology Assessment Section are conducting Health Technology Assessments (HTA) and Technology Reviews (TR), developing Clinical Practice Guidelines (CPG) and also conducting related training to health care providers. In 2008, four HTA and eight CPGs were produced by the section (Table 24). From the 27 TR produced, two were recommended that they can be routinely used, three can be used in certain conditions only, eight to be used in research environment and 14 not recommended to be used. All reports and guidelines can be accessed in the MOH website.

TABLE 24
HTA AND CPG PRODUCED IN 2008

Report / Guideline	
Health Technology Assessment	
i.	Endobronchial Ultrasound (EBUS)
ii.	Enzyme Replacement Therapy for metabolic disorders
iii.	PhaSeal System for chemopreparation
iv.	Exhaled Nitric Oxide Measurement Using NIOX or NIOX MINO
Clinical Practice Guidelines	
i.	Management of Hypertension (3rd Edition)
ii.	Management of HIV Infection in Pregnant Women
iii.	Management of Primary Open Angle Glaucoma
iv.	Management of HIV Infection in Children
v.	Prevention of Cardiovascular Disease in Women
vi.	Management of Gout
vii.	Management of Attention Deficit Hyperactivity Disorder in Children and Adolescents
viii.	Management of Dengue Infection in Adults (2nd Edition)

Source: Health Technology Assessment Section, MOH

Achievements of the section in 2008 were:

- i. Re-appointment as WHO Collaborating Centre for Asia Pacific Region for Evidence-based Practice in Health Care from July 2008 till 2012
- ii. Accepted as a member of International Network for Health Technology Assessment Agency (INAHTA) and known as MaHTAS
- iii. National Seminar on Health Technology Assessment: From Evidence to Policy organised with the cooperation of the College of Public Health, Academy of Medicine. Distinguished international speakers were Professor Dr. Guy John Maddern, Dr. Jill Marion Sanders and Dr. Pwee Keng Ho.
- iv. In 2008, the implementation strategies were rigorously initiated. The strategies were mainly developing a quick reference for the user friendly version of CPGs, training modules and producing patient version CPG, mainly in the form of patient leaflet. The first implementation strategies were based on CPG Major Depressive Disorder 2007.
- v. Effective of October 2008, all new CPGs being approved by HTA and CPG Council need to be launched preferably in the Centre of Excellence of MOH.

Private Medical Practice Control Section

The main function of the Private Medical Practice Control Section (CKAPS) is to monitor, control and regulate the private healthcare facilities and services and for matters related to it, with the implementation and enforcement of the requirements of the Private Healthcare Facilities and Services Act (PHFSA) 1998 (Act 586) and its Regulations. This function involves registration of private medical clinics, private dental clinics and managed care organisation (MCO) and also licensing of private hospitals and other private healthcare facilities and services.

Activities and Achievements

Several dialogue sessions with the professional bodies such as Malaysian Medical Association, Association of Private Hospitals Malaysia, Malaysia Hospice Council, Federation of Private Medical Practitioners Association Malaysia and others were carried out throughout the year to further explain and discuss about the implementation and suggestions on the amendment of the Act 586 and its Regulations.

All types of applications were done through an on-line system i.e. Medical Practice Control System (MedPCs) (at <http://medpcs.moh.gov.my>) consisting modules on Registration, Approval, Licensing, MCO, Transfer or Assignment, Disposal, Extension or Alteration dan Amendment.

Private Medical and Dental Clinics

Private medical clinics and private dental clinics are required to be registered once. The application for registration of private medical clinics and private dental clinics are received through the State Health Departments. Up to 31 December 2009, a total of 6,616 applications from private medical clinics were received and 6,371 (96%) were registered. Apart from that, a total of 1,502 applications for private dental clinics were received and 1,437 (96%) were registered.

Managed Care Organisation (MCO)

Application for registration of MCO through online started on 1 November 2007. Up to 31 December 2008, there were 61 applications received and 25 of them were completed and ready to be registered.

Private Hospitals and Other Private Healthcare Facilities

Licensing activities on private hospitals and other healthcare facilities consists of two stages namely approval to establish or maintain and license to operate or provide.

The total number of approved applications for establishment or maintenance of private hospitals and other healthcare facilities according to state and type of facility are listed in Table X. Whereas, the total number of approved applications on license to provide or operate of private hospitals and other healthcare facilities according to state and type of facility are shown in Table 25.

TABLE 25
TOTAL NUMBER OF APPROVED APPLICATIONS FOR ESTABLISHMENT OR MAINTENANCE OF PRIVATE HOSPITALS
AND OTHER HEALTHCARE FACILITIES, ACCORDING TO STATE AND TYPE OF FACILITY UP TO 31 DECEMBER 2008

No.	State	Private Hospital	Private Ambulatory Care Centre	Private Nursing Home	Private Psychiatric Nursing Home	Private Maternity Home	Private Blood Bank	Private Haemodialysis Centre	Private Hospice	Private Community Mental Health Centre	Total
1.	Johor	6	1	3	3	1	0	48	0	0	62
2.	Kedah	1	0	1	0	0	0	18	0	0	20
3.	Kelantan	0	0	0	0	1	0	9	0	0	10
4.	Melaka	0	1	0	0	0	0	14	0	0	15
5.	N. Sembilan	3	0	0	0	1	0	14	0	0	18
6.	Pahang	2	0	0	0	0	0	10	0	0	12
7.	P. Pinang	4	1	0	0	0	0	23	0	1	29
8.	Perak	2	1	0	0	0	0	36	0	0	39
9.	Perlis	0	0	0	0	0	0	1	0	0	1
10.	Selangor	17	8	1	0	6	3	66	0	0	101
11.	Terengganu	2	0	0	0	0	0	8	0	0	10
12.	Sabah	2	0	0	0	0	0	8	0	0	10
13.	Sarawak	2	1	4	0	0	0	6	0	0	13
14.	WP Kuala Lumpur	5	11	2	0	1	2	31	1	0	53
15.	WP Labuan	0	0	0	0	0	0	0	0	0	0
	Total	46	24	11	3	10	5	292	1	1	393

Source: Private Medical Practice Control Section, MoH

TABLE 26

TOTAL NUMBER OF APPROVED APPLICATIONS FOR LICENSE TO PROVIDE OR OPERATE OF PRIVATE HOSPITALS AND OTHER HEALTHCARE FACILITIES ACCORDING TO STATE AND TYPE OF FACILITY UP TO 31 DECEMBER 2008

No.	State	Private Hospital	Private Maternity Home	Private Nursing Home	Private Hospice	Private Ambulatory Care Centre	Private Blood Bank	Private Haemodialysis Centre	Total
1.	Johor	30	2	6	0	0	0	5	43
2.	Kedah	11	0	0	0	0	0	2	13
3.	Kelantan	3	0	0	0	0	0	0	3
4.	Melaka	4	1	0	0	0	0	1	6
5.	N. Sembilan	7	0	0	0	0	0	2	9
6.	Pahang	8	2	0	0	0	0	2	12
7.	P. Pinang	23	1	0	2	0	0	5	31
8.	Perak	15	1	0	0	0	0	1	17
9.	Perlis	0	1	0	0	0	0	0	1
10.	Selangor	51	9	0	0	8	2	3	73
11.	Terengganu	1	2	0	0	0	0	0	3
12.	Sabah	7	1	0	0	0	0	0	8
13.	Sarawak	9	1	3	0	0	0	2	15
14.	WP Kuala Lumpur	40	1	3	1	6	2	1	54
15.	WP Labuan	0	0	0	0	0	0	0	0
	Total	209	22	12	3	14	4	24	288

Source: Private Medical Practice Control Section, MoH

Medical Legislation And Globalisation Section

Medical Legislation Section is responsible for the drafting of new health laws and its regulations, amendment of existing laws and regulations. This section also functions as the technical secretariat for healthcare sector liberalisation, namely trade in services.

Activities And Achievements

a. List of Health Laws under the Responsibility of the Medical Legislation Section:

1. ***Pathology Laboratory Regulations 200_***

Draft of Pathology Laboratory Regulations dated 26 March 2008 was under reviewed by the Legal Advisor, MOH.

2. ***Allied Health Profession Bill 200_***

Allied Health Profession Bill 200_ was drafted and discussed with members of the drafting committee.

3. ***Human Reproductive Cloning Bill 200_***

Draft of the Bill dated 17 November 2006 was approved by the Minister of Health in January 2007 and sent to the Legal Advisor for review.

4. ***Cosmetology Bill 200_***

Realizing the rapid development of the cosmetic industry, further studies was undertaken in 2007 to determine ways to regulate the practice of cosmetology.

5. ***Mental Health Regulations 200_***

Draft of Mental Health Regulations 200_ was updated by the Medical Practice Division and Legal Advisor on 12 September 2008 and submitted to Attorney-General Chamber for review.

6. ***Assisted Reproductive Techniques Bill 200_***

Bill was still under discussion. The Section reviewed and studied the methods to solve issues pertaining to certain prohibitive procedures in Assisted Reproductive Techniques.

7. ***Medical Act 1971***

Draft amendment of the Medical Act 1971 dated 9 September 2008 had been submitted to Attorney-General Chamber for review.

8. ***Human Tissue Act 1974***

Review of the final draft of the amendment of this Act dated 11 May 2006 was pending to the final draft of Medical Act 1971 as there was cross-references between the two Acts.

9. *Medical Assistant (Registration) Act 1977 and Regulations 1979*

Representatives of the Section had chaired several meetings to amend the above Act and Regulations which was organised by the Medical Assistant Board in 2007. Amendment of the Act was still under the committees' discussion.

b. Lists of Liberalisation Activities:

1. *Bilateral Free Trade Agreement (FTA)*

Actively involved in free trade agreement negotiation in 2008 as in Malaysia – United States Free Trade Agreement (MUSFTA)

2. *Healthcare in Iskandar Malaysia*

Involved in the discussions and negotiations related to the healthcare services in Malaysia offered by Iskandar Malaysia. It was one of the efforts to attract both foreign and local investors to the country.

3. *Liberalization of Healthcare Sector*

MOH played an important role in the negotiations of the free trade agreements in multilateral, bilateral and regional level. This section had assisted the ministry in organising meetings and discussions related to liberalisation issues in healthcare service sector in an effort to achieve full liberalisation of the sector by 2010.

4. *Association of South East Asian Nation (ASEAN)*

- Mutual Recognition Agreement (MRA) – Medical Practitioners
This section was actively involved in the Mutual Recognition Agreement (MRA) - Medical Practitioners. The agreement was signed in August 2008 and involved recognition of medical practitioners within ASEAN member states.
- ASEAN Coordinating Committee on Services (CCS)
This division represented the MOH as committee members in the ASEAN Working Committee on Services (CCS). Malaysia was also appointed as the permanent chairperson for the Healthcare Services Sectoral Working Group (HSSWG) of the CCS. Besides that, this division sent representatives to attend an Advance Scheduling of Services Workshop in 2008.
- Asean Economic Community (AEC) Blueprint
Representative from this section had attended meetings in discussing issues related to Asean Economic Community (AEC) Blueprint.

5. *Asia – Pacific Economic Cooperation*

Representative from this section had actively taken part in Working Group on Domestic Regulation and also contributed several feedbacks in relation to medical practitioner. In line with that, this section was also involved in preparing Sectoral Report IAP Peer Review for 2008.

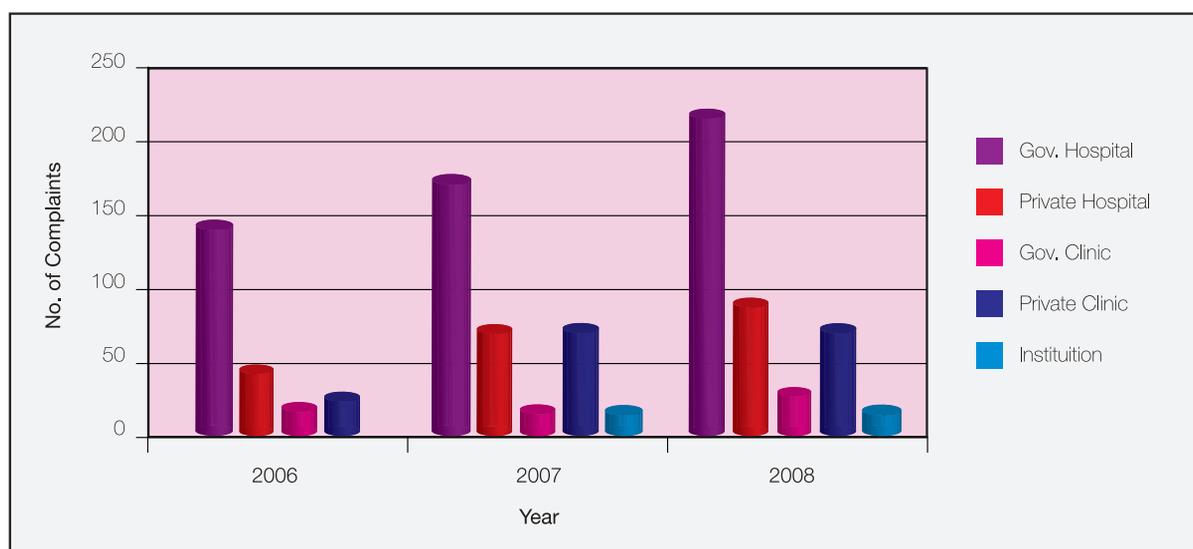
Complaints, Emporcement and Medico-Legal Section

Complaints Unit

The function of this unit is to attend and manage clients' complaints on services provided in both public and private health care facilities. Through investigation and grievance mechanism, this will further improve the quality of services provided by the health workers.

Figure 15 shows the total number of complaints received by this unit from 2006 to 2008. There were increased numbers of complaints received by each type of health facilities yearly.

FIGURE 15
TOTAL NUMBER OF COMPLAINTS INVOLVING PUBLIC AND PRIVATE HEALTHCARE SERVICES, 2006 - 2008



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

Table 27 shows the categories of complaints received from 2005 to 2008 in the public and private health care facilities. In 2008, 63.86% (235) of the complaints were from the public health facilities with 54.47% (128) of them were due to unsatisfactory quality of services.

TABLE 27
TOTAL NUMBER OF COMPLAINTS INVOLVING THE DIFFERENT CATEGORIES, 2005 - 2008

No.	Categories	2005		2006		2007		2008	
		Pub	Pri	Pub	Pri	Pub	Pri	Pub	Pri
1.	Unsatisfactory Quality of Services	69	14	105	32	127	49	128	34
2.	Fee	0	4	0	6	0	3	0	35
3.	Misconduct of Staffs	17	3	20	9	12	4	48	7
4.	Failure to Adhere to Standard Procedure	12	3	2	2	5	5	5	4
5.	Delay / No Action Taken	4	0	3	1	17	5	41	2
6.	Others	40	15	41	30	56	77	13	51
	Total	142	39	171	80	217	143	235	133

Pub – Public Pri - Private
Source: Complaints, Enforcement and Medico-Legal Section, MOH

Medico-Legal Unit

This unit acts as an advisor and coordinator in technical complaints, potential medico-legal cases and medico-legal cases. This unit also liaises with the Judicial and Legal Training Institute (ILKAP) and other agencies in organising medico-legal courses for the staffs of MOH.

Table 28 shows the number of medico-legal cases (including summonses) in public hospitals settled from 2000 until 2008. This includes cases settled in court, cases settled out of court (including ex gratia) and also cases which had been withdrawn or annulled by the court. A total of 98 cases had been settled of which, 39 (39.8%) cases were from the Obstetrics and Gynaecology discipline and followed by 16 (16.3%) from the Surgical discipline.

TABLE 28
NUMBER OF MEDICO-LEGAL CASES BY DISCIPLINE IN PUBLIC HOSPITALS, 2000 - 2008

No.	Discipline	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1.	O & G	4	1	2	5	3	4	8	7	5	39
2.	Surgery	1	1	1	2	1	1	3	2	4	16
3.	Orthopaedics	4	0	1	0	1	1	0	1	4	12
4.	Paediatrics	0	0	0	0	0	3	3	2	2	10
5.	Anaesthesia	0	0	1	0	0	0	0	0	1	2
6.	Medical	0	0	2	0	2	0	1	3	6	14
7.	Psychiatry	0	0	0	0	0	0	1	0	0	1
8.	Ophthalmology	0	0	1	0	0	0	0	0	0	1
9.	ENT	0	1	0	0	2	0	0	0	0	3
		9	3	8	7	9	9	16	15	22	98

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

Table 29 shows the amount of compensation paid by court order, out of court order and ex-gratia for medico-legal cases in public hospitals. A total of RM 5,919,896 had been paid to 98 cases from 2000 to 2008. According to the discipline, 30.3% (RM1,790,756) were paid for 14 cases in the Medical discipline followed by 25% (RM1,481,320) in the Obstetrics and Gynaecology discipline.

TABLE 29
COMPENSATION PAID FOR MEDICO-LEGAL CASES BY DISCIPLINE, 2000 - 2008

No.	Discipline	2000 (RM)	2001 (RM)	2002 (RM)	2003 (RM)	2004 (RM)	2005 (RM)	2006 (RM)	2007 (RM)	2008 (RM)	Total (RM)
1.	O & G	152,974	55,000	22,500	179,853	55,000	257,994	315,224	328,775	114,000	1,481,320
2.	Surgery	20,000	326,002	303,000	66,000	50,000	25,779	121,809	28,265	132,362	1,073,217
3.	Orthopedics	46,534	-	5,112	-	66,000	15,000	-	10,000	70,034	212,680
4.	Paediatrics	-	-	-	-	-	30,000	32,907	293,819	189,867	546,593
5.	Anaesthesia	-	-	512,827	-	-	-	-	-	12,000	524,827
6.	Medical	-	-	65,000	-	30,250	-	613,057	423,353	659,096	1,790,756
7.	Psychiatry	-	-	-	-	-	-	141,993	-	-	141,993
8.	Ophthalmology	-	49,500	13,200	-	-	-	-	-	-	62,700
9.	ENT	-	-	-	-	55,560	-	-	-	-	55,560
10.	Urology	-	-	30,250	-	-	-	-	-	-	30,250
	Total (RM)	219,508	430,502	951,889	245,853	256,810	328,773	1,224,990	1,084,212	1,177,359	5,919,896

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

Enforcement Unit

Enforcement Unit was established on 1 May 2006 after the Private Healthcare Facilities and Services Act 1998 (Act 586) had been enforced. It is responsible to plan, coordinate and implement activities required by Act 586. Enforcement activities are done through constant monitoring, checks and raids on both licensed and unlicensed private healthcare premises to ensure compliance with the relevant legislation and guidelines.

Table 30 shows the total enforcement activities done by the units in the State Health Department. A total of 36 enforcement activities were done in 2008 with Johor doing the most enforcement activities.

TABLE 30
TOTAL ENFORCEMENT ACTIVITIES DONE ACCORDING TO STATE IN 2008

No.	States	Total
1.	Perlis	0
2.	Kedah	1
3.	Pulau Pinang	4
4.	Perak	2
5.	Selangor	10
6.	Wilayah Persekutuan Kuala Lumpur	5
7.	Negeri Sembilan	1
8.	Melaka	0
9.	Johor	12
10.	Pahang	0
11.	Terengganu	0
12.	Kelantan	0
13.	Sarawak	1
14.	Sabah	0
15.	Wilayah Persekutuan Labuan	0
	Total	36

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

Malaysian Medical Council

The Malaysian Medical Council was established by an Act of Parliament which was approved 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.

Council's Achievements in 2008:

Registration

The summary of registration being approved and issued by the Council between 2001 and 2008 according to categories is shown in Table 31 and Table 32.

TABLE 31
NUMBER OF MEDICO-LEGAL CASES BY DISCIPLINE IN PUBLIC HOSPITALS, 2001 - 2008

Type Of Registration	2001	2002	2003	2004	2005	2006	2007	2008
a. Provisional Registration	1,029	1,104	1,083	1,126	1,112	1,122	1,534	2,527
b. Full Registration (without condition)	1,060	1,088	653	968	1,137	1,801	1,726	1,882
c. Full Registration (with condition)	163	76	128	267	296	240	200	576
Total	2,252	2,268	1,864	2,361	2,545	3,163	3,460	4,985

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

TABLE 32
NUMBER OF PRACTITIONERS GRANTED FULL REGISTRATION, 2001 - 2008

Full Registration	2001	2002	2003	2004	2005	2006	2007	2008
a. Registered According to Section 14:								
• Malaysians - Completing Housemanship Locally	996	1,002	568	858	1,060	1,695	1,604	1,793
• Malaysians - Completing Housemanship Overseas	64	86	85	110	77	106	122	89
Total	1,060	1,088	653	968	1,137	1,801	1,726	1,882
b. Registered According to 14(3):								
• Foreigners - Completing Housemanship Locally	13	9	15	16	-	8	18	26
• Foreigners - Completing Housemanship Overseas	150	67	113	251	296	232	182	317
Total	163	76	128	267	296	240	200	343
Grand Total	1,223	1,164	781	1,235	1,433	2,041	1,926	2,225

Source: Malaysian Medical Council, MOH

Annual Practicing Certificate

The number of practitioners applied for Annual Practicing Certificate in 2008 had increased to more than 22% from the previous years as shown in Table 33.

TABLE 33
NUMBER OF ANNUAL PRACTICING CERTIFICATES ISSUED ACCORDING TO STATE AND SECTOR, 2001 - 2008

According To States	2001		2002		2003		2004		2005		2006		2007		2008	
	Pr	Pb														
FT Kuala Lumpur	1,527	1,418	1,645	1,542	1,778	1,623	1,700	1,783	1,686	1,825	1,675	1,545	2,239	1,762	2,590	1,881
FT Labuan	12	16	10	16	7	16	9	15	8	15	13	12	18	16	12	17
FT Putrajaya	21	0	36	0	82	0	85	3	119	3	202	6	254	9	257	10
Johor	367	807	407	846	456	862	461	874	477	891	456	924	612	981	752	1,041
Kedah	282	398	326	411	316	410	338	447	349	457	355	444	446	458	484	483
Kelantan	582	172	623	176	574	186	584	186	595	194	595	192	637	209	784	207
Melaka	186	268	185	283	173	293	239	333	247	344	231	326	306	378	322	363
Negeri Sembilan	219	271	227	280	259	290	290	320	306	334	212	319	354	341	401	401
Pahang	243	252	272	274	286	289	305	311	316	319	223	311	340	355	440	378
Pulau Pinang	294	773	311	796	320	781	346	841	357	853	370	822	514	874	559	938
Perak	427	741	418	777	507	764	514	892	527	919	483	773	662	803	759	835
Perlis	44	31	56	32	50	37	78	36	83	44	60	33	95	28	120	28
Selangor	651	1,685	615	1,630	685	1,891	721	2,050	735	2,097	757	2,103	1,198	2,337	1,393	2,508
Terengganu	156	127	174	135	210	140	201	144	219	153	227	141	260	166	266	182
Sabah	239	292	284	309	200	288	268	329	279	337	225	312	462	342	592	358
Sarawak	220	286	262	311	308	343	327	362	332	377	300	339	471	357	543	378
Total	5,470	7,537	5,851	8,018	6,211	8,213	6,486	8,926	6,635	9,162	6,384	8,602	8,868	9,416	10,274	10,008
Grand Total	13,007		13,869		14,424		15,392		15,797		14,986		18,284		20,282	

(Key: Pb = Public; Pr = Private)
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 439 in 2006, 385 in 2007 and 559 in 2008.

Accreditation/Approval

Approved and accredited local undergraduate medical schools on 1 January 2008 are listed in Table 34.

TABLE 34
LIST OF ACCREDITED LOCAL UNDERGRADUATE MEDICAL SCHOOLS ON 1 JANUARY 2008

Public Institutions	
Name	Accreditation Date
1. Universiti Malaya	15 January 1971
2. Universiti Kebangsaan Malaysia	22 June 1979
3. Universiti Sains Malaysia	11 July 1986
4. Universiti Malaysia Sarawak	15 May 2000
5. Universiti Putra Malaysia	05 June 2001
6. Universiti Islam Antarabangsa Malaysia	14 May 2002
Private Institutions	
Name	Accreditation Date
7. Penang Medical College	June 2001
8. International Medical University	19 February 2002
9. Melaka-Manipal Medical College	09 July 2003
10. Perak Royal College of Medicine (University of Sheffield)	19 January 2006
11. Asian Institute of Medicine, Science & Technology (AIMST)	17 August 2007

Source: Malaysian Medical Council, MOH

There were 10 local undergraduate medical programmes awaiting accreditation. The accreditation visits are done when their first batch reaches final year. In 2008, Universiti Malaysia Sabah, Universiti Teknologi Mara and the twinning programme of Allianza College of Medical Sciences and Universiti Sumatera Utara were given accreditation. 8 other institutions awaiting accreditation are shown in Table 35.

TABLE 35
LIST OF APPROVED LOCAL UNDERGRADUATE MEDICAL SCHOOLS TILL DECEMBER 2007
AWAITING ACCREDITATION

Public Institutions	Year Established	Year to be Accredited
1. Kolej Universiti Islam Malaysia	2004	2009
2. Universiti Kebangsaan Malaysia with Universiti Padjadjaran, Indonesia	2006	2011
Private Institutions		
3. University College Sedaya International	2005	2010
4. Monash University Sunway Campus	2005	2010
5. Cyberjaya University College of Medical Sciences	2005	2010
6. International Medical School, Bangalore (under Management & Science University, Malaysia)	2006	2011
7. Universiti Andalas, Indonesia with Management & Science University, Malaysia.	2006	2011
8. Perak Royal College of Medicine (Universiti Kuala Lumpur)	2007	2012

Source: Malaysian Medical Council, MOH

In 2008, 12 foreign medical training institutions were given recognition by the Council and subsequently approved by the Health Minister to be inserted in the Second Schedule of the Medical Act 1971 as shown in Table 36.

TABLE 36
LIST OF NEWLY RECOGNIZED FOREIGN MEDICAL TRAINING INSTITUTIONS IN 2008

Country	Parent University	Name of the Institution	With Effect From
India	Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka	Jagadguru Jayadeva Murugarajendra (J.J.M.) Medical College, Davangere, Karnataka.	21/01/2008
		Sri Devaraj Urs Medical College, Kolar, Karnataka.	27/01/2008
		JSS Medical College, Mysore, Karnataka.	27/01/2008
		Yenepoya Medical College, Mangalore, Karnataka.	27/01/2008
		K. S. Hegde Medical Academy, Mangalore, Karnataka.	27/01/2008
	Vinayaka Missions University	Vinayaka Mission's Kirupananda Variyar (VMKV) Medical College & Hospital, Salem, Tamil Nadu.	27/01/2008
		Aarupadai Veedu Medical College, Pondicherry.	27/01/2008
		Vinayaka Mission's Medical College, Karaikkal, Pondicherry.	27/01/2008
		Dr. D.Y. Patil University	Dr. D.Y. Patil Medical College, Pune, Maharashtra.
	Krishna Institute of Medical Sciences University	Krishna Institute of Medical Sciences, Karad, Maharashtra.	2/6/2008
Australia	- -	University Of Western Sydney, Sydney, Australia Australian National University, Canberra, Australia	25/8/2008

Source: Malaysian Medical Council, MOH

Disciplinary Problems

The number of complaints or information received by the Council has increased over the years. A total of 69 complaints were received in 2006, 41 in 2007 and 87 in 2008. The nature of complaints referred to the Council for investigation has remained much the same as in the previous years. The majority relates to neglect or disregard of professional responsibilities.

Based on the number of actively practicing practitioners from the number of Annual Practicing Certificates issued in 2006 (16,861), 2007 (18,345) and 2008 (20,282), the complaint per 1,000 registered medical practitioners were 4, 2.2 and 4.23 respectively.

There were 25 disciplinary inquiries completed in 2008. The majority of cases meted with punishment continue to relate to issues of neglect and disregard of professional responsibilities. Table 37 illustrates the outcome of Council inquiries between 2003 and 2007.

TABLE 37
OUTCOME OF COUNCIL INQUIRY, 2003 - 2008

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

Source: Malaysian Medical Council, MOH

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 2008, there are a total of 31 cases pending at the High Court.

Malaysian Optical Council

Malaysian Optical Council (MOC) was established on 1 February 1992 and is responsible for the registration of optometrists and opticians in Malaysia. It is responsible in monitoring the optometry practices in this country through the enforcement of Optical Act 1991 and Optical Regulations 1994.

Registration of Optometrists and Opticians

The registration of optometrists and opticians had reached 3,200 as of 31 December 2008. A total of 694 optometrists were registered under section 19 while 2,506 opticians were registered under section 18 of Optical Act 1991. From the total number of registered practitioners, 2,496 optometrists and opticians had applied for Annual Practising Certificates for 2008 (Table 38)

TABLE 38
TOTAL NUMBER OF OPTOMETRY PRACTITIONERS ACCORDING TO SECTIONS IN 2008

Registered Practitioners		Total Number of Practitioners	Annual Practicing Certificate	Contact Lens Practitioner
Optometrists		694	2,496	694
Section 19 (1)	694			
Section 19 (2)	-			
Opticians		2,506	2,496	544
Section 18 (1)	788			
Section 18 (2)(a)	2726			
Section 18 (2)(b)	1			
Section 18 (3)	1			
Total		3,200	2,496	1,238

Source: Malaysian Optical Council, MOH

Registered opticians are qualified to apply for Contact Lens Permit under Section 30, Optical Act 1991 and Regulation 24, Optical Regulations 1994. However the applications to obtain the above mentioned permit was closed administratively on 30 September 2006.

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 to population is in the ratio of 1 practitioner to 10,000 populations. In 2008, there were 3,200 optometry practitioners (registered optometrists and opticians), therefore the ratio of optometry practitioners to the Malaysian population was 1: 8,804.

As shown in Table 38, 2,496 (78%) optometry practitioners renewed their Annual Practicing Certificates (APC) in 2008.

Achievements In 2008

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

Optometry/Opticianry Programme Standards were set up by the Malaysian Optical Council in collaboration with MOH, Malaysian Qualifications Agency (MQA), Ministry of Higher Education and Public Service Department. The document had been endorsed by the Malaysian Optical Council and is now in the process of final editing for publishing.

2. Standard Operating Procedure (SOP) for Optometry Services and the Enforcement of Optical Act 1991

The Standard Operating Procedure for Optometry Services had been set up and is now in the process of enhancement and later for documentation. 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 documented SOPs are summarised in Operation and Management Plan. All seven documents including the Operation and Management Plan will be published by the Malaysian Optical Council with ISBN-978-983-44504.

3. Contact Lens Examinations

Contact lens examinations for the registered opticians under Section 30(5) Optical Act 1991 were carried out twice in 2008. A total of 90 candidates sat for the first exam and out of that, 15 candidates passed and were given the Contact Lens Permit. For the second exam, 120 candidates sat for the exam and only 9 of them passed and given the Contact Lens Permit.

Medical Assistants Board

Medical Assistant 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 carried out and fully implemented.

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

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

Registration Report of Medical Assistant till 31st Disember 2008

The total number of Assistant Medical Officer registered with the Board since 1974 till 2008 was 10,282.

Annual Practice Registration Report (APC) of Medical Assistant

Total Annual Practicing Certificate produced in 2008 was 8,922 which was 86% of the total registered Assistant Medical Officer.

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 specialisation and sub-specialisation in virtually every field of medicine, and this demand is coming not only from the medical fraternity itself but also from patients expecting a higher level of care closer to home.

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

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

CONCLUSION

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



**RESEARCH AND
TECHNICAL SUPPORT
PROGRAMME**

RESEARCH & TECHNICAL SUPPORT PROGRAMME

The Research and Technical Support (R&ST) Programme, established since 1991, has four Divisions which carry out four main Activities ie. Health Planning & Development; Engineering Services; Traditional and Complementary Medicine and Research. Its latest division, the Division of Medical Devices, a spin off from the Division of Engineering Services, was established in 2007 to further strengthen implementation of the activities under the Programme. The activities of the R&ST Programme are aimed at providing technical and support services to the other Programmes in the Ministry of Health. The Programme has now 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 quality of data within the Health Information Management Systems (HIMS) and implementing development projects as planned in the Ninth Malaysian Plan (9MP). The Division also developed a framework for the evaluation of the 9MP towards the preparation of the 10th MP.

Engineering Services Division continued to provide technical support services for all programmes in the Ministry of Health. The main activities of this division are project implementation management, hospital/clinic support services regulatory, environmental health engineering monitoring, and radiation health and safety. The Division remains responsible in regulating the practice of Hospital Support Services as required in the Concession Agreement between The Government of Malaysia and three companies (Faber Mediserve, Radicare, Pantai Medivest) for the period 1996-2011 whereby SIHAT, the consulting company provides supervisory and consultative work for the services. Similar arrangement for the Clinic Support Services is being planned. The initial phase 1 activities to upgrade some of the health clinics were implemented in 2008 and is expected to be completed in 2009. Activities planned for Hospital Support Services (HSS) have been implemented successfully in 2008 with the delivery of services in 148 hospitals and institutions. In order to improve the quality and effectiveness of the Hospital Support Services, various efforts were made such as enhancing the implementation of Quality Assurance Programme (QAP), development of new guidelines, improvement of work procedures and strengthening the monitoring and evaluation of performance. The Environmental Health Engineering Activity was continued with its three main programmes of Water Supply and Environmental Sanitation, the National Drinking Water Quality Surveillance and the Environmental Health Protection.

The Medical Devices Control Division continues to regulate the medical devices industry in Malaysia. 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 regulatory program and it is now being finalised before it is tabled in the Parliament. The main objective of the regulatory program is to protect public health and safety by preventing substandard, unsafe and ineffective medical devices from entering the Malaysia market. The Division will continue to take a phased approach in developing the regulatory program and its activities. This is to ensure all stakeholders are aware and ready for the implementation of the medical device regulation.

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. E-PENGAMAL, an online registration of T&CM practitioners was launched in November 2008.



T&CMD Logo



T & CMD Building

The National Institutes of Health (NIH) which comprise 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 address 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 Institute for Medical Research (IMR) is the research arm of the MoH and its main function is to carry out research to identify, elucidate, control and prevent diseases and health issues prevalent in the country. The IMR also provides specialised diagnostic services, training in specialised fields and consultative/advisory services.

The main functions of the Institute for Public Health are to provide training in various specialised fields including to carry out health epidemiological projects, dissemination of health information and provide consultancy in health care. Since its inception, it has successfully trained various categories of health personnel at the basic and advanced levels. The Institute also carries out major research projects such as the National Ear and Hearing Disorders Survey and National Iodine Deficiency Disorder Survey.

Soundly established since 2000, the Clinical Research Centre was able to fulfill its mission to improve patients' outcomes through quality and ethical clinical research. As the clinical research arm of the MoH, CRC underwent rapid expansion with development of infrastructure to house and equip a network of 17 centres located in major public hospitals nationwide.

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

ACTIVITIES AND ACHIEVEMENTS

HEALTH PLANNING AND DEVELOPMENT

Monitoring and Evaluation of Health Plan

The commitments stated in Chapter 20 of the Ninth Malaysia Plan (9MP), 2006- 2010 document printed by the Economic Planning Unit of the Prime Minister's Department and the Book II, Programme Health Plan printed by Planning and Development Division, Ministry of Health are being monitored yearly. All Divisions and Activities have submitted their feedbacks within the stipulated time where information for the years 2006, 2007 and 2008 have been compiled. The framework for the evaluation of the 9MP was planned and approved in 2008 to be implemented in 2009.

Midterm Review of the 9MP

The Midterm Review (MTR) of the 9MP has been conducted involving various stakeholders in health including the programmes and activities of the MOH. Two reports were produced namely the 'MTR Report for the Overall Evaluation on the Achievement of the 9MP Programmes/Projects' and the 'MTR Report of 9MP 2006-2010 (Thrust 4: Improving Quality of Life)'. Inputs from these two reports were incorporated into the Chapter on Thrust 4 of the 9MP MTR Report published by EPU on 26 June 2008.

Ministry of Health Policy and Planning Committee

The Ministry of Health Policy and Planning Committee is the highest committee to approve the development of health policies. Four meetings were held throughout 2008 where 8 working papers were tabled (7 of which were approved and 1 was conditionally approved) as in Table 1.

TABLE 1
LIST OF POLICIES TABLED AT THE MOH POLICY AND PLANNING COMMITTEE IN 2008

No.	Policy	Status	Programme /Activity
JDPKK 1/2008			
(1/4)	The MOH need to implement the Human Papiloma Virus (HPV) immunisation programme among the 13 years old (form one) Malaysian female adolescents via the school health programme starting 2009 to prevent and reduce cervical cancer risk starting from the adolescent age group.	Approved	Medical Development Division
(2/4)	This working paper was aimed at informing and obtaining approval from JDPKK to change the current oral polio vaccine (OPV) to the injectable polio vaccine (IPV) in stages and implement the booster H1B vaccine starting 2009 to strengthen the immunisation programme as well as to reduce these diseases in Malaysia	Approved	Medical Development Division

Source: Planning and Development Division, MoH

TABLE 1 (CONTINUED)
LIST OF POLICIES TABLED AT THE MOH POLICY AND PLANNING COMMITTEE IN 2008

No.	Policy	Status	Programme /Activity
JDPKK 1/2008			
(3/4)	The working paper to implement the restructured rehabilitation service in MOH based on the MOH Post Warrant No 28 Year 1999 was for rehabilitation services provided in the MOH to be more integrated and coordinated.	Approved	Medical Development Division
(4/4)	The proposed paper to reduce the number of servings/meals for patients from 6 times a day to 4 times a day was a step towards providing a more cost effective service while ensuring that the move would not jeopardise with the nutrient/calorie requirements of each patient.	Approved	Medical Development Division
JDPKK 2/2008			
(1/1)	The proposal to 'Review the Fee Act (Medical) 2008' was to review and amend the Fee Act (Medical) 1982 including prices of medicine and medical / health services so that it is in line with current needs as well as ensuring the charges are reasonable.	Approved with conditions	Finance Division
JDPKK 3/2008			
(1/1)	The proposal to restructure the organisation of the Food Branch into MOH Food Division was to ensure that nutrition and food could be developed and given special emphasis to cater for current needs.	Approved	Family Health Development Division
JDPKK 4/2008			
(1/2)	The proposal to establish the New District Health and Dental Offices which are Kulajaya and Ledang is to fulfill the health organisational needs for the districts in line with the needs of the local population.	Approved	Johor State Health Department
(2/2)	The proposed norms for nurses were reviewed to fulfill the nursing and care needs in the hospitals and health clinics to improve the quality and healthcare services for the Malaysian population.	Approved	Nursing Division

Source: Planning and Development Division, MoH

National Healthcare Financing Mechanism (NHFM)

Subsequent to the NHFM consultancy in 2006-2007, further works were carried out in 2008 which focused mainly on three areas:

a) Capacity building and consultancy

Several seminars, workshops and discussions were organised for capacity building and to engage stakeholders from Ministry of Health, relevant government agencies and the private sector. The highlight of the year was the engagement of 2 consultants namely Prof. Soonman Kwon from Seoul National University, Korea and Prof. Salman Rawaf from Wandsworth, London. Both engagements were funded by WHO.

b) Study on outsourcing primary healthcare services

Discussions were held with the Family Health Development Division to determine the viability of outsourcing primary healthcare services as a measure to address congestion and waiting time in out-patient clinics. A working paper was presented to the Honorable Minister of Health.

c) Activities for Establishment of NHFM

Further efforts were made to develop some of the preparatory and enabling work that are required for establishment and roll out of the authority and financing scheme respectively. These efforts include a study on accuracy of diagnosis study in Kuala Lumpur Hospital, discussions with the Finance Division on the implementation of accrual accounting and Case-mix implementation with Medical Development Division. Social advocacy activities conducted includes development of an informal blog and involvement in a public forum organised by the Penang Medical Practitioner's Society. A study on costing of primary healthcare services was completed in Batu 9 Health Clinic. Two TWG papers on implementation of case-mix and accrual accounting were presented to JDPKK.

Malaysia National Health Accounts

Since its establishment in 2005, Malaysia National Health Accounts (MNHA) Unit has recorded significant achievements. In March 2008, a report on national health expenditure for the years 1997-2006 was published. Following the MNHA Steering Committee's decision, a workshop to deliberate on the findings was conducted. The proceedings of the workshop have provided insights into the health expenditure pattern of this country that could assist policy makers in the review of current national health policy. In terms of its maturity, based on a four scale typology developed by Asia Pacific National Health Accounts Network (APNHAN), Malaysia has progressed from Level IV to Level I whereby Level IV denotes countries that have indicated their intention to establish NHA systems, but no estimates have been produced, while Level I refers to countries with permanent NHA systems, where annual updates are being routinely generated, and at least three estimates have been produced to date.

Health Facility Planning and Development

In the Ninth Malaysia Plan (9MP), a development allocation of RM10.176 billion was approved for Ministry of Health to finance the development of 1,644 projects which include hospitals (new and upgrading), urban and rural health facilities, training facilities for health personnel, equipment and vehicles, ICT, health offices, staff facilities (quarters and hostels), health promotion activities, research and development and capacity building (Table 2). However with the Midterm Review for the 9th Malaysia Plan at the end of 2007 and early 2008, the total number of projects was reduced to 1,020. The amount of allocation for the year 2008 was RM2.222 billion and about 64.07% was spent (Table 3).

TABLE 2
HEALTH FACILITY PROJECT AND DEVELOPMENT ALLOCATION FOR THE 9TH MALAYSIA PLAN

Project Detail	Facilities	Number of Projects	Allocation (RM'000)	Percentage	Expenditure (RM)	Percentage
001	Training	23	1,260,061	12.58	573,433,954	45.51
002	Public Health	372	2,236,693	22.33	433,478,931	19.38
003	Upgrading of Hospital Facilities	154	1,958,324	19.55	689,567,830	35.21
004	New Hospitals	28	1,699,388	16.97	798,155,354	46.97
005	Research & Development (R & D)	2	160,000	1.60	110,694,653	69.18
006	Upgrading and Maintenance	1	300,000	2.99	299,585,918	99.86
007	Land Acquisition & Maintenance	1	300,000	2.99	298,100,016	99.37
008	ICT	12	671,460	6.70	337,325,955	50.24
009	Staff Facilities/Quarters	92	582,212	5.81	128,194,260	22.02
010	Promotion	1	20,000	0.20	9,444,162	47.22
011	Equipment & Vehicles	334	828,583	8.27	425,966,510	51.41
	Total	1020	10,016,721	100.00	4,103,947,543	40.97

Source: Planning and Development Division, MoH

TABLE 3
DEVELOPMENT ALLOCATION AND EXPENDITURE FOR HEALTH FACILITIES PROJECT, 2008

Project Detail	Facilities	Number of Projects	Allocation (RM'000)	Percentage	Expenditure (RM)	Percentage
001	Training	13	311,500,000	14.02	208,829,442	67.04
002	Public Health	175	547,774,000	24.65	242,265,625	44.23
003	Upgrading of Hospital Facilities	42	371,350,000	16.71	231,976,647	62.47
004	New Hospitals	4	274,000,000	12.33	250,244,953	91.33
005	Research & Development (R & D)	1	44,973,990	2.02	34,604,884	76.94
006	Upgrading and Maintenance	1	11,177,654	0.50	10,763,572	96.30
007	Land Acquisition & Maintenance	1	78,019,127	3.51	76,119,143	97.56
008	ICT	11	145,629,219	6.55	121,969,476	83.75
009	Staff Facilities/Quarters	27	207,030,000	9.32	86,166,560	41.62
010	Promotion	1	10	0.00	0	0.00
011	Equipment & Vehicles	88	230,824,000	10.39	160,831,689	69.68
	Total	364	2,222,278,000	100.00	1,423,771,991	64.07

Source: Planning and Development Division, MoH

In 2008, the Health Facility Planning Unit had initiated the process of developing new standard plans for various types of Health Clinics (KK) to be used throughout the country in the 10th Malaysia Plan. These include the development of new Medical Brief of Requirements (MBoR) documents (based on the revised scope) for KK Type 1, 2, 3, 4, 5 and 6 and inputs were given to the Public Works Department (JKR) building designers during design development process which started in August 2008. Inputs were also given to the Economic Planning Unit (EPU) during the review of the existing Government Building Guidelines Document. A three-day workshop was also organised to review the existing Hospital Planning Norms and Guidelines Document. The revised documents when readied will be used as guidelines for planning and designing future hospitals.

Health Information System Planning and Management

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

The HIMS E-Reporting was further strengthened and improved in 2008. 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 report by sub-system. HIC has also given focus to the Health Informatics Standard development.

ENGINEERING SERVICES

Under the Ninth Malaysia Plan (9MP), project implementation activity is one of the main activities where construction of new hospitals, renovation of hospitals and upgrade of engineering systems apart from building new/replacement of clinics are being coordinated and managed by the Division. The Division managed the construction of the new Kluang Hospital and Permai Psychiatric Hospital, Johor Bahru and renovation of Penang Hospital amounting to RM1.048 billion. A total of 79 projects with a budget allocation of RM230 million have been planned to upgrade existing hospital buildings and facilities. A total of 87 projects with a budget allocation of RM95 million have been implemented to build and/or replaced clinics throughout the country including Sabah and Sarawak. There are 50 more projects that are being planned and on the drawing board.

TABLE 4
LIST OF PROJECTS IMPLEMENTED IN 2008

No.	Project Name	Completion Date
1.	Construction of New Kluang Hospital, Johor	03.06.2010
2.	Construction of New Permai Psychiatric Hospital, Johor Bahru	30.10.2010
3.	Renovation and Upgrade of Penang Hospital (Phase 1)	25.08.2009
4.	Construction of 20 New clinics/ quarters (Phase 1) – Northern Zone	02.04.2009
5.	Construction of 21 New clinics/ quarters (Phase 1) – Central Zone	24.04.2009
6.	Construction of 15 New clinics/ quarters (Phase 1) – Southern Zone	19.07.2009
7.	Construction of 21 New clinics/ quarters (Phase 1) – Eastern Zone	01.06.2009
8.	Construction of 7 New clinics/ quarters (Phase 1) – Sabah Zone	16.04.2009
9.	Construction of 1 New clinic/ quarters– Membakut, Sabah	12.07.2009
10.	Construction of 2 New clinics/ quarters (Phase 1) – Sarawak Zone	03.03.2009
11.	Renovation and Upgrade of Hospitals and Engineering Systems	2008 -2010

Source: Engineering Services Division, MoH

Hospital Support Services Regulatory Activities

Hospital Support Services (HSS) consists of 5 services which are Facility Engineering Management Services (FEMS), Biomedical Engineering Management Services (BEMS), Clinical Waste Management Services (CWMS), Cleansing Services (CLS) and Linen & Laundry Services (LLS) in all contract hospitals and institutions as per agreement.

In 2008, the number of contract hospitals and institutions receiving HSS had increased to 148 from 127 hospitals and institutions in 1997 (year of implementation). The current statistics of the number of hospitals and institutions by concession companies are shown in Table 5. Table 6 shows the comparison of asset numbers and contract values for HSS between year 1997 and year 2008.

TABLE 5
NUMBER OF HOSPITALS & INSTITUTIONS BY CONCESSION COMPANIES, 1997 & 2008

Concession	Number of Hospital and Institution	
	1997	2008
Faber Medi-Serve Sdn Bhd	71	79
Radicare (M) Sdn Bhd	37	47
Pantai Medivest Sdn Bhd	19	22
Total	127	148

Source: Engineering Services Division, MoH

TABLE 6
NUMBER OF ASSETS AND CONTRACT VALUE FOR HSS, 1997 & 2008

Item	1997	2008
Number of Hospitals & Institutions	127	148
Number of Beds	36,319	42,456
Floor Area (m ²)	4,297,523	5,647,670
FEMS asset	Estimate 250,000	384,393
BEMS asset	81,254	180,704
Contract Value	RM / million	RM / million
FEMS	199.53	376.23
BEMS	100.69	243.78
LLS	62.73	156.07
CWMS	24.48	53.76
CLS	100.90	170.18
Total	488.33	1,000.02

Source: Engineering Services Division, MoH

Environmental Health Engineering Activities

Water Supply and Environmental Sanitation Programme

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

Rural Water Supply Programme

One of the objectives of this programme is to provide adequate safe water supply to rural community. The programme incorporated simple technological principles that emphasized on simple design, construction and maintenance. The requirement for the system is to deliver sufficient quantities of water that met the basic health and hygiene requirement at minimum cost. These systems produced untreated but wholesome water and therefore the rural people are advised to boil their drinking water. 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.

The development of rural water supply in the water supply and rural environmental sanitation program was planned according to the 5 year Malaysia Development Plan. A total of 7,313 of various types of systems were installed in 2008. These systems service 9,402 houses. The overall status of rural water supply coverage is about 95.26 % that represents 1,673,165 rural houses (Table 7).

Sanitary Latrines Programme

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. Population densities, soil conditions, cultural habits, the depth of water table and the availability of water to flush the bowl are the criteria considered for the system to operate satisfactorily. The system eliminates odours, flies and generally provides a more aesthetic environment.

The construction of sanitary latrines provided the means to initiate the effort to educate rural people on the use of more comfortable and hygienic method for disposal of excreta. It is hope 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 becomes needed.

In 2008, MOH has constructed a total of 5,283 pour flush latrines. The coverage of sanitary latrines at the end of 2008 was 97.93% that represents 1,720,047 rural houses (Table 8).

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 2008, a total of 3,086 sullage disposal systems and 3,454 solid waste disposal systems were constructed and these represent a total household coverage of 62.21% (1,092,604) and 69.84% (1,226,744) respectively (Table 8).

TABLE 7
CONSTRUCTION OF RURAL WATER SUPPLY PROJECT BY MINISTRY OF HEALTH IN 2008

STATE	TOTAL HOUSES IN RURAL AREA		SANITARY WELL		SANITARY WELL WITH HOUSE CONNECTION		GRAVITY FEED SYSTEM		RAINWATER COLLECTION		JKR/KKM CONNECTION		TOTAL		TOTAL HOUSES SUPPLIED (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	Nos. Built	No. of Houses Supplied		
Perlis	0	0	0	0	0	0	0	0	0	0	188	188	188	188	38,711	98.66
Kedah	10	29	3	18	0	0	0	0	0	0	1104	1,104	1,117	1,151	176,492	96.45
P.Pinang	0	0	0	0	0	0	0	0	1	9	166	166	167	175	71,572	99.60
Perak	1	1	5	16	6	225	50	300	362	592	148,043	148,043	592	592	148,043	97.77
Selangor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85,068	100.00
N.Sembilan	0	0	0	0	0	0	0	0	0	0	68	68	68	68	66,298	99.78
Melaka	0	0	0	0	0	0	0	0	0	0	30	30	30	30	69,242	99.95
Johor	0	0	1	7	0	0	5	64	70	76	144,341	144,341	76	76	144,341	99.34
Pahang	9	28	10	62	5	51	16	134	167	291	151,032	151,032	167	291	151,032	98.89
Terengganu	16	31	1	1	1	72	0	420	438	524	132,869	132,869	438	524	132,869	98.12
Kelantan	0	0	172	276	15	257	0	1458	1,645	1,991	211,864	211,864	1,645	1,991	211,864	82.93
Sarawak	0	0	0	0	8	235	167	727	962	188,683	188,683	188,683	962	962	188,683	95.46
Sabah	0	0	0	0	17	485	2869	2869	2,886	3,354	188,950	188,950	2,886	3,354	188,950	92.84
Malaysia	36	89	192	380	52	1,325	3,101	3,676	7,313	9,402	1,673,165	1,673,165	7,313	9,402	1,673,165	95.26

Source: Engineering Services Division, MoH

TABLE 8
CONSTRUCTION OF LATRINES, SULLAGE AND SOLID WASTE DISPOSAL SYSTEM BY MINISTRY OF HEALTH IN 2008

STATE	TOTAL HOUSES IN RURAL AREA	Latrines			Sullage			Solid Waste Disposal System		
		Nos. Built	No. of Houses Supplied	Coverage (%)	Nos. Built	No. of Houses Supplied	Coverage (%)	Nos. Built	No. of Houses Supplied	Coverage (%)
Perlis	39,236	159	38,885	99.11	121	24,263	61.84	72	26,124	66.58
Kedah	182,991	977	180,356	98.56	474	112,020	61.22	572	145,836	79.70
P.Pinang	71,856	113	71,668	99.74	121	54,075	75.25	167	64,876	90.29
Perak	151,414	302	149,312	98.61	260	77,100	50.92	579	87,567	57.83
Selangor	85,068	20	84,362	99.17	45	78,785	92.61	461	78,964	92.82
N.Sembilan	66,446	11	66,258	99.72	341	53,699	80.82	114	51,835	78.01
Melaka	69,275	35	69,220	99.92	36	58,471	84.40	46	64,145	92.59
Johor	145,293	189	144,749	99.63	2	133,200	91.68	0	136,495	93.94
Pahang	152,734	877	150,769	98.71	45	106,974	70.04	29	105,066	68.79
Terengganu	135,415	364	135,339	99.94	238	69,121	51.04	242	84,854	62.66
Kelantan	255,482	731	252,110	98.68	46	79,877	31.27	2	131,143	51.33
Sarawak	197,650	352	190,286	96.27	1214	119,510	60.47	1,170	113,769	57.56
Sabah	203,530	1153	186,733	91.75	143	125,509	61.67	0	136,070	66.86
Malaysia	1,756,390	5,283	1,720,047	97.93	3,086	1,092,604	62.21	3,454	1,226,744	69.84

Source: Engineering Services Division, MoH

National Drinking Water Quality Surveillance Programme

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.

Other activities under the NDWQSP are the investigation and assessment at estates, resort islands and rural areas. Most of the water supply systems in the stated areas are privately owned or rural public water supply systems which were provided by the Ministry of Health through the Rural Environment and Sanitary program (RESP). More than 420 estates all over Malaysia and 104 resort islands in Johor, Kedah, Pahang, Terengganu, Sabah and Sarawak were investigated and assessed in year 2008.

In 2008, collaboration with Food Safety Division, more than 50 technical comments was also given on local and international manufacturers which requested licenses to produce packaged drinking water/natural mineral water.

TABLE 9
SUMMARY OF SAMPLING PERFORMANCE FOR 2008, MALAYSIA

STATE	Group 1			Group 2			Group 3			Group 4			Total Number of Samples Taken
	A	B	C	A	B	C	A	B	C	A	B	C	
Johor	17245	17199	99.73	4156	4140	99.62	1151	1149	99.83	342	334	97.66	120,685
Kedah	10623	9326	87.79	2218	1738	78.36	698	584	83.67	260	156	60.00	
Kelantan	6518	6508	99.85	1393	1371	98.42	468	450	96.15	240	228	95.00	
Melaka	3269	2817	86.17	708	585	82.63	221	176	79.64	44	33	75.00	
N.Sembilan	5979	5964	99.75	1339	1305	97.46	454	445	98.02	187	179	95.72	
Pahang	15271	14983	98.11	3936	3804	96.65	1159	1090	94.05	653	616	94.33	
Pulau Pinang	4169	4278	102.61	799	813	101.75	308	309	100.32	108	99	91.67	
Perak	12137	12218	100.67	2538	2512	98.98	1216	818	67.27	855	370	43.27	
Perlis	718	708	98.61	158	158	100.00	51	46	90.20	28	16	57.14	
Selangor	11830	9364	79.15	2852	1759	61.68	819	544	66.42	244	97	39.75	
Terengganu	6381	6236	97.73	1403	1319	94.01	372	350	94.09	108	94	87.04	
WP KL	5642	2277	40.36	1162	414	35.63	309	117	37.86	16	4	25.00	
WP Putrajaya	468	468	100.00	100	87	87.00	26	26	100.00	4	4	100.00	
P. MALAYSIA	100250	92346	92.12	22762	20005	87.89	7252	6104	84.17	3089	2230	72.19	
Sabah	10101	9235	91.43	2083	1780	85.45	666	495	72.16	296	242	81.76	
Sarawak	20009	15199	75.96	4455	2399	53.85	1419	772	54.40	512	172	33.59	
WP Labuan	475	475	100.00	100	100	100.00	40	40	100.00	20	20	100.00	
MALAYSIA	130,835	117,255	89.62	29,400	24,284	82.60	9,397	7,411	78.87	3,917	2,664	68.01%	151,614

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.

Source: Engineering Services Division, MoH

A = Number of samples scheduled (ideal schedule)

B = Number of samples taken.

C = Percentage of samples taken (%).

Quality Assurance Programme (QAP) for National Drinking Water Quality Surveillance Programme (NDWQSP)

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. The standards are revised each year so that it can be made more stringent consistent with any improvement of the national annual average. Table 10 indicates a compliance trend for every performance indicator from 1993 to 2008, while Table 11 shows the breakdown of the NDWQSP QAP performance for 2008.

TABLE 10
A COMPLIANCE TREND FOR EVERY NDWQSP QAP PERFORMANCE INDICATOR FROM 1993 TO 2008

Indicator Year	Residual Chlorine & E-coli (%)	E-coli (%)	Turbidity (%)	Residual Chlorine (%)	Aluminium (%)
1993	1.3	2.5	-	8.5	-
1994	0.5	1.3	-	5.3	-
1995	0.4	1.3	-	5.1	-
1996	0.4	1.3	7.7	4.8	-
1997	0.3	1.3	7.6	3.3	-
1998	0.3	1.3	6.7	3.1	-
1999	0.3	1.3	5.8	3.1	-
2000	0.3	1.3	4.8	3.1	-
2001	0.3	0.9	4.1	2.8	-
2002	0.3	0.9	3.8	2.8	-
2003	0.3	0.9	3.4	2.8	-
2004	0.3	0.5	3.2	2.8	10.2
2005	0.3	0.4	3.2	2.8	10.2
2006	0.3	0.4	2.8	2.8	10.2
2007	0.3	0.4	2.2	2.8	10.2
2008	0.3	0.4	2.0	2.3	10.2

Source: Engineering Services Division, MoH

TABLE 11
PERFORMANCE OF QAP FOR NDWQSP IN 2008, MALAYSIA.

Negeri/ Indikator	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
Johor	13993	2	0.01	13956	33	0.24	13958	122	0.87	13961	317	2.27	3099	115	3.71
Kedah	7056	11	0.16	7093	21	0.30	7489	370	4.94	7476	119	1.59	1241	36	2.90
Kelantan	5182	35	0.68	5183	43	0.83	5209	928	17.82	5208	232	4.45	1038	50	4.82
Melaka	2594	0	0.00	2597	3	0.12	2599	8	0.31	2599	25	0.96	549	7	1.28
N.Sembilan	4508	4	0.09	4508	8	0.18	4513	137	3.04	4513	135	2.99	973	36	3.70
Pahang	11223	55	0.49	11243	133	1.18	11250	474	4.21	11248	250	2.22	2750	141	5.13
Pulau Pinang	3385	0	0.00	3387	2	0.06	3452	11	0.32	3450	15	0.43	612	6	0.98
Perak	9579	3	0.03	9581	28	0.29	9105	252	2.77	9583	113	1.18	1903	50	2.63
Perlis	565	23	4.07	565	25	4.42	565	0	0.00	565	26	4.60	121	3	2.48
Selangor	7440	0	0.00	7467	1	0.01	7864	22	0.28	7872	137	1.74	1379	21	1.52
Terengganu	5432	1	0.02	5435	1	0.02	5554	48	0.86	5552	9	0.16	1125	24	2.13
WP KL	869	22	2.53	888	31	3.49	893	17	1.90	870	24	2.76	181	0	0.00
WP Putrajaya	451	0	0.00	451	0	0.00	451	0	0.00	451	1	0.22	83	3	3.61
P. MALAYSIA	72177	156	0.22	72354	329	0.45	72902	2389	3.28	73348	1403	1.91	15054	492	3.27
Sabah	6826	191	2.80	6870	311	4.53	6953	853	12.27	6964	473	6.79	1139	317	27.83
Sarawak	9735	1	0.01	10534	69	0.66	6101	26	0.43	10468	176	1.68	1789	396	22.14
WP Labuan	232	1	0.43	278	24	8.63	252	0	0.00	232	22	9.48	34	22	64.71
MALAYSIA	88970	349	0.39	90036	733	0.81	86208	3288	3.79	91012	2094	2.30	18016	1227	6.81

Note: A = Number of samples analyzed B = Number of samples violated C = Percentage of samples violated (%)

Source: Engineering Services Division, MoH

Environmental Health Protection Programme

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 by the Division in 1997.

For indoor air quality activities, training for engineers, scientists and assistant environmental health officers was conducted in 2008 in collaboration with NIOSH. Training on indoor air quality for assistant environmental health officers was also done through post-basic training conducted annually. The Division is also actively involved in the development of standards under SIRIM for activities related to indoor air quality.

For solid waste management, the division continues to actively participate in giving technical inputs to the National Program for Solid Waste Management under the Ministry of Housing and Local Government (MHLG) especially in the Technical Committee for Technology Assessment for Solid Waste and Strategic Master Plan for Solid Waste. The division is also actively involved in the development of standards under SIRIM, participating in the technical committee for waste management, working group for hazardous waste, domestic waste and site remediation.

The year 2008 saw active participation by the Division in the National Technical Committee for river quality improvement. Sanitation assessment for resort areas was initiated through the development of a monitoring format and a trial run. A few states were selected to carry out the assessment projects.

Radiation Health & Safety Activities

The main objective of the program is to ensure the safe, optimum and efficacious use of irradiating apparatus and associated facilities in medicine. RHSS also ensures that the hazards associated with the application of ionizing radiation and non-ionizing radiation in medicine are kept to a minimum and are within acceptable levels.

Licensing under the Atomic Energy Licensing Act, Act 304

A total of 692 licences were issued to the private sector in 2008. These comprise 131 new licences and 561 renewed licenses. Table 12 shows a total of 2,805 premises comprising 653 registered government locations and 2,152 private centres.

TABLE 12
NUMBER OF LICENSES AND REGISTERED PREMISES

Type of Premises	No. of Premises		Total
	Government	Private	
Hospitals	146	113	259
Health Clinics	152	NA	152
Dental Clinics	352	961	1313
Radiotherapy Centres	3	21	24
Radiology Clinics	NA	44	44
GPs/Non-X-Ray Sp. Clinics	NA	970	970
Veterinary Clinics	NA	43	43
Total	653	2152	2805

Note: NA (Not applicable)
Source: Engineering Services Division, MoH

There are a total of 5,043 irradiating apparatus in both the government and private sectors. The total number of irradiating apparatus for the different modalities until December 2008 is shown in Table 13.

TABLE 13
TOTAL OF IRRADIATING APPARATUS BY TYPE AS OF DECEMBER 2008

Type of Irradiating Apparatus	No. of Premises		Total
	Government	Private	
General/Mobile X-Ray	1005	1,282	2,287
Dental (intra oral/OPG)	566	1,180	1,746
Fluoroscopy/C-Arm	164	233	397
Angio/Cath-Lab	22	59	81
CT Scanner	47	116	163
Mammography	41	104	145
Lithotripter/Bone Densitometer	11	64	75
Linear Accelerator	13	25	38
Simulator	5	14	19
Co-60/Cs-137/Ir-192	3	77	80
Gamma Camera/PET CT	9	3	12
Total	1886	3157	5043

Source: Engineering Services Division, MoH

Monitoring & Enforcement under Act 304

These activities included 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 “*Akta Perlesenan Tenaga Atom 1984*”(Act 304). A total of 505 premises were inspected out of which 108 premises comprised government clinics and hospitals. All government clinics and hospitals complied with the safety regulations. In the private sector, 313 (79%) premises complied with the licensing requirements while 84 (21%) premises did not fully comply with all the licensing requirements. A total of 41 warning letters were issued and reminders were given for 43 x-ray machines not be used.

Technical Support

Technical support and expert services involving ionizing radiation in medicine were provided for all medical facilities under the Ministry of Health (MOH). The primary objective is to ensure that all regulatory requirements are complied with. The activities carried out are vetting and evaluation of installations, inspection, project progress meetings and site visits. The activities carried out in 2008 included 12 technical specifications and evaluations; 4 site visits; 21 project progress meetings and 314 vetting of applications for installation/usage and radiation protection. Ten workshops pertaining to ionizing radiation and non-ionizing radiation were successfully organised with the aim of improving radiation safety and enhancing the quality of medical diagnostic imaging services in government hospitals and health clinics.

Development of Codes & Standards

The activities carried out to develop Codes & Standards included:

- i. Conducting the “Study On Medical Radiation Exposure in Malaysia” both in the government and the private sector. The data obtained will be used to form the basis of guidance reference levels for the safe usage of radiation in medicine and will also be used as an indicator for good practice. This will be done in conjunction with the United Nation Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) dose survey which will be finalised by the year 2010. Data collections from selected hospitals have been completed and are now in the process of being analysed. The first draft of the report is estimated to be ready by October 2009.
- ii. Conducting studies related to the safety of ionizing radiation and non-ionizing radiation usage
 - Medical Radiation Dose Survey under the International Atomic Energy Agency (IAEA) project;
 - Survey of Radiofrequency Fields Emitted by Diathermy Machines in collaboration with the Nuclear Agency.

- iii. Planning and developing manuals/guidelines/guidance notes for the safe usage of ionizing radiation and non-ionizing radiation activities.
- iv. Preparing the draft Licensing Criteria for Registering as a Nuclear Medicine Physician in Nuclear Medicine Services under the Atomic Energy Licensing Act 1984 (Act 304).
- v. Participation in the committee for reviewing draft Radiation Protection (Radioactive Waste Management) Regulations.
- vi. Participation in the committee for reviewing draft Radiation Protection (Medical, Dental & Veterinary Usage of Radiation) Regulation.
- vii. Being a contributing member of the International Advisory Committee (IAC) for International Electromagnetic Fields (EMF) Project developed by the World Health Organization (WHO).
- viii. Collaboration with SIRIM in developing relevant standards.
- ix. Involved in the preparation of the document on 'MRI Safety and Quality Guidelines' in collaboration with the College of Radiology (COR).
- x. Involved in the preparation of the document on 'Guidelines for Quality Assurance in Mammography' in collaboration with the College of Radiology (COR).

MEDICAL DEVICES CONTROL

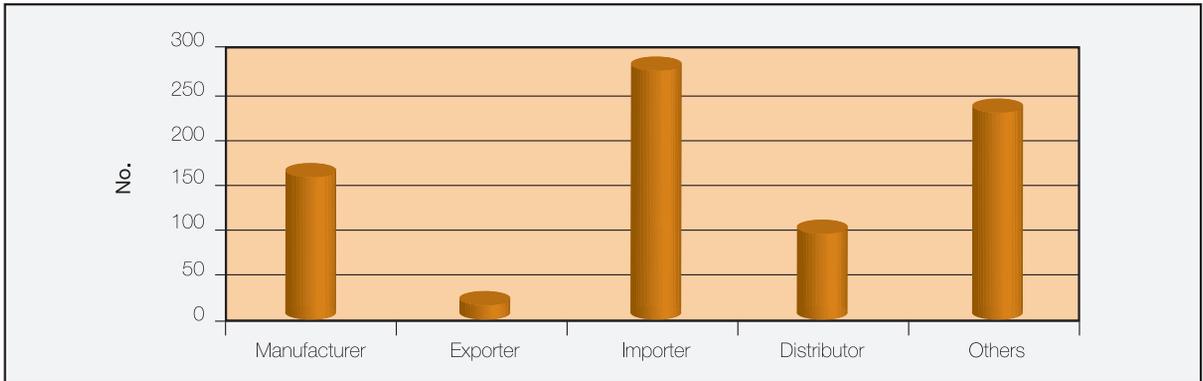
With the role of regulating medical device and its industry players in Malaysia, Medical Devices Control Division has two important objectives i.e. to protect the public health in terms of safety and to ensure that new technology is made available for use for patients in a timely manner and at the same 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 finalised before it is tabled in the Parliament.

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

The voluntary registration scheme for establishments who deal 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 familiarise all affected parties with the registration process. It is 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 2008, 681 establishments dealing with medical devices participated in this scheme. The breakdown of registered establishments is as shown in Figure 1. Approximately 50,000 medical devices have been listed in MeDVER.

FIGURE 1
MEDVER REGISTERED ESTABLISHMENTS ACCORDING TO ESTABLISHMENT TYPE



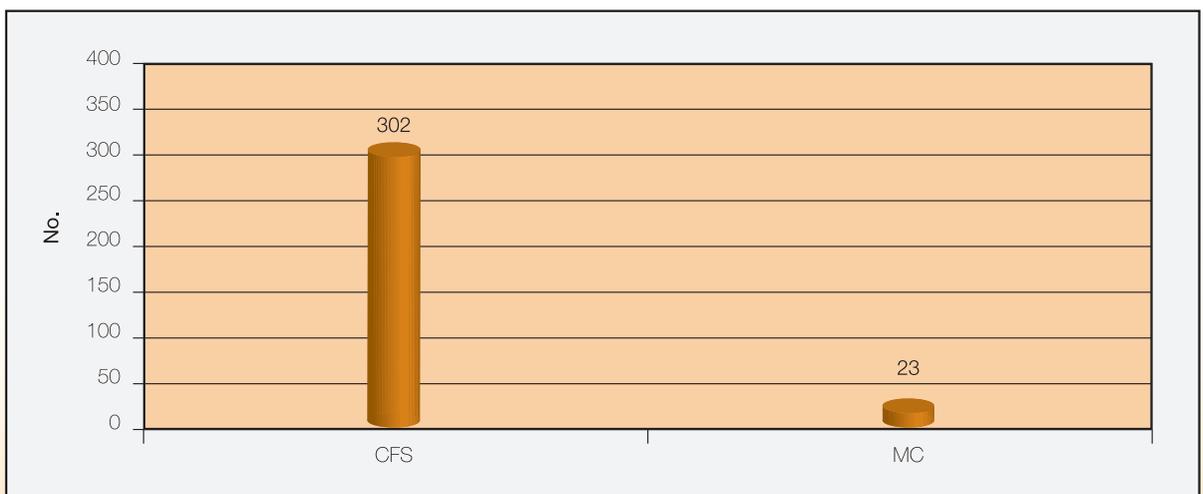
Source: Medical Devices Division, MoH

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 Devices 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 2008, a total of 302 certificate of Free-Sales and 23 manufacturing certificates were issued to local manufacturers who exported their products to these countries (Figure 2).

FIGURE 2
NUMBER OF CFS AND MC ISSUED IN 2008



Source: Medical Devices Division, MoH

Post Market Surveillance and Vigilance

Post market surveillance is 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 publish and provide 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.

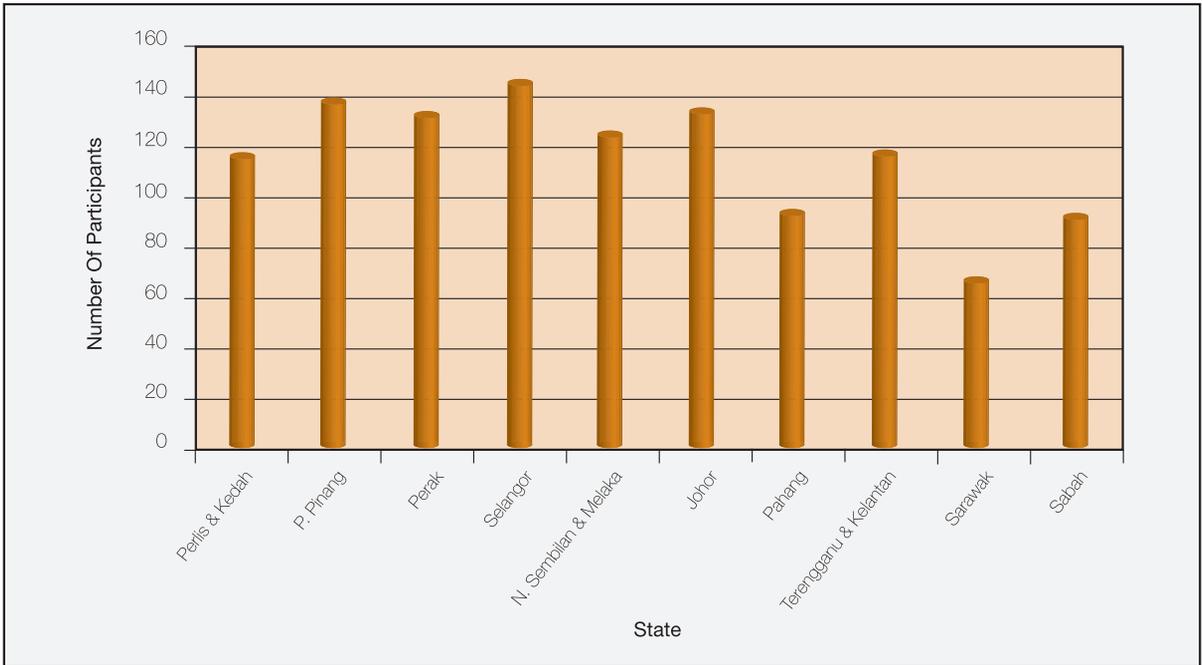
Audit Visit to Manufacturing Facilities

One of the important activities carried out by Medical Device Control Division is audit visits to local manufacturing facilities. The aim of this activity is to ensure that 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 2008, Medical Device Control Division has visited a total of 14 local manufacturing facilities.

Awareness Programme

In 2008, Medical Device Control Division also organised a series of awareness programmes in government hospitals throughout Malaysia. The purpose of the awareness programme is to disseminate information on the proposed Medical Device Regulatory System and its Impact on Health Facilities in Malaysia. The programme was carried out at 10 government hospitals throughout Malaysia. The number of participants participated in the programme held in each region is as shown in Figure 3.

FIGURE 3
PARTICIPATION IN THE AWARENESS PROGRAMME, 2008



Source: Medical Devices Division, MoH

International Relations

Ministry of Health has participated in various international organizations including the ASEAN Medical Device Product Working Group (MDPWG) and Asian Harmonization Working Party (AHWP). These organisations are working towards harmonisation of medical device regulations in each region. Malaysia has been given the responsibility for the second time to chair the ASEAN MDPWG. Both organisations are now working on the development of a common submission dossier template (CSDT) for medical device product approval. Both organisations have also implemented the framework for post market alert system for defective and unsafe medical devices.

TRADITIONAL AND COMPLEMENTARY MEDICINE

1st Asia-Pacific Traditional & Complementary Medicine Conference 2008

The 1st Asia-Pacific Traditional & Complementary Medicine Conference (FAPT&CM), was held in Grand Seasons Hotel, Kuala Lumpur from 4th to 6th November 2008 and lived up to the expectation as an inaugural eye-opening gathering of renown speakers, practitioners and public with one common interest in T&CM. The conference was organised by Traditional & Complimentary Medicine Division (T&CMD) in collaboration with six practitioner bodies and supported by The Advance Medical and Dental Institution (AMDI), an esteemed organisation from Universiti Sains Malaysia. Almost 400 practitioners, Ministry of Health staff and the public attended this event, exceeding the estimated number of 300 participants.

The conference kicked off with two plenary presentations on Traditional Malay Massage and Standardization of Traditional Thai Massage, followed by eight parallel demonstrations of various modalities of manipulative therapy and massage. The opening ceremony and official launching of the conference and the online registration system e-PENGAMAL was graced by the Honourable Minister of Health, Dato' Sri Liow Tiong Lai. The Director-General of Health Malaysia, Tan Sri Dato' Seri Dr. Haji Ismail Mohd Merican, delivered the keynote address and the Deputy Director General of Health (Research and Technical Support), Dato' Dr. Maimunah A. Hamid delivered the welcoming remarks. With the support of these three key figures of the Ministry, T&CM will continue to achieve greater heights and wider acceptance, locally and internationally. A lot of emphasis was on evidence-based T&CM practices and standardisation of education and training. The closing agenda for the conference was a study visit to T&CM Unit in Putrajaya Hospital by participants from the conference.



From left Director-General of Health, Honourable Minister of Health & Deputy Director-General of Health (Research & Technical Support) as Organising Chairman.



Official launching of the conference by the Honourable Minister of Health.



Honourable Minister of Health delivers opening speech.



Director-General of Health delivers the conference's keynote address.



Local & International speakers as well participants attending the Conference.



Demonstration on Therapeutic Malay Massage for Post Stroke.



Demonstration on Wellness Malay Massage.



Demonstration on Traditional Malay Workout.



Demonstration on Traditional Malay Post Natal Care & Massage.



Demonstration on Ayurvedic Massage.

MS ISO 9001:2000 Certification



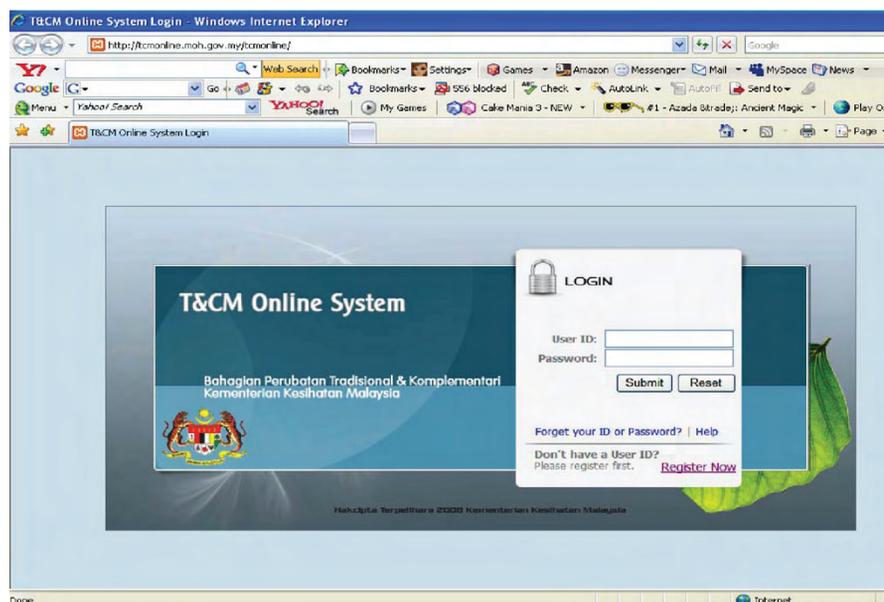
The T&CMD has embarked on the implementation of the Quality Management System (QMS) based on the ISO 9001:2000 standard requirements since November 2006 in which the focus is on “*Kawalselia Amalan Penjagaan Kesihatan Tradisional dan Komplementari di Malaysia*” processes. In relation to that, each section in T&CMD was required to develop their procedures that followed the ISO 9001:2000 Standard Requirement. T&CMD has been awarded the MS ISO 9001:2000 QMS on 23 December 2008 (certification no: MY-AR 4771) from SIRIM.

e-PENGAMAL

T&CMD had conducted nationwide road show in October 2008 to introduce e-PENGAMAL (online registration) to the local traditional and complementary medicine (T&CM) practitioners. One of the objectives of the road show was to demonstrate to T&CM practitioners the online registration and its processes. About 500 local T&CM practitioners attended the briefing.



e-PENGAMAL logo



e-PENGAMAL website at <http://www.tcmonline.moh.gov.my>

Foreign Practitioner Registration Unit

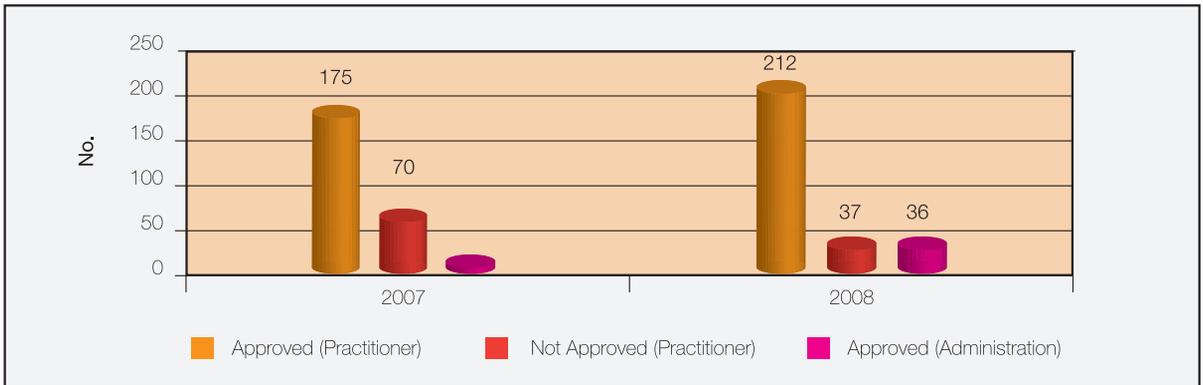
One of the roles of T&CMD is to issue supporting letters for expatriates (foreign T&CM practitioner) who wish to practice in Malaysia before they can apply for expatriate passes from Immigration Department of Malaysia. The main objective of this process is to ensure Foreign T&CM practitioners who work in Malaysia are qualified and experienced in order for them to transfer their knowledge to local practitioners. In 2008, 285 applications had been processed with only 37 applicants rejected by “*Jawatankuasa Permohonan Pegawai Dagang (JKPPD)*” (Table 14).

TABLE 14
STATUS OF REGISTRATION OF FOREIGN PRACTITIONERS IN 2007 & 2008

Year	Approved		Not Approved
	Practitioner	Administration	
2007	175	0	70
2008	212	36	37

Source: Traditional & Complementary Medicine Division, MoH

FIGURE 4
COMPARISON NUMBER OF FOREIGN PRACTITIONER APPLICATIONS, 2007 AND 2008

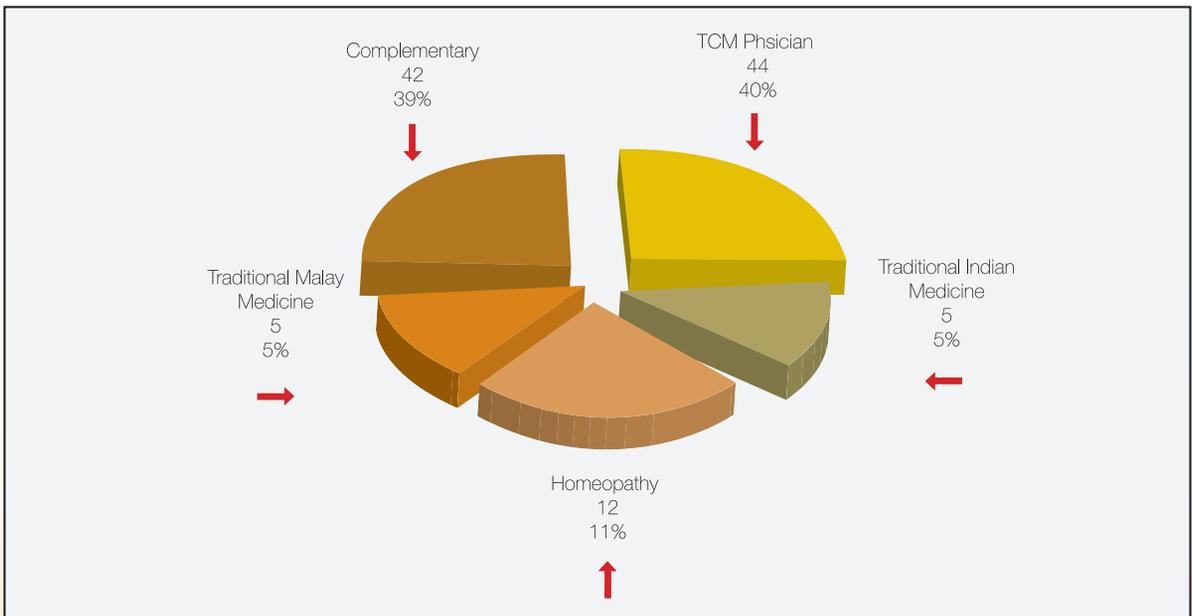


Source: Traditional & Complementary Medicine Division, MoH

Inspectorate and Enforcement Section

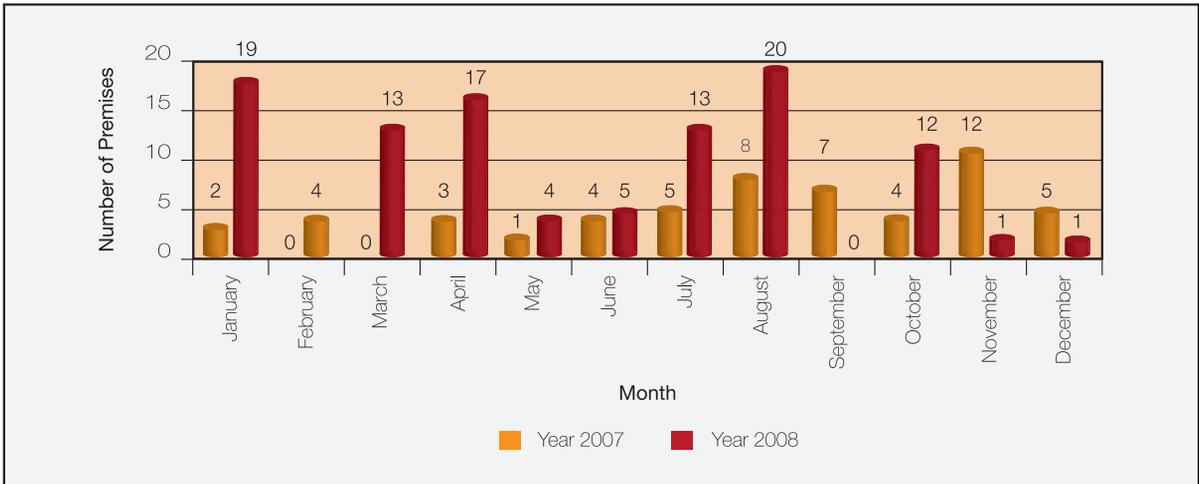
Since January 2008, the Inspectorate and Enforcement Section organised enforcement activities on T&CM premises throughout Malaysia including Sabah & Sarawak. Inspection, mapping & customer education were among the activities conducted. Good collaboration with other enforcement agencies such as Enforcement Pharmacy Division, Immigration Department and Local Councils helped in ensuring effective enforcement activities. Figure 5, 6 and 7 illustrated the inspection activities in 2007 and 2008.

FIGURE 5
INSPECTION ON T&CM PREMISES IN 2008



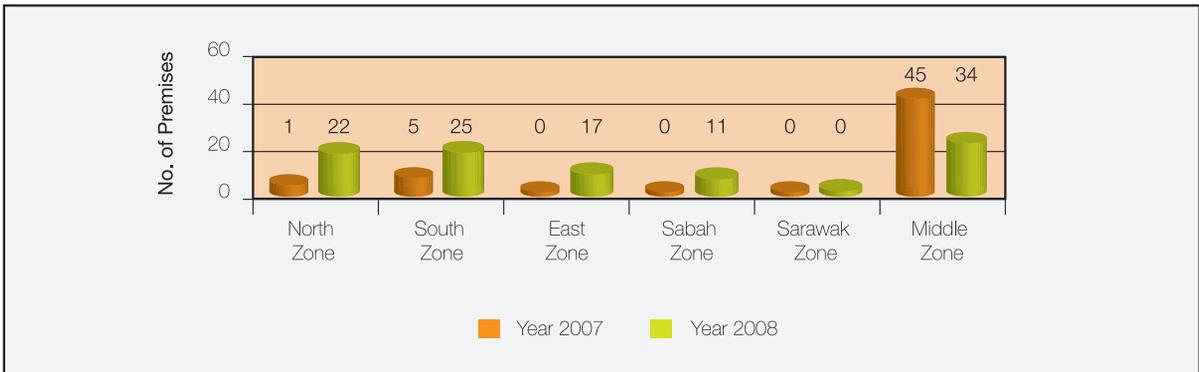
Source: Traditional & Complementary Medicine Division, MOH

FIGURE 6
STATISTICS ON T&CM PREMISES INSPECTED, 2007 AND 2008



Source: Traditional & Complementary Medicine Division, MoH

FIGURE 7
T&CM PREMISES INSPECTED ACCORDING TO ZONES IN 2007 AND 2008



Source: Traditional & Complementary Medicine Division, MoH

T&CM Modalities

T&CMD with cooperation from the Ministry of Education and Malaysian Qualifications Agency (MQA) has developed the Standards & Criteria for 13 T&CM learning programmes. The objective is to provide the opportunity for learning T&CM and to upgrade the knowledge of T&CM practitioners to an accepted level and thus ensuring the safety and quality of T&CM practice. Table 15 shows the Standards & Criteria for 13 T&CM learning programmes.

TABLE 15
STANDARDS & CRITERIA DEVELOPED FOR T&CM LEARNING PROGRAMMES

No.	Degree Programmes
1.	Bachelor in Traditional Chinese Medicine
2.	Bachelor in Traditional Chinese Medicine (Acupuncture)
3.	Bachelor in Malay Medicine
4.	Bachelor in Complementary Medicine (Natural Medicine)
5.	Bachelor in Complementary Medicine (Chiropracter)
6.	Bachelor in Homeopathy
7.	Bachelor in Ayurvedic Medicine
No.	Diploma Programmes
1.	Diploma in Acupuncture
2.	Diploma in Malay Massage
3.	Diploma in Islamic Medical Practise
4.	Diploma in Aromatherapy
5.	Diploma in Reflexology
6.	Diploma in Nature Medicine

Source: Traditional & Complementary Medicine Division, MoH

NATIONAL INSTITUTES OF HEALTH (NIH)

Institute for Medical Research (IMR)

In 2008, staff members of the Institute were engaged in 115 projects. The Institute published 87 scientific papers and produced 30 reports. The reports were generally prepared to meet specific requests made by various government departments and agencies. In addition, staff members of the Institute were involved in 197 presentations at local and International Seminars.

A new unit in IMR, the Occupational Safety and Health Unit was formed in May 2008 to ensure the health and safety of all workers in IMR. The Unit activities of the past year focused on raising the awareness for health and safety issues, accident prevention and workplace inspection. The occupational health programmes provided include Hepatitis B vaccination, Influenza Vaccination and medical examination for workers above 40 years old.

The Allergy and Immunology Research Centre (AIRC) was engaged in the study of Rheumatoid Arthritis (RA), frequency and nature of variant syndrome in autoimmune hepatitis, identification and characterization of IgE-binding proteins of black sesame seed and white squid (*Lotiga edulis*), prevalence of allergy to commonly available edible mushrooms and to establish confirmatory tests for the main primary immunodeficiencies. The study on biomarkers and immunogenetics of RA is a collaborative study with the Karolinska Institute, Sweden. The anti-CCP assay was introduced as a new diagnostic marker for RA. The multi-centre study on the cross-sectional investigation of a cohort of patients with early RA in Malaysia to identify epidemiological and genetic risk factors was continued this year. Collagen induced arthritis in DA rats was established as an animal model for the study of the effect of ostrich oil on arthritis. The Centre also provided a specialised diagnostic service, which included the tissue typing for all the transplant programmes in all MOH hospitals, and maintains the national bone marrow donor registry (MMDR).

The Haematology Unit of the Cancer Research Centre (CaRC) is actively involved in breast cancer, leukaemia and stem cell research. In terms of breast cancer research, the study focuses on the identification of potential gene sets, which might be important in the pathogenesis and clinical behavior of breast cancer using high-throughput genome-wide microarray method. The research team is also involved in the study of procurement and cryopreservation of human amniotic membrane, which is important in ex-vivo expansion of corneal and conjunctival epithelium. Research using aCGH microarray to measure the copy number changes in unexplained syndromic patients was also being carried out. The research team had successfully utilised multiplex reverse transcription-polymerase chain reaction (RT-PCR) approach to detect fusion genes associated with specific translocation in acute leukaemia (AL) patients and managed to monitor allogeneic post-bone marrow transplantation outcome in patients with or without malignant hematological diseases by Taqman real-time quantitative PCR technology. The reverse dot blot hybridisation method using alpha globin Strip Assay has proven to be more sensitive and less time consuming in diagnosis of alpha-thalassemia disease.

The Molecular Pathology Unit of the Cancer Research Centre continues to carry out studies on cancer and genetics, with a particular emphasis on nasopharyngeal carcinoma (NPC). Studies are also carried out to characterize genes expressed in the nasopharynx. A multi-institutional study on the clinical outcome of NPC, carried out in collaboration with the Network of Clinical Research Centres at six pilot hospital sites revealed that 75% of new cases of NPC present in the late stages (Stage III/IV). A study on the CYP21 gene revealed multiple mutations and gene rearrangements in our local patients with congenital adrenal hyperplasia.

The Stomatology unit of the Cancer Research Centre, continues to carry out clinico-pathological research on odontogenic cysts/tumours and other oral diseases. It also collaborated with oral precancer and oral cancer projects conducted by CARIF.

The Cardiovascular, Diabetes & Nutrition Centre (CNDC) was given the task of spear-heading two projects identified to be among the health research priorities for the Ninth Malaysia Plan by the Diabetes group. With a total funding of RM1.5 million approved between the years 2007-2009, the Metabolic Syndrome Study in Malaysia (MSSM) would involve close collaboration with 6 local universities, namely; Universiti Sains Malaysia, Universiti Kebangsaan Malaysia, University Malaya, Monash University Malaysia, Penang Medical College and Universiti Malaysia Sabah. A total amount of RM1.5million was also received for the second project, Biomarkers for Diabetic Nephropathy. Like MSSM, the project would be a collaborative effort between CDNRC and researchers from Universiti Sains Malaysia, Universiti Kebangsaan Malaysia and Putrajaya Hospital.

The Environmental Health Research Centre (EHRC) research focuses on environmental epidemiology, environmental health risk assessment, environmental toxicology and microbiology. The Centre's projects broadly encompass: developing and assessing Environmental Health Indicators, 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, environmental and reproductive risk of certain cancers, and linkage of congenital anomalies to the environment.

The Information Unit under the Herbal Medicine Research Centre (HMRC) continues its participation in the 'Global Information Hub on Integrated Medicine (GlobinMed)'. The unit also actively conducts the study on the trends of traditional medicine that has been registered with the NPCB. Documentation of medicinal plant information is another ongoing activity that involves every officer in HMRC.

The Phytochemistry Unit of the HMRC continues to provide phytochemical analysis in herbal research which mainly focuses on the chemical of herbal extracts towards production of quality herbal products. Research on the *Lignosus rhinoceros* locally known as Kulat Susu Harimau in Malaysia contributed to the scientific information in term of chemical properties as well as the efficacy of locally grown *Lignosus* sp. Similar extensive research were also carried out for both local plants *Goniothalamus giganteus* and *Ficus deltoidea*.

The Toxicology & Pharmacology Unit of the HMRC aims to be the main source of safety information of selected herbs in the country. It carries out pre-clinical research on the toxicology and pharmacology aspects of the plant extracts. The focus area is still on anti-addiction research particularly on *Mitragyna speciosa* or ketum.

The Bioassay Unit of the HMRC continues its role in carrying out various biological tests (in vitro and in vivo) using standardised assay procedures to determine the biological properties and medicinal potentials of medicinal plants. The biological tests include the screening of medicinal plants for anti-malarial, anti-fungal, antibacterial and anti-narcotic properties. Four compounds isolated from the plant *Goniothalamus scorthecinii* were investigated for their anti plasmodia activities towards *P. falciparum* in vitro. Another study is on the effects of curcumin (*Curcuma xanthorrhiza* Roxb) on xanthorrhizol cytotoxicity in human breast carcinoma mda-mb-231 cells. The Unit also seeks to identify new anti filarial drugs which is either microfilaricidal or one that causes permanent sterilisation of adult worms.

The researches carried out by the Bacteriology Unit of the Infectious Diseases Research Centre (IDRC) were mainly focused on Tropical Diseases such as tuberculosis, brucellosis, leptospirosis, melioidosis; hospital and community acquired infections such as methicillin-resistant *Staphylococcus aureus*, *Streptococcus pneumoniae* and Salmonellosis; and studies on yeasts, moulds and fungi.

Studies on the biology and control of medically important insects remains the main focus of the Medical Entomology Unit of the IDRC. In view of the importance of dengue, the Unit conducted a number of studies on the dengue vectors. Other studies on dengue and chikungunya vectors were related to the bionomics and dengue infection in the vectors. Forensic entomology studies can provide important indicators to determine the time of the victim's death. Continuous work are being done to improve the maggot strain used in the treatment of diabetic ulcers. The Virology Unit focused on research pertaining to locally important medical viruses, aiming to determine the epidemiology of the viruses and the development of new technology for rapid diagnosis of these viruses.

The Biochemistry Unit of the Specialised Diagnostic Centre (SDC) has completed the pilot project on Newborn Screening for IEM and has achieved most of its objectives in finding the incidence of acute IEM. This year onward the unit will be focusing more on developing and setting up research and diagnostic method for chronic types of Inborn Error of Metabolism such as Lysosomal Storage Diseases (LSD) and other difficult and laborious enzyme assays. The Molecular Diagnostics and Protein Unit of the SDC has developed a few more tests towards strengthening its function as a referral laboratory for molecular diagnostics in certain genetic diseases, particularly inherited metabolic disorders, for the country.

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 in IMR and Ministry of Health, the centre was also involved in several research projects. They include the 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; a collaborative project on the health status of the Orang Asli in Peninsular Malaysia; prevalence of ecto and endo-parasites among the rodent population in Peninsular Malaysia; and development of immunodiagnostic technique for leptospirosis.

One of the main functions of IMR is providing specialised diagnostic tests as requested by Health Care Providers to support the health service. In 2008, about 177 different diagnostic tests were provided by 10 units (laboratories) of which 301,483 tests were performed. This was a substantial increase from the 168,758 tests reported in 2007 due to several outbreaks which occurred in 2008, the addition of new tests and previously unreported testing activities.

Seven of the units providing the specialised diagnostic tests namely AIRC, Stomatology, Parasitology, Virology, Pharmacology & Toxicology, Haematology and Bacteriology Unit (mycology and mycobacteriology testing) were accredited by NATA in 2006. In view of the specialised tests provided where most of the tests are only available in IMR, Standard Malaysia is not able to provide technical expertise to assess the lab. Hence, IMR has to continue to obtain the accreditation status from NATA although the Malaysian Scheme for Laboratory Accreditation (SAMM) for medical testing has been established by Standard Malaysia. A special budget will be obtained for this purpose.

IMR staff provided advisory and consultative services to the Ministry of Health (MOH) Malaysia, other government departments, as well as international organizations. Most units of the Institute also serve as referral centres to MOH Laboratories throughout the country. During the year, 46 staff members provided consultative services at the national level, while 17 staff members provided such services at the regional/international level.

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

The ad hoc programmes provided training opportunities for 346 scientists, medical doctors and allied personnel from other departments and local and foreign institutes. Of these, 67 were undergraduates from local tertiary institutions who received training through attachments at the various units of the Institute. The Institute also conducted 22 training workshops and 16 courses during the year.

A total of 238 staff attended 101 conferences, seminars and scientific meetings, whilst 228 attended short courses at national and international level.

There were 21 officers are studying their Master degrees while 23 are pursuing their PhDs.

Institute for 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. The Institute has also conducted major research projects such as the National Health Morbidity Survey I (1986), II (1996) and III (2006), National Ear and Hearing Disorders Survey and National Iodine Deficiency Disorder Survey (IDD) 2008. Table 16 summarises the researches conducted by the Divisions in IPH.

TABLE 16
RESEARCH CONDUCTED BY THE DIVISIONS IN IPH

Division	Research Title
Division of Disease Control	<ul style="list-style-type: none"> • Poliomyelitis vaccination status among children aged 6 months to 24 months in the Federal Territory Kuala Lumpur 2007 • The Evaluation of the effectiveness of the HIV and Hepatitis prevention programmes in the prisons and drug rehabilitation centres (DRC) • Assessment of Children and Families affected by HIV/AIDS in the state of Selangor • Unintentional Injury • Validation of the Accuracy of OMRON HEM-907 Blood Pressure Machine • Estimating the Magnitude of Cigarette Smuggling into Malaysia and Government Tax Revenue Loss • A Cross Sectional Study on the Use of Illicit Cigarettes in Malaysia
Division of Community Health Development	<ul style="list-style-type: none"> • National Ear & Hearing Disorder Survey • Validity Study of Adolescent Health Screening Tools • Factors Related to Capability in Conducting Research among Institute for Public Health (IPH) Officers
Division of Occupational Health	<ul style="list-style-type: none"> • An Exploratory Study to Assess the Implementation of the Safety Health Committee (SHC) and the Perception of the SHC Members in the Healthcare Facilities within MOH • Status of Neurobehavioral Effects among MOH Staffs Exposed to Neurotoxic Chemicals in Vector Control Unit and Pathology Laboratory in the State of Perak • Status of the Quality of Water in Recreational Water Parks within Klang Valley • A Survey on Employee Job Satisfaction in the Institute for Public Health
Division of Food Nutrition	<ul style="list-style-type: none"> • National Iodine Deficiency Disorder (IDD) 2008 • Comparison of Child Growth using WHO 2006 Standard and NCHS 1977 reference with clinical assessment in Perak and Pahang –A Prospective Study • Nutritional status of TASKA children in Selangor – co-investigator • Food Premise Survey 2008 • Nutritional Status And Food Practices Among Breast Cancer Patients in Selected Government Hospitals 2008 • Malaysian Adult Nutrition Survey 2003 (MANS)

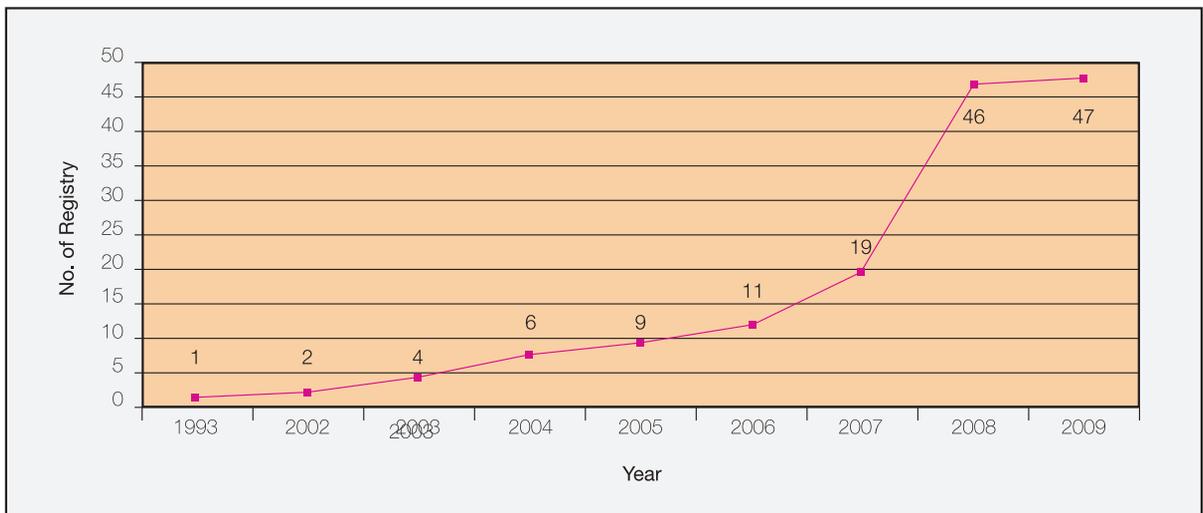
Source: Institute for Public Health

Network of Clinical Research Centres (CRC)

The CRC continues to promote, support and conduct quality and ethical research to improve patient outcome with a network of 17 centres around the country. These networks include Hospital Kuala Lumpur, Hospital Ipoh, Hospital Sultanah Aminah (Johor Bahru); Hospital Pulau Pinang; Hospital Raja Perempuan Zainab II (Kelantan); Hospital Umum Sarawak; Hospital Queen Elizabeth (Kota Kinabalu); Hospital Melaka; Hospital Selayang; Hospital Tengku Ampuan Rahimah (Klang); Hospital Alor Setar; Hospital Tuanku Jaa'far (Seremban); Hospital Tengku Ampuan Afzan (Kuantan); Hospital Sultanah Nur Zahirah (Kuala Terengganu); Hospital Tuanku Fauziah (Perlis); Hospital Serdang and Hospital Selayang.

Since its establishment, CRC is involved in more than 47 patient registries in a variety of therapeutic areas (Figure 8).

FIGURE 8
PATIENT REGISTRY DEVELOPMENT, 1993 - 2009



Source: Clinical Research Centre (CRC)

CRC has also published more than 94 journal papers, 18 reports and presented in 8 different international presentations. In 2008, CRC targeted to conduct 100 clinical trials involving 500 sites and 500 patients, but CRC has exceeded this target and have conducted 139 clinical trials involving 330 sites and 26,000 patients.

In order to promote and support the clinical trials in Malaysia, CRC has been conducting 39 workshops and trained more than 1,200 trainees in various courses in 2008 such as Good Clinical Practice, Research Methodology, Biostatistics, Medical Writing, Economics, Pharmaco-Epidemiology, and Registry (Table 17). The trainees not only include MOH staff but also personnel from private hospitals and pharmaceutical agencies. Most of the trainees are medical officers and specialists, nurses, medical assistants and research officers who are specifically involved in research.

TABLE 17
SHORT-TERM TRAINING COURSES, 2008

Training Courses	Number of Courses	Number of Trainees
GCP	26	>400
Research methods	3 (1 KL, 1 Kedah, 1 HPP)	>150
Biostatistics	3 (2 KL, 1 HPP)	>150
Medical writing	3	+/-160
Pharmaco-Epidemiology	1	NA
Economics	1	NA
Critical Appraisal	1	30
Registry	1	118
Ethics	0	0

HPP = Hospital Pulau Pinang

Source: Clinical Research Centre (CRC)

CRC plays an important role in promoting, supporting and conducting clinical trials in Malaysia. In line with this, CRC has seen an increase of requests for research consultant clinics (RCC) in 2008. More than 112 consultation clinics were requested by medical officers and postgraduate students attached at Kuala Lumpur Hospital. The type of consultation requested involved research design, research sample plan, research proposal and protocol, as well as statistical analysis and data management. Based on the clients' requirement, The CRC team that is formed for the research consultant clinics consists of epidemiology specialist, clinical trials specialist, economics officer, and statistician.

In 2008, CRC successfully organised the Clinical Research & Trials Excellence Conference & Exhibition 2008 (CReaTE 08), a conference held to create opportunities for individuals and research organisations to update their research skills, exchange ideas, share experiences and to network. It is the premier event for investigators, scientists, sponsors, IRB members, regulators and the variety of professionals working in the clinical research area in Malaysia.

One of the research projects that was launched in 2008 was the Community Based Multiple Risk Factors Intervention Strategy to prevent Cardiovascular & Chronic Kidney Diseases (CORFIS). It is a chronic disease management research study funded by the Ministry of Health. The aim of the study is to assess the effectiveness of the management of hypertension, diabetes mellitus and hyperlipidaemia through a purpose design and systematically organised disease management program that employs multi-faceted interventions incorporating various specific measures which include:

- Intensive follow-up of patients diagnosed with these conditions by participating general practitioners by following evidence based treatment guidelines.

- Regular monitoring of patients adherence to treatment and outcomes by participating medical specialists.
- Free patients access to allied health care and counselling by nurses, dieticians, pharmacists and physiotherapists. Individual and group education including counselling sessions on home disease monitoring, diet, physical exercise and medication use are provided.
- Monthly call centre follow-up by nurses to provide disease management advice and monitoring of treatment compliance.

Institute for Health Management (IHM)

The core functions of IHM are research, training and consultation in health management. In line with these functions, IHM aspires to contribute towards the production of health managers who are responsive, proactive and able to contribute towards a healthcare system that meets the needs of the country. As such, the role of IHM is:

To develop a strong and effective system in research in health management.

- To develop a health management training programme in health management 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 in the area of health management and related areas for the National Institutes of Health.
- To foster networking and smart partnership between individuals, institutions and organisations in the public and private sectors for greater collaboration.
- To build capacity in giving input, feedback, views and proposals to the Ministry of Health in strategic planning and evaluation of health plans.

The IHM continues its research activities in the conduct of the following research projects:

- Human Resources: Meeting Service Needs and Demands.
- Evaluation on the utilisation of specialist services in the Malaysian Health System.
- Measuring patient expectation and satisfaction at MOH hospitals and clinics.
- Study on effectiveness of NIH knowledge sharing.

- Study on delays between stroke onset and management in hospitals.
- Effectiveness of ICT system towards service delivery in public hospitals and clinics.
- To study counseling skills among MOH counselors.
- The quality of Ministry of Health hospitals with accreditation or with ISO MS 9000 Certification as compared to those that had not obtained accreditation or certification.
- Assessment of soft skill practice among MOH Front Liners.
- The agony of housemanship.

Seven technical research reports were published and IHM conducted seven training courses with ten consultancies to various agencies.

Institute for Health Systems Research (IHSR)

The Institute for Health Systems Research (IHSR) aims to provide evidence to health managers at all levels and policy-makers to facilitate evidence-based decision-making. This will be done through:

- Collaborating with stakeholders on the design and delivery of evidence.
- Identifying issues around the health systems and researching into their needs.
- Delivering the research methodology and training programme to a diverse range of health professionals.

IHSR is a WHO (World Health Organisation) Collaborating Centre for Health Systems Research and Quality Improvement and incorporates into its structure the Quality Assurance Secretariat to support the coordination and development of the MOH Quality Assurance Programme. The general areas of research include research in health care services, health outcome research, research in quality improvement, health policy research, and health economics and financing.

The research projects conducted were:

- Improving Patient Safety Projects (13 sub projects)
- Evaluation of Private Sector Involvement in the Delivery of Primary Care Services
- A Study on the Effectiveness of Clinical Practice Guidelines (CPG) in Managing Selected Chronic Diseases (4 subprojects)
- Patients' Unvoiced Needs Study

- A Systematic Review for Patient's Unvoiced Needs
- Evaluation of the Ministry of Health Quality Assurance Programme
- Using Coronary Calcium Score in Predicting Patient Heart Risk in Sarawak General Hospital (SGH) – A Preliminary Analysis
- Review of Performance of the National Indicators (3 subprojects)

In partnership with other research organisations, the researchers from IHSR were involved as collaborators in the following projects:

- Evidence-based Policy Network (EVIPNet)
- Evaluating Knowledge-Translation Platforms in Low and Middle-Income Countries
- Development of Risk Adjustment in Primary Care in Malaysia Through Use of John Hopkins ACG (Adjusted Clinical Groups)
- Pilot Study on Health Research Systems Analysis
- WHO TRI-Country Study
- EQUITAP Study Phase 2

As part of the Research Methodology Workshop, IHSR provided support and facilitate the following projects:

- *Are Newly Graduate Nurses Sufficiently Trained? The Reasons for Unplanned Leave Taken by Nurses in Hospital Pulau Pinang.*
- *Kebolehan Jururawat Pergigian Wilayah Persekutuan, K.Lumpur & Selangor Mengenalpasti Kes-kes Interseptif Ortodontik Yang Perlu Dirujuk*
- *Pesakit Mental Tidak Mematuhi Temujanji Rawatan Susulan di Klinik Kesihatan Negeri Pahang.*
- *Kenapa Amalan Perancang Keluarga Rendah di Kalangan Ibu Hamil Berisiko Tinggi (IHBT) di Negeri Kelantan.*
- *Stres di Kalangan Jururawat di Kesihatan Awam Negeri Melaka.*

IHSR carries out 38 in-service training courses/workshops in the following areas: Health Systems Research, Quality Assurance / Improvements, Health Outcomes, Health Economics, Statistics and Data Management, and Translating Research into Action.

Five (5) staff members from the Institute attended various training courses at international levels to upgrade and improve their knowledge and skills in specific areas of interest.

Within the country, all professional and technical staff from the Institute had attended at least five courses relevant to their areas of interest.

The professional staff members from IHSR were also engaged by MOH and other external agencies to provide consultation and technical assistance in matters related to health systems research, quality assurance/improvement, health outcomes research, health economics and health policy. The staff members also provided technical assistance in the following areas organised by the WHO: Western Pacific Advisory Committee on Health Research, Human Reproduction's Regional Advisory Panel for Asia & the Pacific, WHO Scientific & Technical Advisory Group, Human Reproduction, WHO Reference Group on Patient at the Centre of Care Initiative WPRO, WHO Expert Working Group Priority Area for Research on Patient Safety, WHO Expert Working Group Infrastructure for Research on Patient Safety, Steering group for a study on the feasibility of creating RRRM for health policy decision-makers in Asian countries (a joint initiative between the Alliance Health Policy and System Research and the WHO Western Pacific Regional Office (WPRO), Evidence Based Informed Policy Network Asia (EVIPNet Asia), WHO Commission for Social Determinants for Health (WHO Tri-Country Study), National Health Research Systems Analysis in the WPRO, WHO Pilot Study on Health Research Systems Analysis (WHO / OECD / EUROSTAT – Asia Pacific Technical Committee on the Revision of the System of Health Accounts).

In addition, IHSR provided support for two international courses co-sponsored or organised by WHO HQ and Regional Office:-

- Investigators' meeting to finalise research proposals on establishing linkages between sexual and reproductive health services and sexually transmitted and reproductive tract infection (WHO – RHR).
- Training of Trainers on Quality Assurance/Quality Improvement for the WHO Western Pacific Region (WPRO) member countries.

In 2008 IHSR was awarded with the ISO MS 9001:2000 certification. The Institute was also re-designated as a WHO Collaborating Centre until 2013. IHSR also continues to be the Lead Agency for the Evidence-informed Policy Network for Better Decision Making - EVIPNet Malaysia until 2011.

Throughout 2008, staff members published and presented papers & posters in journals and conferences. They delivered lectures in various training courses conducted by either the Ministry of Health, local universities or other organizations (Table 18)

TABLE 18
RESEARCH PUBLICATIONS & PRESENTATIONS IN 2007 & 2008

Training Courses	2007	2008
Presentations (papers & posters)	34	21
Lectures	102	145
Journals & Bulletins	7	12
Reports, Proceedings & others	43	25

Source: Institute for Health System Research

IHSR housed the National Quality Assurance Secretariat for the MOH and continues to maintain a registry of HSR and QA projects conducted throughout the country. In addition, the following activities were also carried out by the Secretariat: National QA Technical Committee Meeting, National QA Steering Committee Meeting, State QA Liaison Officer Meeting and Publication of QA Bulletin.

The Institute hosted an international fellow from McMaster University. It also received the Regional Adviser in Health Services Development, Western Pacific Regional Office. Other visitors to the Institute include representatives from Hanoi School of Public Health (VietNam), Global Forum for Health Research (Geneva), Council on Health Research for Development (COHRED), Ministry of Health Brunei Darussalam and the Directorate General of Health Services Bangladesh.

In addition IHSR also provided attachment programmes for a number of undergraduates from local universities.

Institute for Health Behavioural Research (IHBR)

The number of staff at the Institute for Health Behavioural Research (IHBR) increased significantly in 2008 in line with the growth and activities of the Institute. The majority of the permanent staff was Health Education Officers from various grades ranging from S41 to S52. In addition, the Institute also has one permanent Research Officer (Q41) and a Junior General Assistant (N1). Various categories of new temporary employment opportunities were created in an effort to respond to the service needs of the Institute. This included the recruitments of three Administrative Assistants. In addition, the Institute also recruited 7 Research Officers (Q41), 2 Assistant Research Officers (Q27) and 2 Assistant Research Officers (Q17) on a temporary basis. These officers were recruited to support various research projects carried out by the Institute.

IHBR has established beneficial research collaboration both outside and within the Ministry of Health Malaysia. This effort has provided a sound platform to enhance the knowledge and ability in the field of research. Furthermore, the launch of this smart partnership is very meaningful because it allows for more credible and quality research to be conducted.

TABLE 19
RESEARCH PROJECT CONDUCTED BY IHBR

Research Projects	Collaboration With
Determinants of Wellness Among Older Malaysian: A Health Promotion Perspectives	Institute Gerontology, UPM
Malaysian Mental Health Screening Inventory 45 (MMHSI 45) Pilot Study.	UKM
A study on social, economic and emotional impacts and level of stigma of both treated and untreated childhood psychiatric disorders on patient and their family.	HKL; Sunway University College
Foreign domestic workers in Malaysia: Exploring the intersection of gender, migration and health.	University of Ottawa, Canada
Study on Epidemiology of Suicide In Malaysia: Pilot Project in 3 States.	Kajang Hospital
Traditional Complementary Medicine (TCM)	HECC
Knowledge, attitude and practice on health risk behaviour among PLKN trainees.	IHBR
Identification of Non Compliance in Patients with IHD	University Cyberjaya
Investigate the role of palm based vitamin E in managing contributory risk factors for Ischaemic Heart Disease.	University Cyberjaya
Effectiveness of intervention in rehabilitation programs for malnourished children in Kelantan and Sarawak.	IHBR
20 Health Education Projects	UKM Master Program Candidates
Pretesting Of New National Dietary Guidelines	IHBR
Focus Group Discussions On Corporate Cultures in Hospital Serdang and Hospital Kajang	IHBR

Source: Institute for Health Behavioural Research

Besides conducting the Post Graduate Program in Health Education Course, IHBR also conducted 8 short term courses for various health staff such as the Patient Education, Introduction to SPSS, Risk communication And Statistical Analysis using SPSS. 12 consultations were carried out in 2008. In 2008, IHBR developed a survey tool for the planning of Youth Behaviour Risk Survey in Malaysia with the assistance from a consultant from CDC, Atlanta.

WAY FORWARD

In the coming years, the Planning and Development Division will emphasise on activities leading to the Healthcare Financing Mechanism for the country. Efforts will also be stepped up to improve the quality of data at HIC and MNHA units in meeting global standards. Capacity building is crucial at all levels in order to meet the challenging service demands. The formulation of the 10th Malaysia Plan is another upcoming task for the Division.

Engineering service will continue to provide technical services and monitoring in all its activities. The Medical Device Division will continue to plan and develop regulatory activities in order to be prepared for the implementation of medical devices regulations. In 2009, Medical Device Control Division will finalise the Medical Device Bill and it is targeted to be tabled in the Parliament by end of 2009. The Division will also focus on the development of regulations and guidance documents under the Medical Device Act as a preparation to complete the legislative documents for future implementation of the Act. The current activities will continue to be implemented and improved. The division also plans to strengthen the organisation by expanding the functions and resources of the organisation.

The Traditional and Complimentary Medicine will strengthen its role in regulating, coordinating, planning and monitoring the various activities related to practitioners, practice, product and research in traditional and complimentary medicine in the MOH.

The NIH Institutes will further strengthen its research capabilities and capacities towards becoming Centres of Excellence. The NIH plans to continue providing support to MOH through the conduct of research, training and consultation. It aspires to continue being relevant to the nation through capacity and capability building especially in areas related to the development of novel technologies in the diagnostics and prevention of diseases, providing and translating research evidence in health policy decision making. The NIH will further strengthen its credibility through international collaboration and partnerships. The national mission to make Malaysia the clinical trial hub in Asia will be given more emphasis in the years ahead as strategies are formulated that include training skilled professionals for the industry. The One Stop Centre, in collaboration with public agencies, private sector partners as well as with clinical research centres in universities and private hospitals will strengthen Malaysia's research capability.

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 endeavours and play an important role in ensuring that MOH activities are geared towards achieving national objectives. Research activities will continue to support the other programmes and providing evidence for policy making and improving public health services and health delivery systems.



PHARMACEUTICAL PROGRAMME

PHARMACY

INTRODUCTION

The Pharmacy Programme, Ministry of Health (MOH) is responsible for ensuring that Malaysians can gain access to safe, effective and good quality medicines and promoting the rational and cost effective use of medicines for the improvement of the general health and quality of life. The programme comprised of three main divisions, the Pharmacy Regulatory Division (National Pharmaceutical Control Bureau), Pharmacy Enforcement Division and Pharmacy Practice & Development Division.

The Pharmacy Regulatory Division (National Pharmaceutical Control Bureau) ensures that therapeutic and public healthcare products are safe, effective and of good quality by establishing and implementing the national drug registration for pharmaceutical and healthcare products besides regulating the pharmaceutical industry through Good Manufacturing Practices (GMP). The Pharmacy Enforcement Division protects consumers from consuming dangerous medicines, misleading medicine advertisements and unscrupulous practices through the enforcement of related drug and pharmacy legislations that control the importation, sale and advertisement of drugs and the practices of pharmacy in Malaysia while the Pharmacy Practice & Development Division optimises drug therapy and provide pharmaceutical care by ensuring efficient management of selection, procurement, distribution of pharmaceutical products and to promote the rational and cost-effective use of medicines through effective up-to-date clinical and professional pharmaceutical services in tandem with current global development.

Programme Resources

The manpower of the Pharmacy Programme is as shown in Table 1 and Table 2.

TABLE 1
PHARMACIST MANPOWER OF PHARMACEUTICAL SERVICES, 2008

Category / Activity	Grade	No. of Post	Filled	Vacant	% Filled
Senior Director	JUSA A	1	0	1	100
Pharmacy Practice & Development	U41	2645	2177	468	82
	U44	396	205	191	52
	U48	130	55	75	42
	U52	53	47	6	89
	U54	19	15	4	79
	JUSA C	1	1	0	100
Pharmacy Enforcement	U41	309	204	105	66
	U44	67	43	24	64
	U48	37	19	18	51
	U52	5	5	0	100
	U54	2	2	0	100
	JUSA C	1	1	0	100
Pharmacy Regulatory (NPCB)	U41	142	116	26	82
	U44	23	18	5	78
	U48	33	19	14	58
	U52	8	8	0	100
	U54	3	3	0	100
	JUSA C	1	1	0	100
Total		3876	2939	937	76

Source: Pharmaceutical Services Division, MOH

TABLE 2
ASSISTANT PHARMACIST MANPOWER OF PHARMACEUTICAL SERVICES, 2008

Category / Activity	Grade	No. of Post	Filled	Vacant	% Filled
Pharmacy Practice & Development	U29	2591	2227	364	86
	U32	381	381	0	100
	U36	80	50	30	63
	U38	30	28	2	93
	U40	7	4	3	57
Pharmacy Enforcement	U29	8	5	3	63
	U32	9	8	1	89
	U36	3	3	0	100
	U38	0	0	0	0
	U40	0	0	0	0
Pharmacy Regulatory (NPCB)	U29	70	58	12	83
	U32	8	8	0	100
	U36	2	2	0	100
	U38	0	0	0	0
	U40	0	0	0	0
Total		3189	2774	415	87

Source: Pharmaceutical Services Division, MOH

Training and Continuous Professional Development Activities

Allocation

The Programme had been allocated a sum of RM1,546,667 for the purpose of in-service training under the development expenses allocation of the 9th Malaysia Plan for the year 2008 to conduct courses/training/workshops domestically and abroad.

Distribution of allocation to states and institutions was as follows:

- a) Pharmaceutical Services Division, MOH : RM 702,211
- b) States/Institution : RM 299,000
- c) Overseas Training : RM 545,456

Organisation of Courses

- Local Training
Throughout 2008, 467 sessions of courses, conventions and workshops were conducted.
- Attachment Courses.
As at end of 2008, 37 pharmacists were sent to undergo attachment trainings in clinical disciplines at Hospital Kuala Lumpur, Hospital Melaka, Hospital Pulau Pinang, Hospital Putrajaya, Hospital Sultanah Aminah and Hospital Selayang in the area of General Pharmacotherapy, Nephrology, Respiratory, Medication Therapy Adherence Clinic (MTAC) and Clinical Pharmacokinetic.
- Overseas Training
A total of 49 officers from the Pharmaceutical Services Division were sent overseas in 2008 to attend courses and workshops and participate in educational visits. The countries involved were Australia, Austria, Brunei, Cambodia, China, Denmark, Germany, India, Indonesia, Italy, Japan, South Korea, Singapore, Switzerland, Thailand, and United States of America.
- Expenses
The expenses incurred for organisation of courses, conventions, and workshops in 2008 were RM1,452, 076 or 93.88% of the training allocation.

TABLE 3
LOCAL AND OVERSEAS TRAINING EXPENSES (2008)

Training	Allocation (RM)	Expenses (RM)	%
Local Training	1,001,211	934,026	93.29
Overseas Training	545,456	518,050	94.98
Total	1,546,667	1,452,076	93.88

Source: Pharmaceutical Services Division, MOH

Pharmacy Board

The Pharmacy Board was established according to the provisions of Section 3, Registration of Pharmacist Act 1951, which is responsible for the regulation of the profession and practice of pharmacy, through the following activities:

- i. Registration and registration cancellation of Pharmacist.
- ii. Registration and registration cancellation of Body Corporate.
- iii. Registration of House Pharmacist (before 2nd September 2004).
- iv. Registration of Provisionally Registered Pharmacist (before and after 2nd September 2004).
- v. Recognition of Pharmacy Degree.
- vi. Approval of Training Premises for Provisionally Registered Pharmacist.
- vii. Preparation of guidelines and standardisation on issues related to recognition of pharmacy programme and pharmacy practice.
- viii. Organizing Pharmacist Jurisprudence Examination.
- ix. Conducting investigation on reports of unethical practices by pharmacist.

TABLE 4
REGISTRATION BY PHARMACY BOARD (2000 - 2008)

Description	Year								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Newly Registered Pharmacist	259	310	310	393	447	379	437	534	617
House Pharmacist	248	256	299	329	327	CS	CS	CS	CS
PRP	0	0	0	0	0	420	529	614	722
Registered Body Corporate	9	27	39	78	92	87	107	98	43
Pharmacist Annual Retention Certificate	2437	2663	2916	3160	3506	3965	4292	4422	5924
Body Corporate Annual Retention Certificate	52	83	85	105	164	218	270	414	371

Source: Pharmaceutical Services, MOH

CS: Compulsory Service

Community Pharmacy

Pharmacy Programme through *Pekeliling Perkhidmatan Farmasi Bil 20/2008* has allowed pharmacists to do locum outside office hours, subject to the approval of the Head of unit. However, all pharmacists doing locum are required to give priority to public services and avoid any conflict of interests. It is hoped that through this opportunity, the knowledge, skills and service professionalism of public sector pharmacists can be enhanced as a whole. Other activities consist of collecting and updating information regarding community pharmacies and other healthcare providers in Malaysia, being the Secretariat for the Quality Use of Medicine Committee and processing locum application for pharmacist in the MOH.

ACTIVITIES AND ACHIEVEMENTS

Regulatory Control Of Pharmaceutical Industry

- Pharmaceutical Quality, Efficacy and Safety Assurance

The National Pharmaceutical Control Bureau (NPCB) serves as the secretariat to the Drug Control Authority (DCA) and is responsible for ensuring therapeutic, traditional and cosmetics products approved for the local market are safe, effective and of good quality. Product registration was started in 1985 and up till December 2008, a cumulative total of 233,758 applications were received and 207,911 products were registered consequently. In 2008, a total of 33,444 applications for product registration were submitted and 32,165 products were registered. They comprised of 409 prescription drugs (1.3%), 272 non-prescription drugs (0.8%), 953 traditional products (3.0%) and 30,531 cosmetics products (94.9%). A total of 615 product applications which included 171 (27.8%) prescription drugs, 112 (18.2%) non-prescription drugs and 332 (54.0%) traditional products were rejected by the DCA. The registrations of 190 products were cancelled by the DCA. This includes 90 prescription drugs, 15 non-prescription drugs, 78 traditional products and 7 cosmetics, due to cancellation of agreement for contract manufacturing and adulteration. The registrations of 474 products were suspended by the DCA due to various reasons. The statistics on product registration are as shown in Table 5 and Table 6.

TABLE 5
CUMULATIVE NUMBER OF REGISTERED PRODUCTS, 2003 - 2008

Year	'Scheduled Poison' Drugs	Non-Poison Drugs	Traditional Products	Cosmetics	Total
2003	10,143	7,463	12,851	6,751	37,208
2004	10,496	7,689	13,821	47,513	79,519
2005	10,823	7,989	15,129	83,525	117,466
2006	11,356	8,686	16,857	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

Source: Pharmaceutical Services Division, MOH

TABLE 6
APPLICATION FOR PRODUCT REGISTRATION, 1985 - 2008

Year	'Scheduled Poison' Drugs	Non-Poison Drugs	Traditional Products	Cosmetics	Total	
					Yearly	Cumulative
1985-1990	9,166	5,935	-	-	15,101	15,101
1991	481	305	-	42	828	15,929
1992	150	60	3,973	145	4,328	20,257
1993	376	111	7,059	51	7,597	27,854
1994	400	168	4,080	31	4,679	32,533
1995	440	239	288	58	1,025	33,558
1996	617	671	415	130	1,833	35,391
1997	532	635	668	123	1,958	37,349
1998	587	606	938	277	2,408	39,757
1999	796	789	1,347	610	3,542	43,299
2000	427	444	1,523	262	2,656	45,955
2001	578	487	1,154	150	2,369	48,324
2002	509	448	1,603	214	2,774	51,098
2003	263	266	1,471	26,177	28,177	79,275
2004	529	720	2,220	30,630	34,099	113,374
2005	703	645	1,807	28,632	31,787	145,161
2006	465	630	1,526	24,558	27,179	172,340
2007	555	560	1,325	25,534	27,974	200,314
2008	604	483	1,120	31,237	33,444	233,758
Total	18,178	14,202	32,517	168,861	233,758	

Source: Pharmaceutical Services Division, MOH

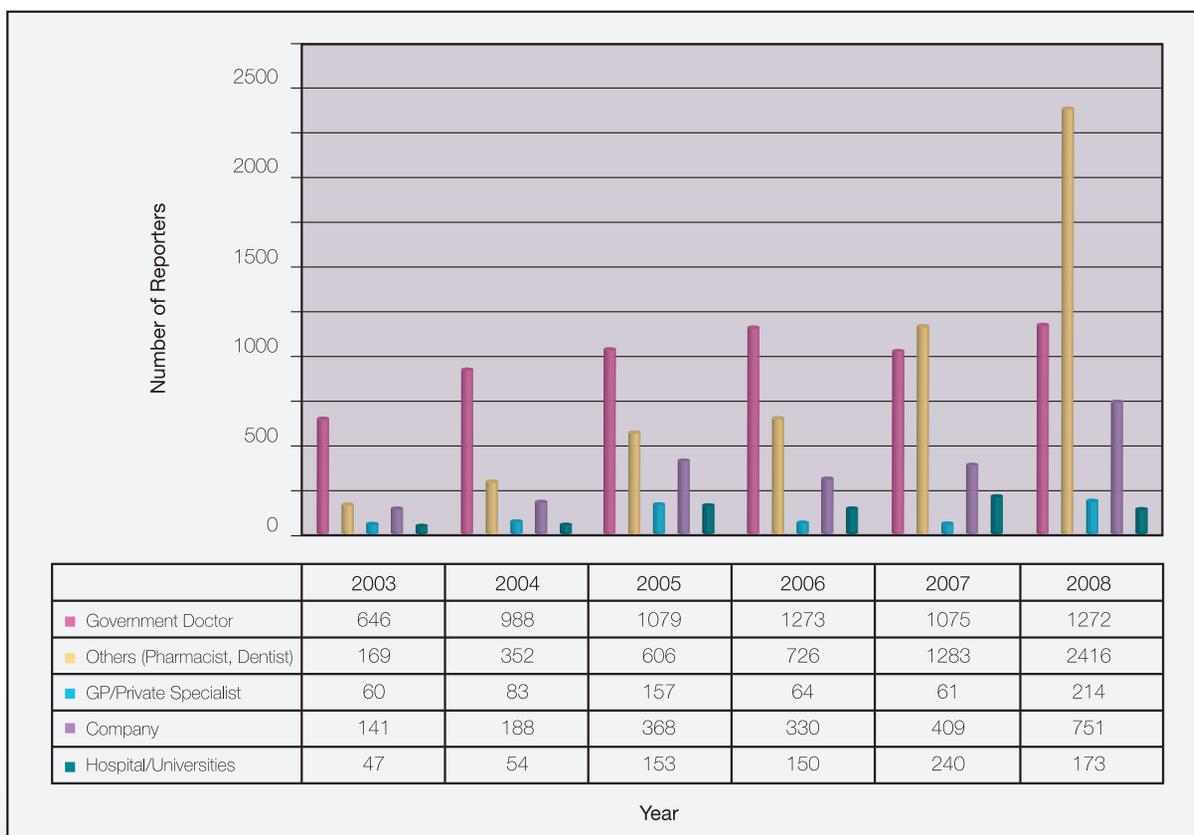
Malaysia is among the first nations in the world to implement the online system for the application of product registration. It commenced in 2002, with cosmetic products and later extended in stages to products containing scheduled poisons (controlled items) and non-poison products (over-the-counter products) in July 2003 followed by traditional medicines in January 2004 and veterinary medicine products in August 2007.

As part of the regulatory process to ensure continued compliance to safety, efficacy and quality, samples of some registered products are subjected to testing under the post market surveillance programme. A total of 2,272 registered products were sampled in 2008. Based on the outcome of laboratory testing, 112 product batches were subjected to Degree III product recalls (i.e. within 30 days) due to quality defects. The recalls involved 10 (9%) prescription drugs, 7 (6%) non-prescription drugs, 92 (82%) traditional products and 3 (3%) cosmetics products. The registrations of 22 products were cancelled as the samples tested were found to be adulterated with scheduled poisons.

Under the surveillance programme, 2,375 labels and package inserts were also checked. Warning letters were issued for 293 products, which were found to be non-compliant with the labelling requirements. The NPCB also investigated 468 product complaints submitted by health professionals and the general public, which subsequently led to punitive actions being taken such as, recalls for some of these products from the market.

A total of 4,826 adverse drug reaction (ADR) reports were received, a 58% increase as compared to the previous year. Of this, 4,487 reports were evaluated and subsequently 4,382 reports were submitted to the WHO ADR Monitoring Centre in Uppsala, Sweden. An analysis of the submitted ADR reports showed that slightly more than 50% were from pharmacists and 26% from doctors in the government sector respectively (Figure 1).

FIGURE 1
ANALYSIS OF ADVERSE DRUG REACTION (ADR) REPORTS BASED ON
CATEGORY OF REPORTERS, 2003 - 2008

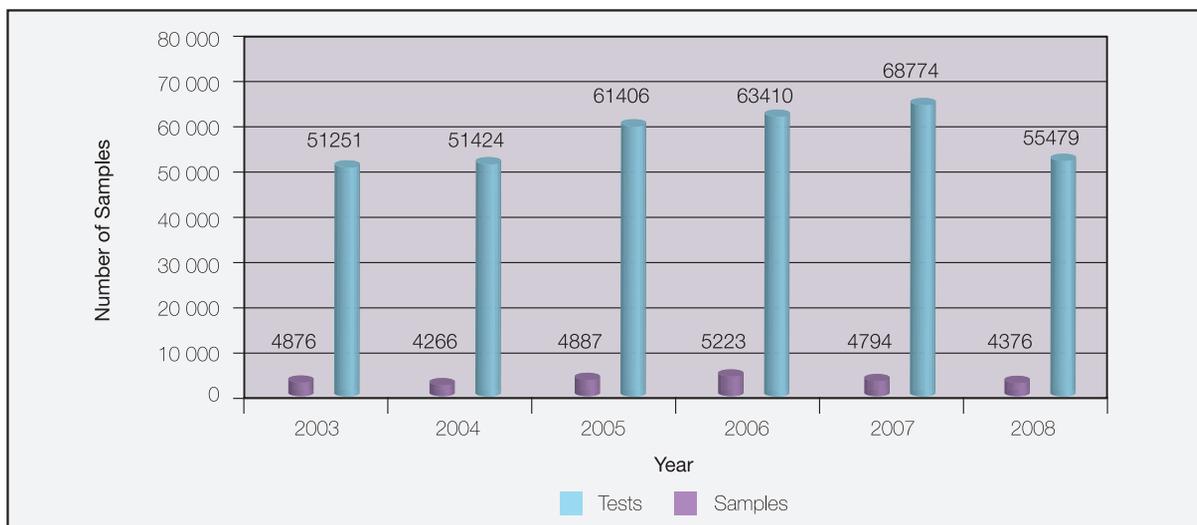


Source: Pharmaceutical Services Division, MOH

A total of 55,479 quality control tests were done on 4,376 samples, of which 1,487 (34.0%) samples were for applications for registration, 2,296 (52.5%) samples from surveillance activities, 132 (3.0%) samples arose from product complaints, 408 (9.3%) samples were from enforcement activities and 53 (1.2%) samples were from other sources (Figure 2).

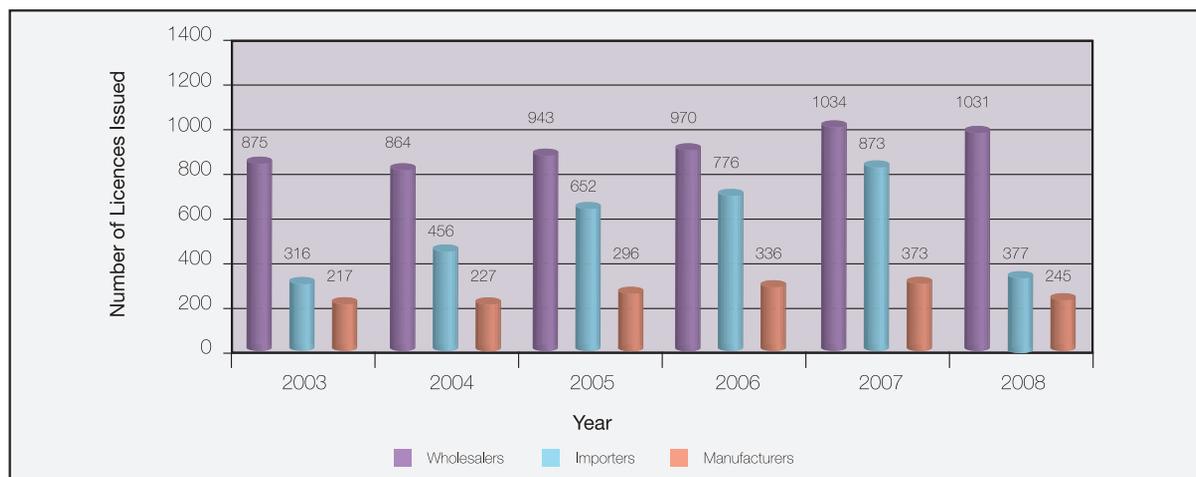
A total of 245 manufacturing premise licenses were issued of which 69 (28.2%) were for pharmaceutical products and 176 (71.8%) were for traditional medicines. A total of 377 import licenses were issued, comprising of 223 (59.2%) for pharmaceuticals and 154 (40.8%) for traditional medicines. In terms of wholesalers' licenses, 1,031 were issued of which 479 (46.5%) of these licenses were issued to wholesalers of products containing scheduled poison drugs and 552 (53.5%) licenses were issued to wholesalers selling non-poisons, traditional medicines and cosmetics (Figure 3).

FIGURE 2
STATISTICS ON SAMPLES TESTING, 2003 - 2008



Source: Pharmaceutical Services Division, MOH

FIGURE 3
STATISTICS ON LICENCES ISSUED, 2003 - 2008



Source: Pharmaceutical Services Division, MOH

- **International Involvement**

NPCB continues to play an active role in harmonisation efforts through the ASEAN Consultative Committee for Standards and Quality (ACCSQ), Pharmaceutical Product Working Group (PPWG), Traditional Medicines and Health Supplements Product Working Group (TMHS PWG) and ASEAN Cosmetic Committee (ACC). Other international involvements include facilitating the fast tracking of ASEAN healthcare integration and EC-ASEAN Economic Cooperation on Quality, Standards and Conformity Assessments, as well as other PIC/s activities. The NPCB has also participated in other international consultations such as Technical Meetings and initiation of Bilateral Arrangements with ASEAN member countries as well as participation in the Malaysia-US Free Trade Agreement (MUSFTA) negotiations. In addition, NPCB implemented the ASEAN Cosmetic Directives (ACD) from 1st January 2008 with notification procedures for cosmetics.

- **Visits and Training of Visitors from Overseas**

Throughout the year of 2008, NPCB received a total of 24 international visitors from various countries such as Ethiopia, Indonesia, Myanmar, Nepal, Sudan and Uganda. Those who came on educational visits were given trainings according to their respective specific needs. Trainings given were in the aspects of quality control, product registration, good manufacturing practices and licensing or pharmacovigilance and surveillance.

Enforcement And Licensing

• Medicine Advertisements Board

i. Control of Advertisements

The Medicines (Advertisement and Sale) Act 1956 provides for the establishment of the Medicine Advertisements Board (MAB), which is responsible for the control of advertisements pertaining to medicines, appliances, remedies and health services. The Board has issued two guidelines to aid advertisers in designing advertisement formats for publication in various media, thus ensuring responsible advertising in promoting the sale of medicines, appliances, remedies as well as skills and services relating to medical and health services. Statistics on activities conducted under the MAB are as shown in Table 7 and Table 8.

TABLE 7
APPLICATIONS FOR ADVERTISEMENT 2008

Types of Advertisement	Applications Received	'Fast Track' Approvals	Non 'Fast Track' Approvals	Not Approved	Approval Not Required	Fees Collected (RM)
Product	1333	990	182	27	35	133,300
Medical Services	274	112	90	14	2	27,400
Total	1607	1102	272	41	37	160,700

Source: Pharmaceutical Services Division, MOH

TABLE 8
APPLICATIONS FOR ADVERTISEMENT APPROVAL FOR YEAR 2006 - 2008

Description / Year	2006	2007	2008
Number of applications	1657	1980	1607
Number of 'Non Fast Track' Approvals	1428	1619	1374
Number of 'Fast Track' Approvals'	1028 (62.04%)	1306 (65.96%)	1333 (82.95%)
Fees Collected	RM 165,700	RM 198,000	RM 160,700

Source: Pharmaceutical Services Division, MOH

ii. Advertisements Monitoring

The activities involve scrutinising all publications from the print media including newspapers from 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. The activity also depends on complaints received from the public, advertisers, companies and some non-government organisations. Warning letters are issued to advertisers and product owners when advertisements, which are not approved by the MAB, are published. Court action is taken for certain cases, which contravene the Medicines (Advertisement and Sale) Act 1956. Statistics on advertisements monitoring are as shown in Table 9.

TABLE 9
WARNING LETTERS ISSUED IN 2008

Warning Letter Were Send To	Number
Editors	2
Advertisers (Products and Services)	67
Editors & Advertisers	58
Total	127

Source: Pharmaceutical Services Division, MOH

iii. Dialogue with the Media, Advertisers and Other Related Agencies

A total of 14 dialogues were held with the media, advertisers and other related agencies as a means of continuous engagement for cooperation to ensure that only approved advertisements by the MAB are published. This approach is part of the efforts in protecting consumers from misleading advertisements.

• Licensing

In general, the total number of licences issued in 2008 for all types of poison is as shown in Table 10. There is an increase of 50 Type A licences, 32 Pharmacy premises but the number of Type B licence decreased by 120 and NaOH Permit decreased by 229 as compared to 2007. Selangor registered the highest number of Type A licences issued, followed by Federal Territory Kuala Lumpur and Penang (Refer to Table 11). Selangor issued 900 type A licences followed by Federal Territory Kuala Lumpur with 450 Type A licences and Penang with 323 type A licences in 2008. Each premise was inspected once a year except for Selangor, where inspections were conducted once in two years.

TABLE 10
TOTAL NUMBER OF LICENCES ISSUED IN 2006 - 2008

Licence and Permit	2006	2007	2008
Poison Licence Type A	2,803	3,005	3055
Poison Licence Type B	1,366	1,674	1554
Poison Licence Type D	8	9	8
Poison Licence Type E	8	16	18
NaOH Permit	1,783	2,166	1937
Total Number of Licence and Permit Issued	6,292	6,870	6572
Total Number of Pharmacy Premises	2,032	1,994	2026

Source: Pharmaceutical Services Division, MOH

TABLE 11
LICENCES AND PERMITS ISSUED ACCORDING TO STATES, 2008

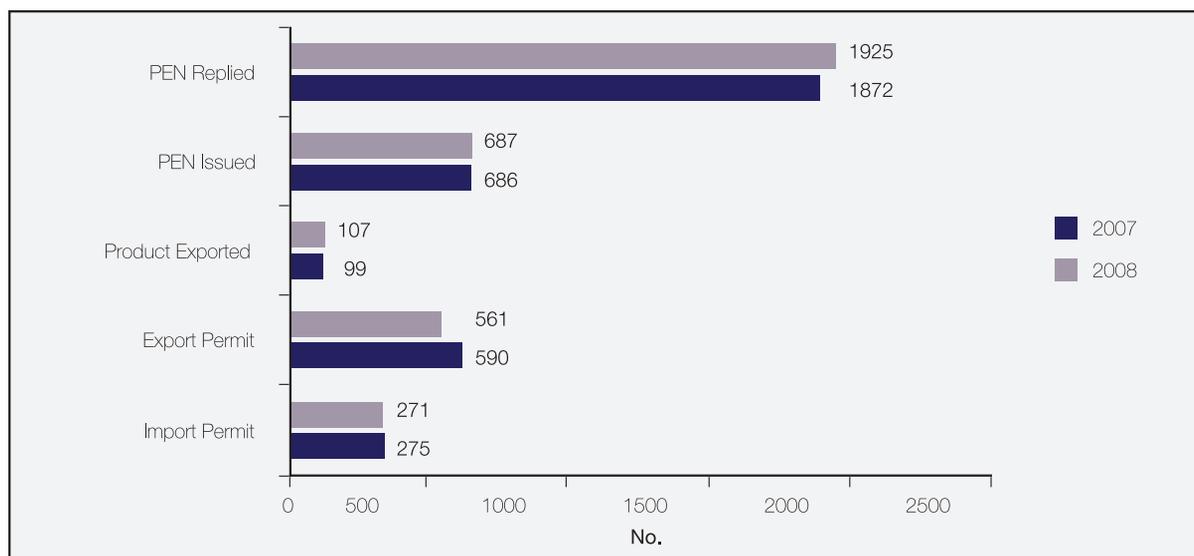
State	Type A Licence	Type B Licence	Type D Licence	Type E Licence	NaOh Permit
Perlis	12	7	1	-	5
Kedah	142	89	5	-	51
P. Pinang	323	232	-	-	197
Perak	228	91	-	4	171
Selangor	900	378	-	1	442
WP KL	450	77	-	1	30
N. Sembilan	82	45	-	-	92
Melaka	74	63	-	-	88
Johor	227	217	-	9	407
Pahang	83	66	2	-	152
Terengganu	18	21	-	-	27
Kelantan	84	19	-	-	16
Sabah	204	96	-	-	100
Sarawak	221	129	-	3	155
WP Labuan	7	24	-	-	4
Total	3,055	1,554	8	18	1,937

Source: Pharmaceutical Services Division, MOH

• **The Control of Precursors and Controlled Chemicals**

The Pharmaceutical Services Division is the competent authority for precursor control under Article 12, the UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988. Other chemicals, which are sold in the illegal market, are also controlled. All precursors and controlled chemicals are listed under the Custom Order (Prohibition of Import) and Custom Order (Prohibition of Export). Precursors and controlled chemicals are also listed in the Poisons List under the Poisons Act 1952. Pre-Export Notification (PEN) is issued to the competent authority of the importing countries to prevent diversion to illicit market. The application of import/export authorization and PEN using electronic means has improved the communication and the efficiency of the process. The statistics on the activities and comparison to the previous year are as shown in Figure 4.

FIGURE 4
APPROVALS ISSUED FOR IMPORT AND EXPORT ACTIVITIES



Source: Pharmaceutical Services Division, MOH

- **Diversion Control**

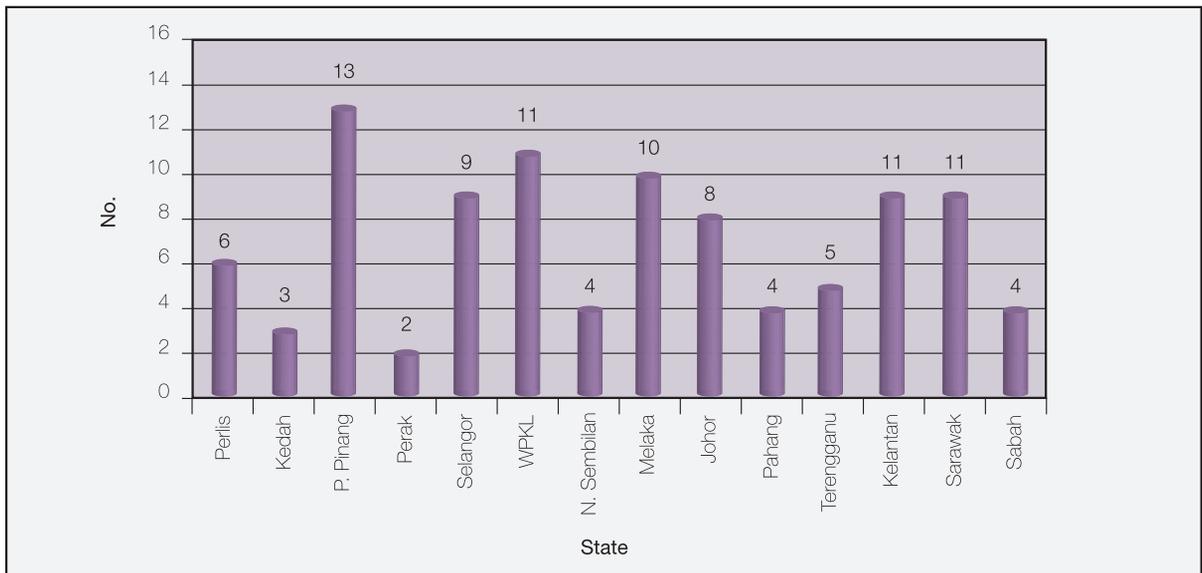
- i. Action On Psychotropic Substances And Controlled Medicines Diversion: The “A-More” Approach

In 2008, the “A-MORE Approach” was implemented where the diversion audit activities are combined together with monitoring and research elements. The monitoring of registered products such as dangerous drugs (methadone), psychotropic substances (buprenorphine, benzodiazepines, dihydrocodiene and zolpidem) and controlled medicine (dextromethorphan and pseudophedrine) has been increased. The results showed that from 101 private clinics and licensed pharmacies that were investigated, 35 or 35% of them will face legal actions for committing various offences under the law.

- ii. “Hands-On” To Overcome Prescription Drug Diversion

In February 2008, a Prescription Drug Diversion course was held. The objective of this course was to give exposure to the enforcement officers of the latest approaches to overcome problems that arise from prescriptions drugs diversions.

FIGURE 5
DIVERSION AUDITS CONDUCTED ACCORDING TO STATES IN 2008



Source: Pharmaceutical Services Division, MOH

- **Investigation**

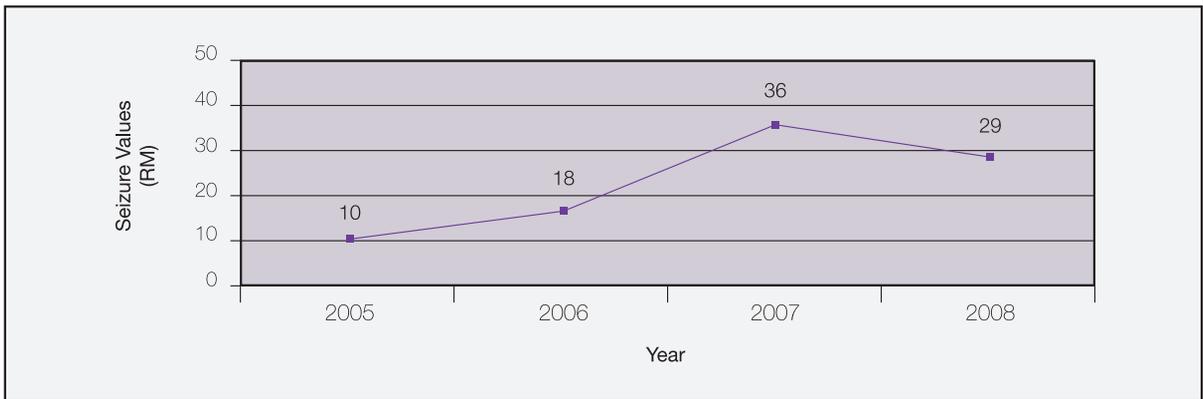
Investigation activities are carried out on all cases that contravene the legislative Acts enforced by the Pharmacy Enforcement Division. The Acts are Poisons Act 1952, Sales of Drug Act, Medicines (Advertisement and Sales) Act 1952, Pharmacy Registration Act 1951 and Dangerous Drug Act 1952. Each State Pharmacy Enforcement Branch investigates cases that contravene the Acts in their respective states. In 2008 a total of 998 cases were investigated compared to 971 cases in 2007. A number of 787 new cases were received in 2008 as compared to 638 cases in 2007.

- **Special Task Operation**

In 2008, special attention was given to manufacturing, distribution and import of pharmaceutical products adulterated with poisons, in particular sex stimulants for men and slimming agents for women. In addition, focus was also given to activities involving counterfeit pharmaceutical products, abuse and diversion of psychotropic substances by private clinics and pharmacies. Operations led by the Special Task Force Unit were carried out with the aid from Surveillance, Diversion Control and Special Task on Cosmetics Unit. Inputs for missions were also received from all state enforcement divisions, and other enforcement agencies. Raids were planned and carried out from time to time either single-handedly by each state or in collaboration with enforcement officers from other states in large-scale operations.

Inspections and raids were carried out targeting licensed and unlicensed pharmaceutical product manufacturers, importers, distributors, direct sales companies and other parties dealing with pharmaceuticals. Inspections and raids were also conducted on private clinics and pharmacy premises known to sell, supply and divert psychotropic substances to drug addicts. Sex stimulants, psychotropic substances and slimming agents register the most items confiscated from raids, apart from unregistered traditional medicines and cosmetics adulterated with poisons, which at present are still flooding the market. Figure 6, Table 12 and Table 13 illustrate the achievements in 2008.

FIGURE 6
SEIZURE VALUES (RM) FOR 2005 - 2008



Source: Pharmaceutical Services Division, MOH

TABLE 12
SEIZURES (%) ACCORDING TO PRODUCT CATEGORIES IN 2008

Product Categories	(%) Seizures
Sex Stimulants	3.4
Unregistered Traditional	46.9
Unregistered Poisons	46.2
Slimming Products	0.5
Cosmetics	2.0
Psychotropic Products	0.8
Others	0.2

Source: Pharmaceutical Services Division, MOH

TABLE 13
SEIZURE VALUES (%) ACCORDING TO STATES, 2008

State	Seizure Values (%)
CPF HQ	0.02
Johor	2.24
Kedah	1.29
Kelantan	1.18
Melaka	1.70
N.Sembilan	0.45
Pahang	25.8
Perak	0.95
Perlis	1.08
Pulau Pinang	21.76
Sabah	2.26
Sarawak	2.01
Selangor	27.91
Terengganu	0.51
WP Kuala Lumpur	10.79
WP Labuan	0.02

Source: Pharmaceutical Services Division, MOH

- Prosecution

A total of 479 cases were prosecuted in 2008 with the total fines of RM1, 296,290 imposed on the accused. The breakdown of prosecution cases completed within the period according to the Acts enforced and the respective states are as shown in Table 14. The amount collected as fines from offences under the Sales of Drugs Act 1952 was the highest with RM836,690 (64.5%) followed by offences under the Poisons Act 1952 with RM321,150 (24.8%). The high collection of fines under the Sales of Drugs Act is mainly due to the high penalty imposed under Section 12(1) of the Act with a maximum fine of RM25, 000 for individual offenders and under Section 12(2), with a maximum fine of RM50, 000 for corporate offenders. In addition, the total number of cases that were prosecuted under this Act was the highest with 215 cases as compared to 205 cases under the Poisons Act 1952.

TABLE 14
PROSECUTION (COMPLETED) BY ACTS AND STATES IN 2008

No.	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 (RM)	% in Fine Collected
1.	Perlis	2	1	2	-	5 (10)	17,200	1.3
2.	Kedah	2	-	2	-	4 (1)	10,000	0.8
3.	Pulau Pinang	7	4	18	3	32 (7)	98,300	7.6
4.	Perak	12	2	29	-	43 (9)	99,300	7.7
5.	Selangor	33	7	32	4	76 (16)	299,690	23.2
6.	WP K. Lumpur	40	2	7	2	51 (11)	73,100	5.6
7.	N. Sembilan	1	-	5	-	6 (1.5)	18,600	1.4
8.	Melaka	2	1	20	-	23 (4.5)	123,300	9.5
9.	Johor	17	5	9	2	33 (7)	80,450	6.2
10.	Pahang	11	1	12	-	24 (4.5)	44,400	3.4
11.	Terengganu	7	2	3	3	15 (3)	29,900	2.3
12.	Kelantan	11	-	15	-	26 (5)	64,800	5.0
13.	Sarawak	16	-	22	-	38 (8)	75,600	5.8
14.	Sabah	44	8	36	8	96 (20)	251,650	19.4
15.	WP Labuan	-	1	3	1	5 (1)	7,000	0.6
16.	BPF, KKM	-	-	-	2	2 (0.5)	3,000	0.2
Total		205	34	215	25	479	1,296,290	
Total Fine Collected (RM)		321,150 (24.8%)	110,950 (8.6%)	836,690 (64.5%)	27,500 (2.1 %)			

Source: Pharmaceutical Services Division, MOH

The low collection in fines for offences committed under Medicines (Advertisement and Sales) Act 1956 was due to few numbers of cases being prosecuted and the low penalty imposed by the Act, with a maximum fine of only RM3, 000. Selangor showed the highest collection in fines with a total amount of RM299, 690 (23.2%) followed by Sabah with a total collection of RM251, 650 (19.4%) for the same period. Malacca also recorded a high figure in fine collection in 2008 with the amount of RM123, 300 (9.5%). There was an increase in fine for the year 2008 compared to the year 2007 whereby the total fine collected was RM1, 028,100.

- **Pharmacy Legislation**

Legislations enforced by Pharmacy Enforcement Division, Ministry of Health Malaysia are reviewed from time to time to ensure it keep pace with the current trends and developments in the pharmaceutical industry. These include:

- New Pharmacy Bill – English version of the draft is in the process of translation into the national language;
- Amendments relating to Cosmetics Notification under the Control of Drugs and Cosmetics Regulations 1984;
- Extension of Pharmacists Registration Act 1951 to Sarawak and Labuan; and
- Amendments relating to permit to doctors in the Methadone Substitution Therapy under the Poisons (Psychotropic Substances) Regulations 1989.

Several documents have also been completed for enforcement purposes, i.e.:

- 4 Government gazettes;
- 87 Pharmacy Enforcement cards;
- 84 Authorisation letters under the Medicines (Advertisement & Sales) Act 1956;
- 87 Authorisation letters under the Poisons Act 1952;
- 84 Authorisation letters to prosecute under section 377(b) Criminal Procedure Code; and
- 82 Authorisation letters to inspect identity cards.

Other activities include listing of 22 types of poisons classified under the Poisons List Order (First Schedule), Poisons Act 1952 through Poisons Board meeting and issuance of exemption letters for unregistered products under the provision of the Control of Drugs and Cosmetics Regulations 1984. Letters issued in 2008 were:

- 700 exemption letters issued to government hospitals and 900 exemption letters issued to private hospitals to import unregistered medicines,
- 700 exemption letters to import for re-export medicines,
- 45 authorization letters for release of medicines at Customs entry point.

Pharmacy Practice And Development

- **Pharmaceutical Procurement**

The PSD, MOH provides technical support with regards to procurement and supply services of drugs and non-drugs especially through the concession company. The Pharmaceutical Procurement activities include coordinating the preparation of drug tenders by identifying the requirements of existing drugs and new drugs to be listed in the new tenders and the renewal of existing contracts. The PSD also acts as the coordinator for technical specification meetings and evaluation of tender offers as part of the procedures in preparing pharmaceutical tenders. Figure 7 shows the trends in MOH drug expenditure from 1998 to 2008, which is being monitored under these activities.

FIGURE 7
MOH DRUG EXPENDITURE 1998 - 2008



Source: Pharmaceutical Services Division, MOH

- **MOH Drug Formulary Management**

A total of 159 Pro-forma were received, and these were made up of 70 “B” Pro-forma (proposal to add or alter formulation/dosage form/dose/prescribes category/indication in the MOH Formulary) and 89 “D” Pro-forma (proposal to introduce a new drug into MOH Formulary) resulting in a total of 1,413 preparations being listed in the formulary at the end of 2008 (Table 15). Two circulars on drug Formulary amendments, were issued in 2008. The latest Formulary updates are available at www.pharmacy.gov.my. The fifth edition of the MOH Formulary book was printed at the end of 2008.

TABLE 15
STATISTICS FOR MOH DRUG FORMULARY FROM 2004 TO 2008

Year	Pro-forma Received	Number of Panel Meeting	Number of Drug Circulars	Drugs Listed		Drugs Deleted
				New strength/ Formulation	New Drugs	
2004	192	3	3	20	36	17
2005	152	3	2	19	20	106
2006	197	3	4	8	11	4
2007	186	3	3	21	40	15
2008	159	3	2	29	30	36

Source: Pharmaceutical Services Division, MOH

- **National Essential Drug List (NEDL)**

Essential medicines are those that satisfy the priority health care needs of the population. Updating of the first NEDL which was launched in 2000, started in year 2005 by the Drug List Review Panel and aided by the Technical Drug Working Committees, MOH. Feedback was also obtained from the private sector on the list of drugs for various disciplines. The second version of the NEDL, which is available on the PSD website, was accepted by the Drug List Review Panel in September 2008.

- **Drugs Requested Through Special Approval**

Drugs requiring special request from the Director-General of Health or Senior Director of the Pharmaceutical Services are Non-Formulary Drugs which consist of registered drugs and drugs not registered with the DCA; drugs in the MOH Formulary, but with unapproved DCA indication and also not registered with the DCA or unavailable in the local market.

Approval is required to ensure that patients can be treated with these drugs as the last line of treatment. In 2008, a total of 2,359 requests from MOH institutions were given special approval to buy 434 types of drugs with an approximate value of RM41,980,563.44. There is an increase of 19% in the number of requests compared to 2007, whilst the estimated value incurred increased by 5.7%. Registered non-formulary drugs accounted for about 50.7% of the total request approved. The balance which comprised of non-registered drugs (inclusive of formulary drugs), made up 49.3% of the total request (Table 16).

TABLE 16
DRUGS REQUESTED THROUGH SPECIAL APPROVAL BY MOH HOSPITALS/INSTITUTION IN 2008

Status of Request	Description	Non-Registered Formulary Drugs		Non-Registered Drugs	Total for Non-Registered Drugs	Registered Non-Formulary Drugs	Total
		Request by MOH Hospitals	Request from Companies				
Approved	Approximate Value (RM)	4,490,714.24	1,531,640	11,352,401.26	17,374,755.50	24,605,807.94	41,980,563.44
	Number of Drugs	46	11	147	204	230	434
	Number of Request	463	12	687	1,162	1,197	2,359
Rejected	Approximate Value (RM)	363,992.90	324,828	98,930.50	787,751.40	1,157,674.86	1,945,426.26
	Number of Drugs	20	3	11	34	36	70
	Number of Request	37	4	12	53	123	176

Source: Pharmaceutical Services Division, MOH

- **Malaysian Drug Code (MDC)**

The MDC is a code developed for a particular drug whereby the final code identifies the brand name of the drug. The code is developed based on the structure and principle of the Anatomical Therapeutic Chemical (ATC) Classification. It is formulated to standardise codes for medication orders for health facilities which can be used to present drug consumption data/standards for drug utilisation studies. The fourth edition of the MDC for 6,827 products is available at Pharmaceutical Services Division website, www.pharmacy.gov.my.

- **Clinical Pharmacy Services**

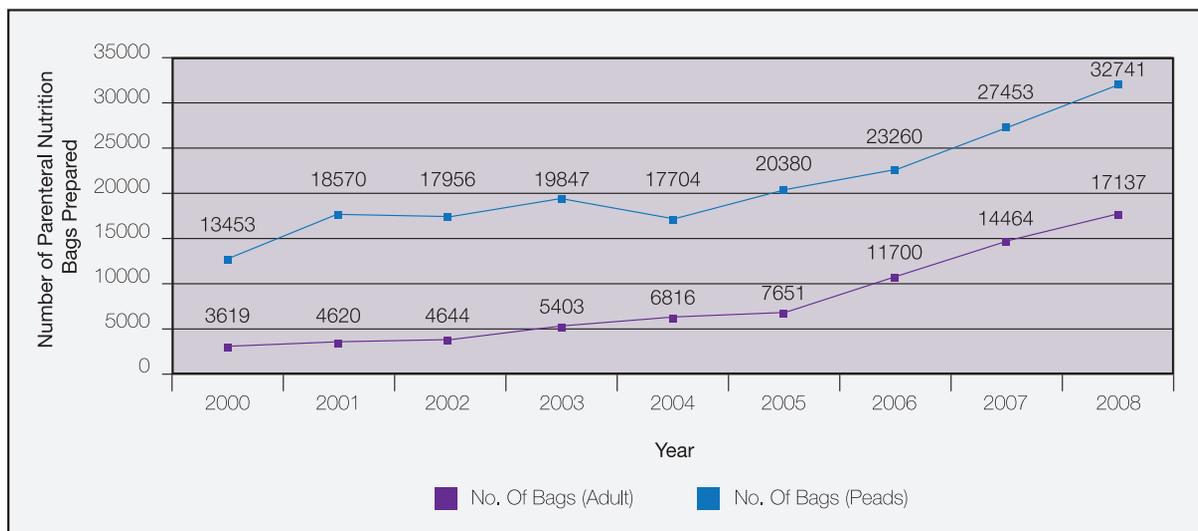
The pharmaceutical service of hospitals and health clinics under the MOH aims to provide comprehensive patient-centred pharmaceutical care. This is achieved through the provision of clinical pharmacy services such as medication counselling, Ward Pharmacy Service, Drug Information Service, Clinical Pharmacokinetic Service, Parenteral Nutrition Service, Oncology Pharmacy Service and Nuclear Pharmacy Service.

- i. Sterile Pharmacy Service (Parenteral Nutrition, Pharmacy Oncology and IV Admixture Service)

- a. *Parenteral Nutrition Service*

The main objective of parenteral nutrition service is to provide optimal nutrition support in critically ill patients to improve health conditions. For the year 2008, there were 27 MOH hospitals providing parenteral nutrition service. Statistics on this activity is shown in Figure 8.

FIGURE 8
NUMBER OF PARENTERAL NUTRITION BAGS PREPARED, 2000 - 2008



Source: Pharmaceutical Services Division, MOH

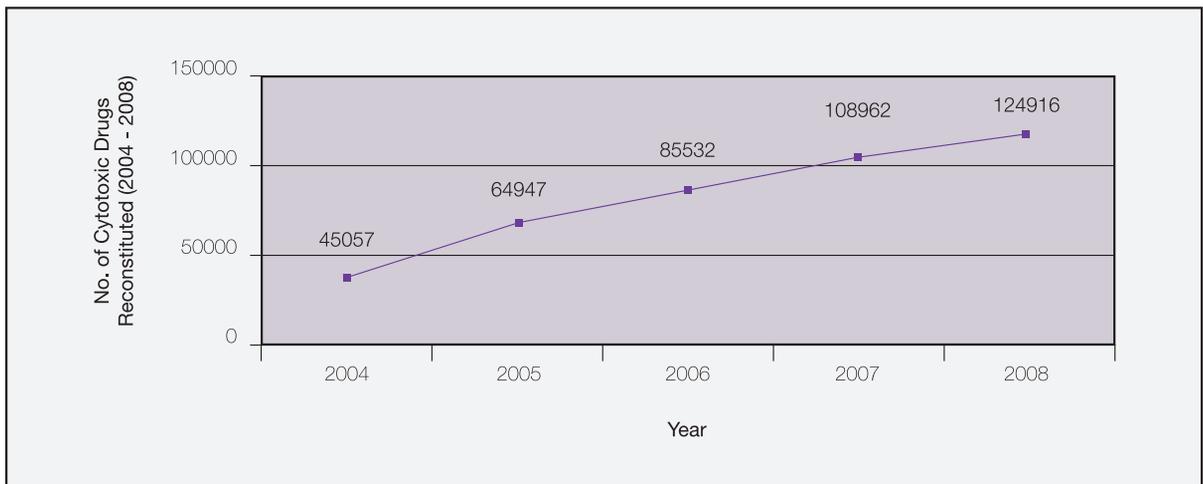
- b. *Pharmacy Oncology Service*

Oncology pharmacists play a significant role in cancer patient treatment by dispensing and reconstituting cytotoxic drugs. A total of 29 hospital pharmacies in the country dispense cytotoxic drugs to cancer patients but in 2008, only 18 hospitals provide pharmacy cytotoxic drug reconstitution services as shown below:

• Kuala Lumpur	• Pulau Pinang
• Queen Elizabeth, Kota Kinabalu	• Melaka
• Raja Permaisuri Bainun, Ipoh	• Kulim
• Sultanah Nur Zahirah, K. Terengganu	• Seri Manjung
• Tg. Ampuan Rahimah, Klang	• Selayang
• Tengku Ampuan Afzan, Kuantan	• Likas, Kota Kinabalu
• RPZ II, Kota Bharu	• Sultan Ismail, JB
• Tuanku Jaafar, Seremban	• Sultanah Fatimah, Muar
• Putrajaya	• Teluk Intan

Figure 9 illustrates the achievements on Pharmacy Oncology Service for 2008.

FIGURE 9
NUMBER OF CYTOTOXIC DRUGS RECONSTITUTED (2004-2008)



Source: Pharmaceutical Services Division, MOH

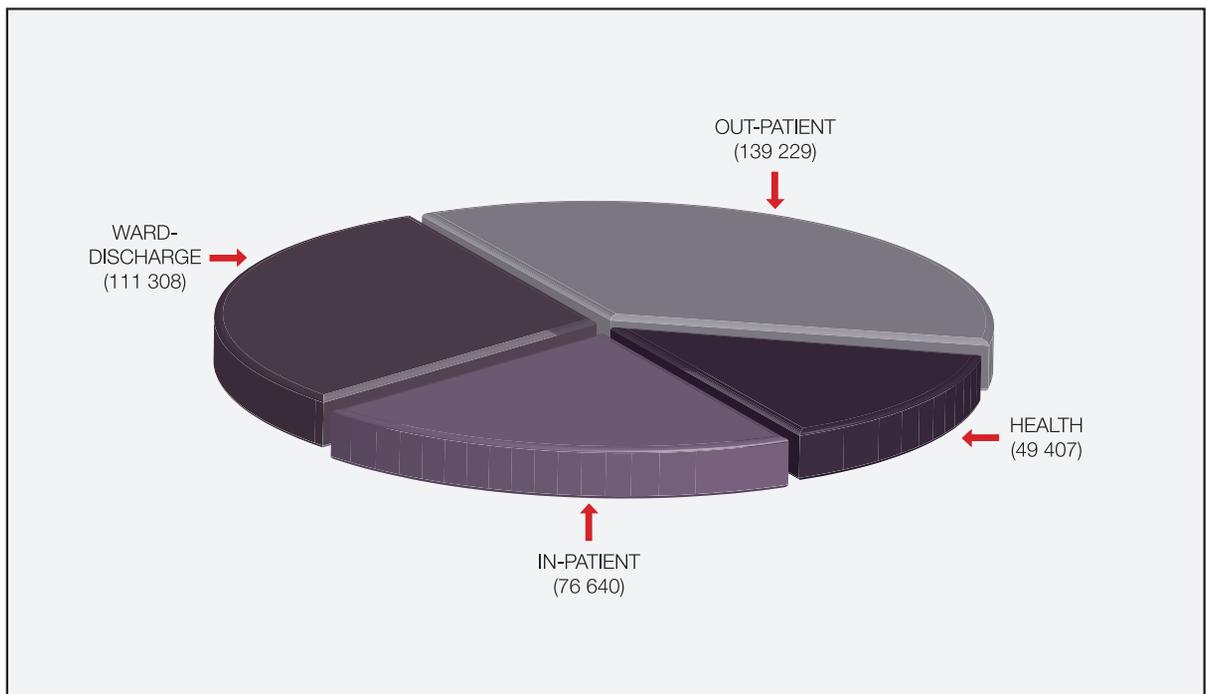
c. *IV Admixture Service*

There are 17 hospitals with clean room facilities to provide IV admixture service, which enabled the supply of 87,276 ready-to-use preparations for 27,284 cases for the year 2008. This service will be further enhanced in the future to meet the Good Preparation Practice (GPP) standard.

- **Pharmacy Ambulatory Care Service**

Medication counselling through individual, discharge and group sessions is carried out by pharmacists to help patients achieve intended health outcomes through better compliance as well as handling of adverse drug events that may arise from their medication use. A total of nearly 376,584 patients were counselled on use of their medications in 2008 as shown in Figure 10.

FIGURE 10
NUMBER OF PATIENTS COUNSELLED IN 2008



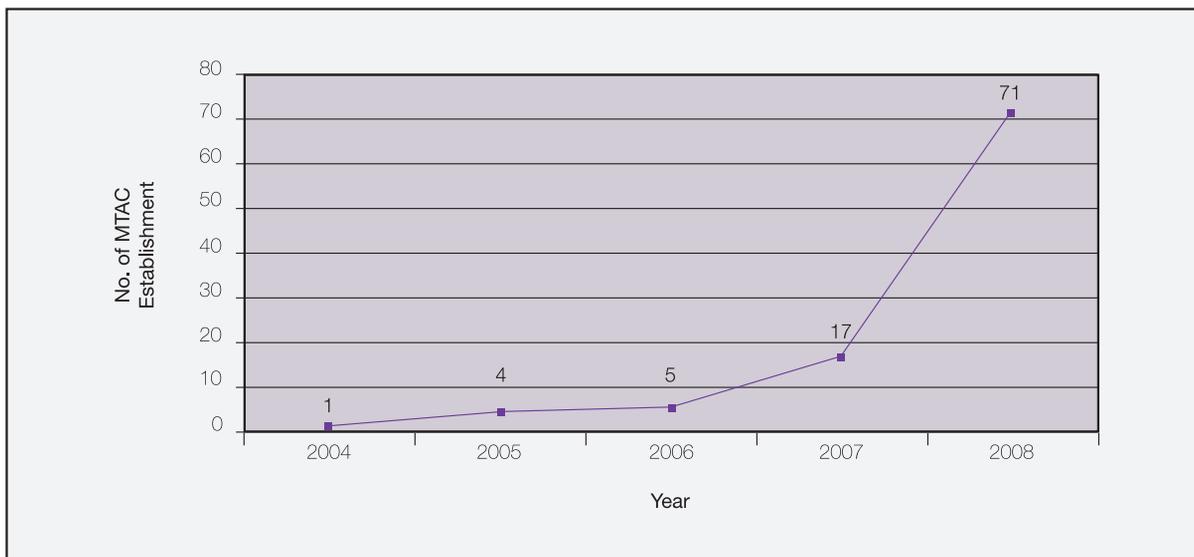
Source: Pharmaceutical Services Division, MOH

- **Medication Therapy Adherence Clinic (MTAC)**

The main targets of MTAC are chronic diseases such as Diabetes Mellitus, HIV/AIDS, Warfarin and Asthma for 14 major hospitals. From 2004 to 2008, a total of 98 MTAC was established with 71 MTAC established in 2008 in alone, an increase of approximately 417% in MTAC service compared to 2007 (17 MTAC). This is an excellent achievement towards providing better quality pharmaceutical services to patients. There are a few types of MTACs that were established other than the 4 MTACs mentioned above, which are Renal Transplant, Liver Transplant, Neurology, Rheumatology and Hepatitis C, MTACs.

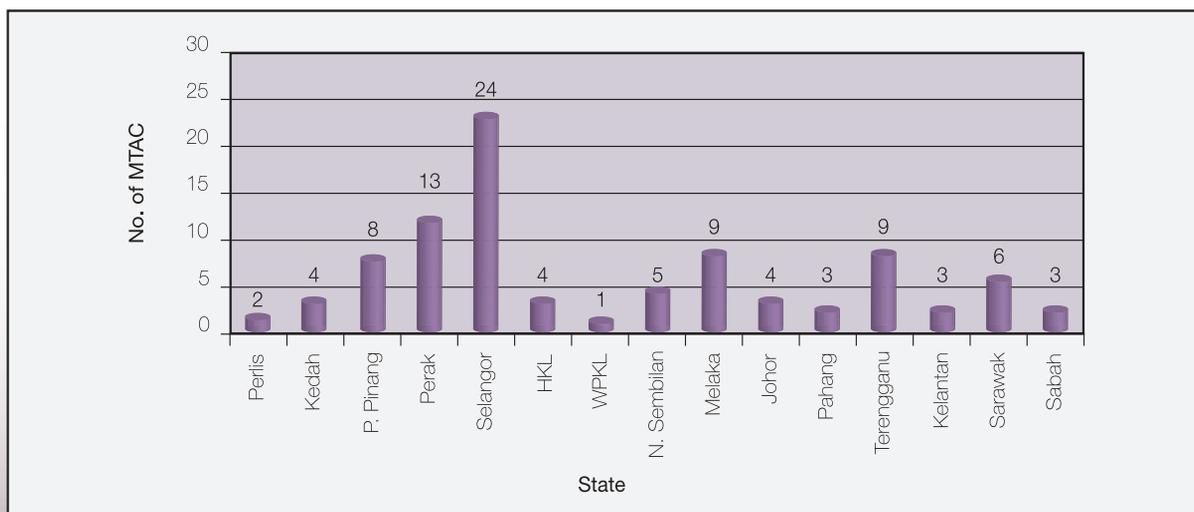
It is shown that 24.4% of the total number of MTACs is from Selangor. This is due to the fact that there are two hospitals in Selangor (Hospital Tengku Ampuan Rahimah and Hospital Selayang) that have established 5 different MTACs. Perlis and Federal Territory Putrajaya have only one hospital each and therefore only 1 MTAC for each hospital. From the total number of 188,636 counselling for outpatients in hospitals and health clinics, 25% (46,557) were done with MTAC service. Statistics on these activities are as shown in Figure 11, 12 and 13.

FIGURE 11
THE ESTABLISHMENT OF MTAC IN MOH HOSPITALS



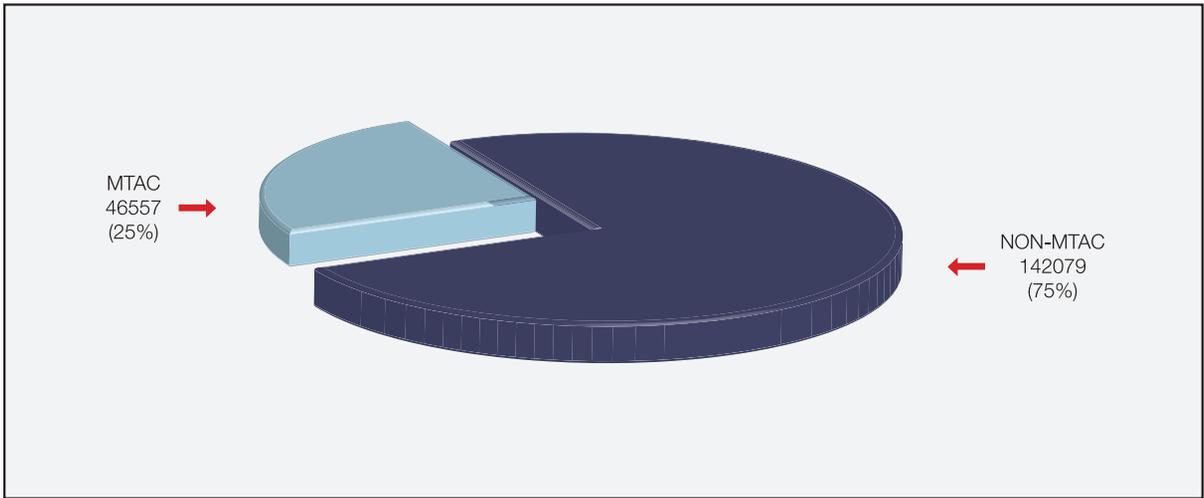
Source: Pharmaceutical Services Division, MOH

FIGURE 12
NUMBER OF MTAC BY STATES



Source: Pharmaceutical Services Division, MOH

FIGURE 13
PERCENTAGE OF COUNSELLING DONE IN MTAC COMPARED TO NON-MTAC

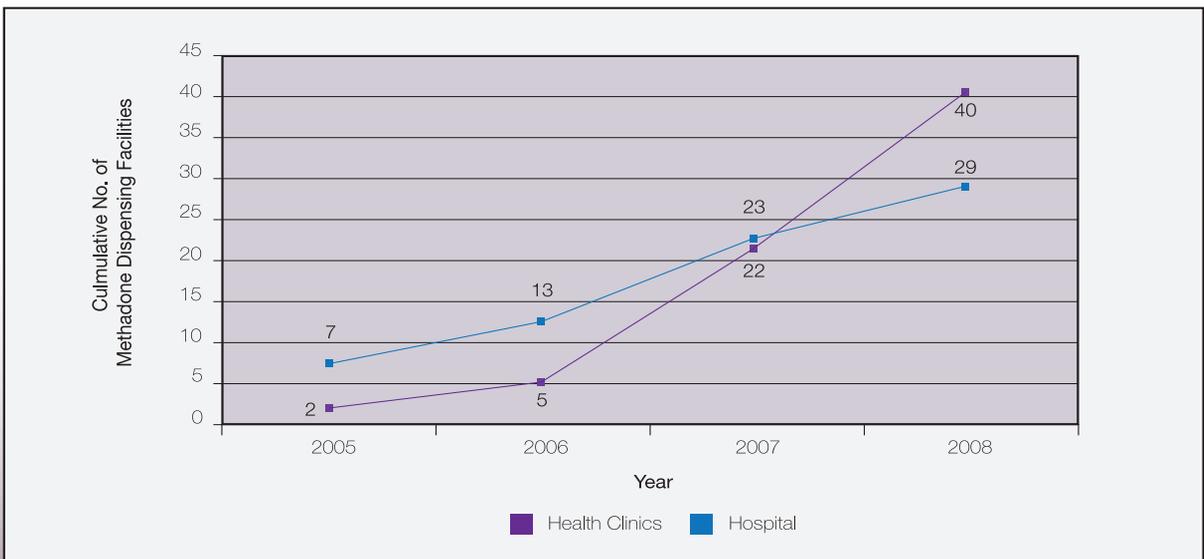


Source: Pharmaceutical Services Division, MOH

- Methadone Dispensing and Counselling Programme

As at end of 2008, a total of 69 pharmacy facilities, which consist of 29 hospitals and 40 health clinics in the MOH have successfully implemented Methadone Dispensing and Counselling activities (refer to Figure 14). The methadone dispensing activity was also done in *Pusat Khidmat, Agensi Anti Dadah Kebangsaan (AADK) Wilayah Persekutuan, Pusat Khidmat AADK Tasek Gelugor* and *Pusat Khidmat AADK Johor Bahru*, as well as Pengkalan Chepa Prison, Kota Bharu. MOH pharmacists do methadone-dispensing activity on rotation basis from selected hospitals and health clinics.

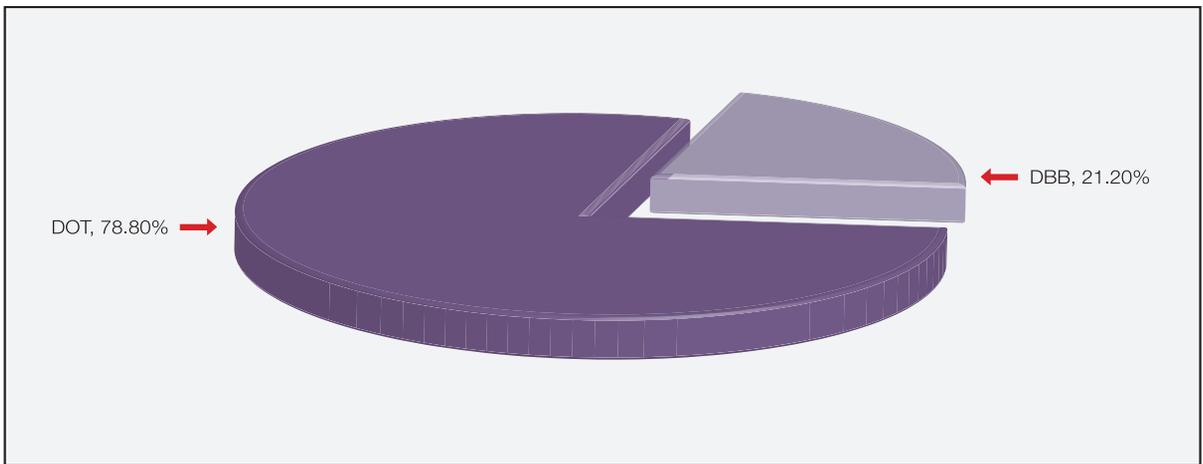
FIGURE 14
CUMULATIVE NUMBER OF METHADONE DISPENSING FACILITIES IN MOH PHARMACY



Source: Pharmaceutical Services Division, MOH

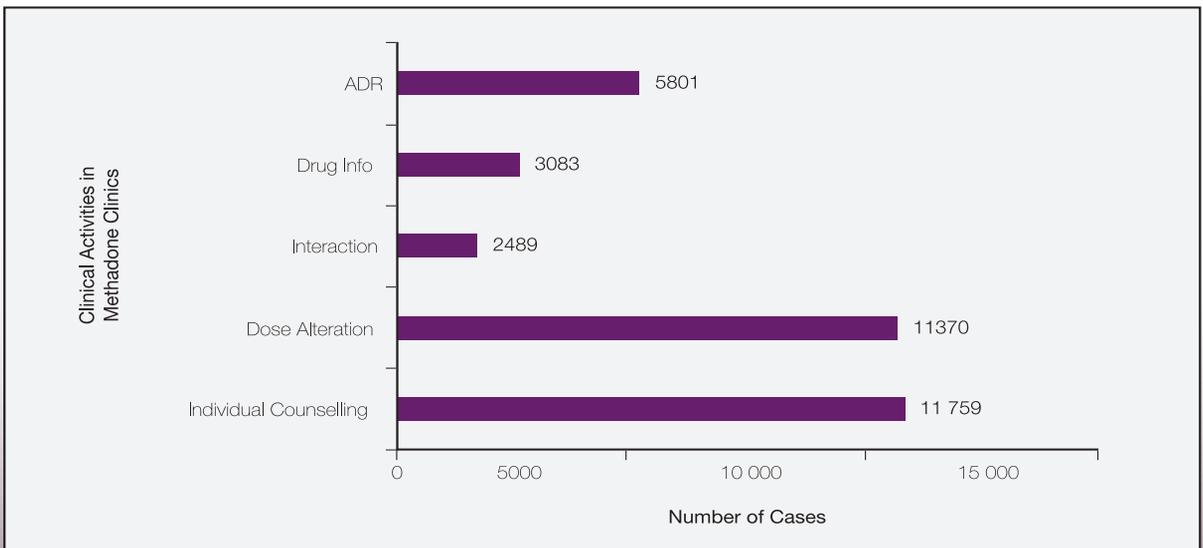
The methadone dispensing activity is carried out daily including on weekends and public holidays by pharmacists. All patients are given medication counselling prior to starting the methadone maintenance therapy, either individually or by group counselling. The activity involved a total number of 5,024 patients that have actively participated in the programme from the total of 7065 patients registered. About 78.8% (3,959) patients were taking methadone on Direct Observe Therapy (DOT) and 21.2% (1,065) of the patients were allowed to take methadone as take-away doses (DBB) (Figure 15). Apart from dispensing, pharmacists are also required to perform clinical pharmacy tasks in the Methadone Clinic. The involvement of pharmacists in clinical pharmacy activities is as shown in Figure 16.

FIGURE 15
PERCENTAGE OF PATIENTS TAKING METHADONE BY DIRECT OBSERVE THERAPY (DOT)
AND TAKE AWAY DOSE (DBB)



Source: Pharmaceutical Services Division, MOH

FIGURE 16
NUMBER OF CASES IN CLINICAL PHARMACY ACTIVITIES DONE BY PHARMACIST



Source: Pharmaceutical Services Division, MOH

- **Quality Improvement Activities**

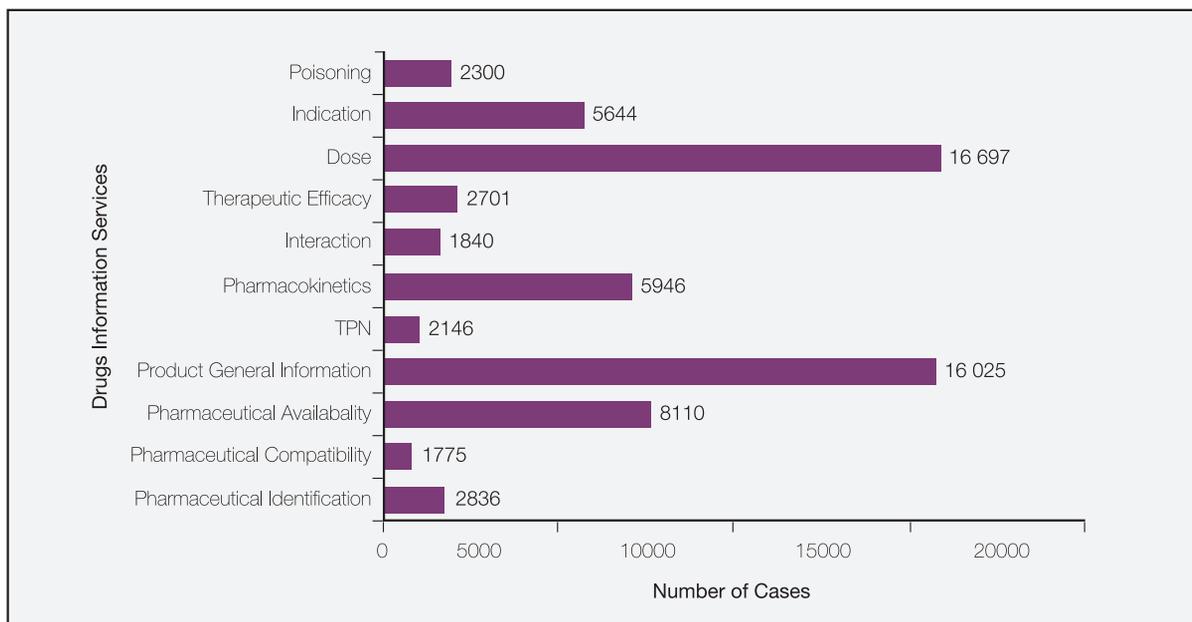
- i. MTAC Protocols
Three types of protocols, Diabetes-MTAC, Warfarin-MTAC and HIV/AIDS-MTAC have been prepared with contributions from the members of the Specialized Clinical Pharmacy Committee (Diabetes, Cardiology and HIV/AIDS) to be used in the MTAC services in all MOH hospitals.
- ii. Additional documentation for MTAC and Methadone Dispensing
 1. New forms (PF 6.2, PF 6.3 and PF 6.5) were introduced for data collection in MTAC services and Methadone Dispensing.
 2. Introducing the modified Clinical Pharmacy Form CP3 and CP4 and also SPUB form in Methadone Dispensing Activity.
- iii. The preparation of the Standard Procedure for Methadone Dispensing to be used in Methadone Maintenance Therapy Programme in prison.
- iv. The preparation of the Methadone Administration Record Form, Monthly Report of Methadone Dispensing Form and SOP of Methadone Dispensing in private retail pharmacies that will be used in private retail pharmacies when the service starts in 2009 at selected premises.
- v. Identified new training centres for MTAC training attachments for Warfarin and Diabetes as to create more opportunities for pharmacists to be trained in this area. The new training centres are Putrajaya and Seberang Jaya Health Clinic for Diabetes MTAC and Hospital Serdang for Warfarin-MTAC.

- **Ward Pharmacy Service**

Clinical pharmacists are now based in medical wards as well as the intensive care units of hospitals. 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. They provide drug information and consultation on medication-related issues as well as conduct medication therapy monitoring. Statistics on ward pharmacy services are as shown in Figure 17 and Table 17. The following hospitals have been established as training centres for pharmacotherapy in 2008 to train pharmacists in specialised fields:

- i. Hospital Melaka – General Pharmacotherapy and Respiratory Pharmacy
- ii. Hospital Selayang – General Critical Care and Nephrology Pharmacy
- iii. Hospital Pulau Pinang – Infectious Disease (HIV/AIDS) and Endocrine (Diabetes mellitus) Pharmacy
- iv. Hospital Putrajaya – Endocrine (Diabetes mellitus) Pharmacy

FIGURE 17
 TYPES OF DRUG INFORMATION SERVICES IN INPATIENT AND WARD PHARMACY (2008)



Source: Pharmaceutical Services Division, MOH

TABLE 17
 INPATIENT COUNSELLING SERVICE FOR VARIOUS DISCIPLINES IN HOSPITALS (2008)

Inpatient	Individual		Group	
	Bedside	Discharge	Total Sessions	Total Patients
Adult	69,320	99,753	416	3,325
Paediatric	7,320	11,555	18	50

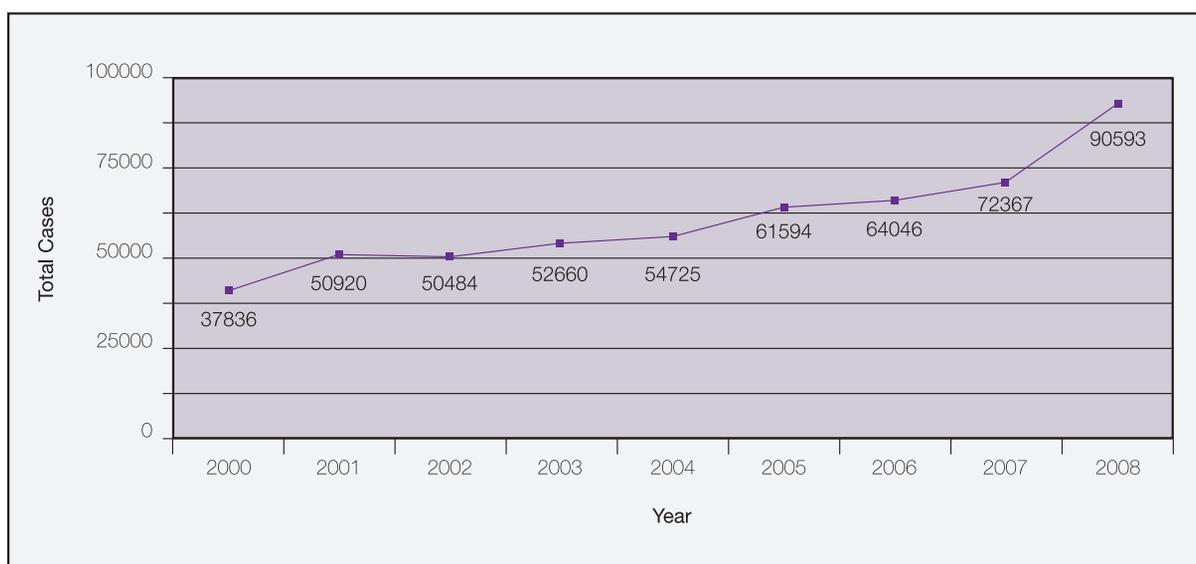
Source: Pharmaceutical Services Division, MOH

- **Clinical Pharmacokinetic Service (CPS)**

The CPS is essential towards ensuring the safe and effective use of medications particularly those with narrow therapeutic windows and promoting positive outcomes in therapy. This service has enabled many pharmacists to be involved in the clinical aspect of patient care and has proven to be a useful tool in enhancing the pharmaceutical care process. Through CPS, pharmacists provide consultation on appropriate dosing of 14 types of drugs, as shown below and the statistics are shown in Figure 18, 19 and 20.

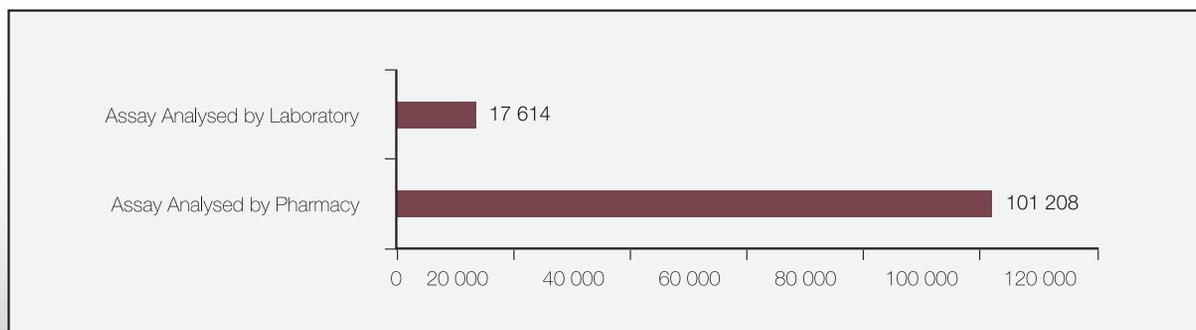
• Gentamicin	• Netilmicin
• Amikacin	• Vancomycin
• Digoxin	• Phenytoin
• Carbamazepine	• Valproic acid
• Theophylline	• Ciclosporin
• Lithium	• Methotrexate
• Phenobarbitone	• Tacrolimus

FIGURE 18
THE NUMBER OF CPS CASES RECEIVED, (2000 - 2008)



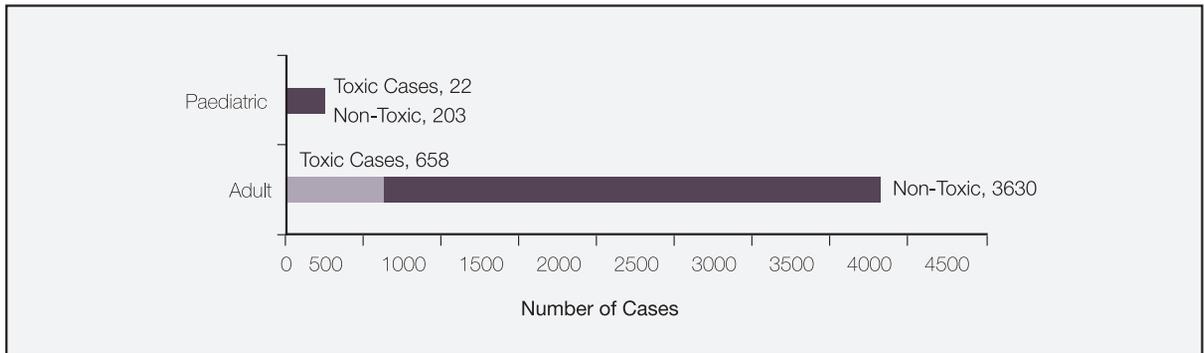
Source: Pharmaceutical Services Division, MOH

FIGURE 19
NUMBER OF ANALYSED CLINICAL PHARMACOKINETIC TESTS IN 2008



Source: Pharmaceutical Services Division, MOH

FIGURE 20
NUMBER OF PARACETAMOL POISONING CASES – ADULT AND PAEDIATRIC (2008)



Source: Pharmaceutical Services Division, MOH

- **Nuclear Pharmacy**

The Nuclear Pharmacy Service aims to improve and promote the quality of public health through 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. Twelve Nuclear Pharmacists have been selected to provide nuclear pharmacy service and are placed in hospitals designated to give nuclear pharmacy service. Six are placed in Hospital Putrajaya, three in Hospital Kuala Lumpur, two in Hospital Pulau Pinang and one in Hospital Sultanah Aminah, Johor Bharu.

- **Drug Information Service (DIS)**

The Hospital Drug Information Service is equipped with sufficient resources to respond to queries by healthcare professionals and patients with the objective to improve the quality of patient care. In 2008, a total of 43,861 enquiries were received by hospital pharmacies. The Drug Information Units also facilitated the reporting of 2,844 Adverse Drugs Reactions (ADR) cases to the Malaysian Adverse Drug Reaction Advisory Committee (MADRAC).

- **Health Pharmacy Practice**

The scope for health pharmacy services include basic pharmacy services, extended pharmacy services and expanded pharmacy services. A basic pharmacy service involve activities such as prescriptions screening, drug dispensing, patient counselling, procurement, health promotion, health education and drug information. Extended and Expanded Pharmacy Services include MTAC, Methadone Maintenance Therapy Program (MMT) and Home Medication Review (HMR). Sixteen health clinics were involved in after-office-hours' service (Extended Hours Pharmacy Service-EHPS) as shown in Table 18.

TABLE 18
HEALTH CLINICS INVOLVED IN EHPS

KK Alor Setar, Kedah	KK Kuantan, Pahang
KK Greentown, Perak	JPL Mahmoodiah, Johor Bahru
KK Anika, Selangor	KK Bandar Maharani, Johor
KK Selayang Baru, Selangor	KK Kuala Terengganu
KK Seremban, Negeri Sembilan	KKB Kota Bharu, Kelantan
KK Peringgit, Melaka	KK Putrajaya
KK Jalan Masjid, Sarawak	KK Kangar, Perlis
KK Luyang, Sabah	KK Mentakab, Pahang

Source: Pharmaceutical Services Division, MOH

- **Integrated Drug Dispensing System (IDDS)**

The IDDS was first initiated on 1st June 2003 after the implementation of a 6-month pilot project from December 2001 to May 2002. The aim of IDDS is to provide option and facilitate patients, particularly follow-up cases, to collect their medication from health facilities nearest to their homes. There is an increase in the total number of IDDS prescriptions by 3.1% for the year 2008 compared to 2007 (Table 19).

- **Medication Safety**

The Medication Error Reporting System (MERS) involves voluntary reporting by healthcare providers to enhance patients' safety. Throughout 2008, a total number of 1,550 medication error reports were received. Various trainings and workshops on Medication Safety have also been conducted. The Pre-Conference Workshop on Medication Safety, Medication Safety Inter-professional Learning Workshop and Drugs and Vaccines Adverse Events Workshop were held. Several talks on medication safety were given and these include talks held at Hospital Ampang and during the Johor 1st Mini Scientific Meeting in Kluang.

TABLE 19
IDDS TRANSACTION 2005 - 2008

	2005			2006			2007			2008		
	Intra State	Inter State	Total									
Total No. of Prescription	28,705	11,474	40,179	37,670	14,092	51,762	44,502	15,752	60,245	48,113	14,006	62,119
Total No. of Category A Items	25,868	12,868	38,736	30,936	12,419	43,355	42,047	13,618	55,665	55,830	16,107	71,937
Total No. of Category B & C Items	50,845	23,561	74,406	56,590	29,654	95,117	89,172	36,232	125,404	127,573	36,367	163,940
Total Cost for Category A Items (RM)	1,278,718	556,931	1,835,649	1,052,304.	607,772	1,660,076	2,252,495	1,017,571	3,270,066	3,439,627	1,084,640	4,524,266
Total Cost for Category B & C Items (RM)	427,909	203,443	631,352	517,092	277,249	794,341	855,308	407,111	1,262,419	1,082,524	370,357	1,452,881
Total Items Cost (RM)	1,706,627	760,374	2,467,001	1,569,396	885,022	2,454,418	3,107,803	1,424,682	4,532,485	4,523,797	1,386,782	5,910,579

Source: Pharmaceutical Services Division, MOH

- Medicine Price

- i. Medicines Price Monitoring Survey

In 2008, medicines price monitoring survey had been conducted whereby two sets of data collection on medicines price were collected in a number of premises as shown in Table 20.

TABLE 20
TYPES OF PREMISES INVOLVED IN THE PRICE MONITORING SURVEY, 2008

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

Data collections were done every 6 months in June and December and the list of medicines is reviewed from time to time. The results of data analysis for 2006 had been published in the 2nd edition of My.MedPrice Bulletin. The bulletin can be viewed and downloaded at www.pharmacy.gov.my.

- ii. Medicines Price Database

At present, data collection and compilation of medicines prices cover:-

- 1) Public Wholesale Price List
- 2) Private Wholesale Price List and Private Wholesale OTC Price List
- 3) Private Retail Price List and Private Recommended Retail Price List

Other types of price lists that are still under compilation, such as:

- 1) Manufacturer Sales Price (Ex-Manufacturer Price) - Cooperation with the manufacturing company.
- 2) General Practitioner Retail Price - The Pharmaceutical Services Division will liaise with the Inland Revenue Board in order to obtain itemized billing of medicines from more than 400 private clinics.

Several price lists had been compiled for the use of MOH:

- 1) Medicines price list for the use of Fee Act (Full Paying Patient), First and Second Edition had been prepared.
- 2) Medicines price list for the use of Fee Act (Health).
- 3) Price list of medicines listed in the MOH Drug Formulary, to be distributed to MOH facilities especially for the use of pharmacists who are in charge of the pharmacy store.

- iii. Price Variation of Newly Listed Medicines in Ministry of Health Drug Formulary 2008
The compilation of surveys conducted in 2006, 2007 and 2008 had been distributed to all MOH hospitals. To ensure the effectiveness of the monitoring activities, pharmaceutical companies that have successfully listed their drugs in the MOH Drug Formulary were requested to quote their prices to MOH facilities where the price must not exceed the quoted price for the period of at least one year. Any further price changes after that period will still be monitored.

- **National Medicines Policy**

The Malaysian National Medicines Policy (MNMP) provides the framework of strategies and commitments of the government and all relevant stakeholders in both public and private sectors towards achieving common medium and long term goals for the national pharmaceutical sector. It comprises four main components namely Quality, Safety and Efficacy of Medicines, Availability of Medicines, Affordability of Medicines and Quality Use of Medicines. Four other supporting components are Human Resource Development, Research and Development, Technical Cooperation and Management of the National Medicines Policy.

In 2008, the monitoring of MNMP indicators was implemented on 29 backgrounds, 39 structural and 18 process indicators. Background indicators are intended to provide data on demography, economy, health and pharmaceutical status while structural indicators provide qualitative information to assess the pharmaceutical system's capacity to achieve the policy objectives. Process indicators impart quantitative information on the processes by which the policy is implemented, and outcome indicators measure the results achieved and the changes that can be attributed to the implementation of the national medicines policy.

- **Promotion on Quality Use of Medicines for Consumer Protection and Education**

The Comprehensive National Project On Quality Use of Medicine - Consumers (QUM-C) is a three-year project (2006 – 2008) jointly organised by the Ministry of Health, Malaysia (MOH) and Federation of Malaysian Consumers Associations (FOMCA). Project activities were implemented in 2008 so that the impact of the project will extend to each and every public stratum. The project consisted of the:

- i. ***Know Your Medicine Campaign (KYM)***

Under the KYM campaign, trained Master Trainers will then train and lead pharmacists of every state to educate the general public in a structured manner to promote the quality use of medicine. State level activities conducted include campaign-launching, seminar, exhibition and radio talk and these activities are conducted simultaneously with the ongoing Consumer Protection and Education activities.

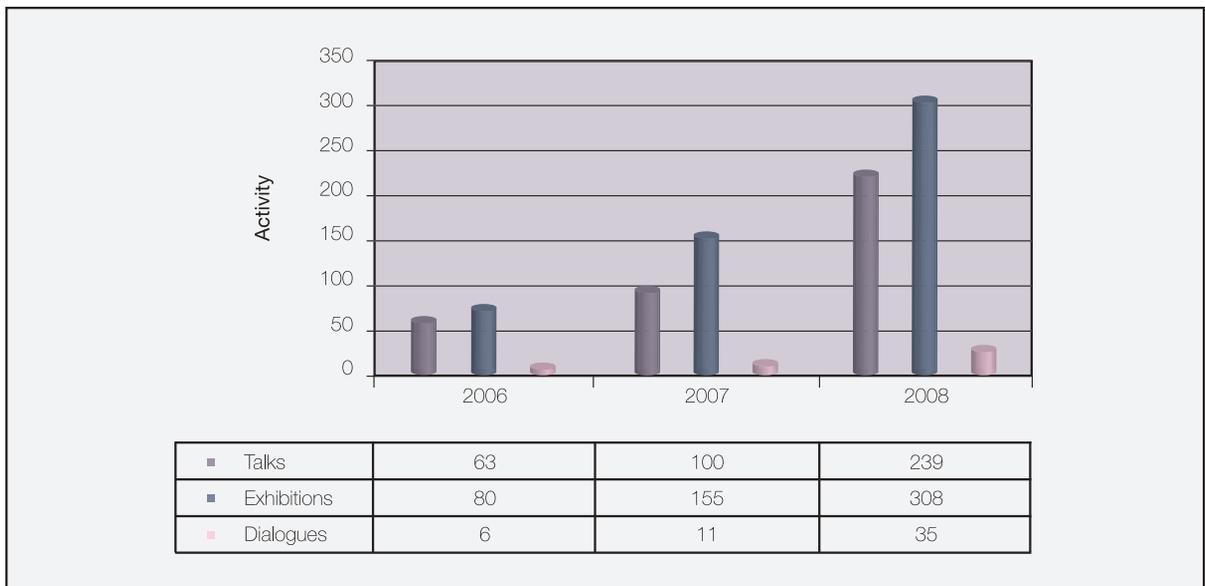
Other promotional efforts included dissemination of information on KYM campaign through distribution of campaign flyers to pharmacists, distribution of campaign theme song "*Kenali Ubat Anda*" and printing campaign information on plastic bags used to carry medicines.. Efforts were made also to incorporate a pharmacy module in the Young Doctor Program, to produce an interactive compact disc and promotional video trailers for electronic media and writing health articles for the print media.

ii. Consumer Protection

Consumer awareness and education programmes were organised to educate consumers on the safety aspects in the use of medicines and cosmetic products. Consumers in both the rural and urban areas were targeted in promoting the rational use of medicine and cosmetics.

The mass media was used to disseminate information to the target groups to enhance their knowledge and awareness. Educational talks were given to the public and also to community pharmacists regarding the usage of hologram and decoder to detect the authenticity of medicines. A total of 1700 decoders were distributed to all retail pharmacies for public use. Activities carried out in 2008 were talks (308), exhibitions (239) and dialogues (35) as shown in Figure 21. A total of 582 activities were conducted in 2008 as compared to 266 activities in 2007 and 149 activities in the year 2006.

FIGURE 21
NUMBER OF TALKS, EXHIBITIONS AND DIALOGUES 2006 - 2008



Source: Pharmaceutical Services Division, MOH

iii. National Survey on the Use of Medications by Malaysian Consumers

The Main QUM-C Committee also coordinated a survey to determine public awareness and knowledge on quality use of medicines, which is entitled “A National Survey on the Use of Medications by Malaysian Consumers”. The objective of the survey was to evaluate the level of awareness and knowledge on quality use of medicines by consumers. This survey is jointly conducted with Universiti Sains Malaysia, Penang.

Quality and Standards

- **Quality and Standard Enhancement Efforts**

A survey on client management by various divisions in the MOH was completed while another study commenced at the end of 2008. A QCC group for the Pharmaceutical Services Division (PSD) was formed. Five tiers of Key Performance Indicators (KPI) for the PSD were identified and established for monitoring of performance.

- **Providing Quality Services to Patients Through the Intervention of the QAP-3 Indicators Study**

The main objective of this study is to improve patients' safety through improvement of the pre-dispensing processes. RM15,000.00 was allocated by the Institute of Health System Research (IHSR) to fund the study activities such as procurement of appliances to implement the 5S system in three selected hospitals namely Hospital Raja Perempuan Zainab II, Hospital Seberang Jaya, and Hospital Tuanku Ampuan Najihah. The study started in November 2008 and is scheduled to complete in July 2009. (QAP 3 - Proportion of prescriptions wrongly filled and detected before dispensing to the total number of prescriptions counterchecked at outpatient pharmacy).

- **Inspection of Facilities for The Production of Sterile Cytotoxic Drug Reconstitution (CDR) and Parenteral Nutrition (PN) products**

In 2008, one pre-qualification inspection, six routine inspections and one preliminary inspection of CDR and PN facilities were conducted to ensure that the facilities comply with the PIC/S Good Preparation Practices (GPP).

- **Clients Complaints**

Complaints by clients were divided into public complaints and product complaints. The process has reduced tremendously the number of complaints on pharmacy services from an average of 150 complaints per year to only 11 complaints in 2008. All 11 complaints were resolved successfully.

- **Pharmacy Research and Development**

There are 4 major multi-centres and on-going projects for the year 2008, which involved hospitals, health clinics, NPCB and enforcement activities. These projects are conducted in collaboration with lecturers from the School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang.

- i. 5th National Pharmacy Research and Development (NPRD) Conference

The 5th NPRD conference was held at the Auditorium of Hospital Putrajaya from 28 to 30 July 2008. The main objective of the biannual conference is to provide opportunities for pharmacists to present their research and share their experiences.

ii. Drug Utilisation Study

The rationale of this workshop is to provide early exposure and to prepare all participants with regards to the National Drug Utilisation Study. Two Drug Utilisation Study workshops were successfully held in Penang on 12 to 14 of March 2008 and 10 to 12 December 2008 in Johor Bahru.

iii. Training collaboration with other institutions

Collaboration activities with other institutions such as CRC and the NPCB include jointly organising the Evidence-Based Medicine Workshop with NPCB, conducting a workshop on Good Clinical Practice Workshop with CRC Johor, Penang and Sabah, as well as conducting Data Analysis for Project: A National Survey on the Use of Medications by Malaysian Consumer with the National Medicines Policy Unit.

• **National Medicines Use Survey (NMUS) Project**

The NMUS is a research project jointly sponsored by the PSD and CRC which was initiated in 2005. In September 2006, the PSD undertook the role of primary sponsor for the NMUS while CRC remained as an important collaborating agency providing research and statistical support. NMUS will continue to be an on-going activity to track the utilisation of medicines in the country that is expected to change over time.

The project aims to describe and track the types and amount of medicines supplied in Malaysia which provides useful aggregate measures for the use and expenditure on medicines in the country, to describe and track the types and amount of medicines prescribed and/or dispensed in Malaysia and to stimulate and facilitate research on use of medicines.

In order to capture data at the various levels of the medicines supply and distribution system in the country (which include all government and private healthcare facilities), NMUS has to conduct several surveys systematically. Data are collected for these surveys using the methods such as downloading from existing databases, for example, hospital's pharmaceutical procurement databases, the use of primary data collection for prescriptions/ dispensing surveys and utilising Electronic Data Capture (EDC) tool which is introduced for certain information sources such as Local Purchase System from Ministry of Health facilities and purchasing of medicines by General Health Practitioners.

Two reports on Malaysian Statistics on Medicine (MSOM) have been published and provide useful reference for preliminary data on medicines use in the country and can be used as a basis for further actions if necessary and as a tool to facilitate better decision-making in the allocation of healthcare resources for the Malaysian population. The data generated can also be used to do a comparison with developed countries on the drug usage pattern. This effort is important for monitoring the quality of drug usage towards achieving a more cost effective treatment. This is in accordance with fulfilling one of the objectives of the National Medicines Policy of Malaysia. Table 21 illustrates the achievements of NMUS activities for 2008.

TABLE 21
ACHIEVEMENTS OF NMUS IN 2008

No.	Activity	Output	Achievement
1.	Implementation of NMUS project with collaboration of Clinical Research Centre (CRC), HKL	Publication of the "Malaysian Statistics on Medicine (MSOM)"	- MSOM 2005: October 2007 - MSOM 2006: Will be published in mid 2009
2.	Continuous funding for NMUS project	Funding Application	NMUS Fund 2008: RM 294,800.00
3.	NMUS Website: www.crc.gov.my/nmus	Uploading information into NMUS website (PDF format)	Continuous update of information
4.	a) NMUS Governance Board / Steering Committee Meeting b) NMUS Expert Panel Meeting	No. Of meetings: Once a year	a) Once b) Twice
5.	MSOM Workshop: Quality Use of Medicine (during CREATE 2008)	Quality Use of Medicine Project	10 research projects on the quality use of medicine have been identified to commence in January 2009

Source: Pharmaceutical Services Division, MOH

WAY FORWARD

Pharmacy Enforcement Division

The Pharmacy Enforcement Division has encountered many challenges in law enforcement. The Division has formulated plans to enhance enforcement activities. A forensic laboratory was established at the headquarters and started its operation in 2008. This laboratory carried out basic analysis of samples and thus avoiding referrals to the Chemistry Department or NPCB. The laboratory may cater to the needs of other regions such as to facilitate any basic analysis for each Pharmacy Enforcement Branch.

An application has been made to reward whistleblowers as a means to encourage the public to come forward to provide information on any suspected offences committed under the related acts. With the increased number of officers in pharmacy enforcement activities, the working hours at the main custom entry points in Johor, Penang, Selangor, Kelantan, Kedah and Perlis can be extended to 24 hours daily. The extension is important to ensure that importation of substances is in accordance with the law as enforced by the Division.

Unlawful advertisements and sales of medicines through the Internet are increasing. The Investigation Unit requires officers to specifically investigate the offenders in the administration of the due process of the law. The first group of 22 officers that have completed the Masters in Pharmacy Enforcement Law at the end of 2008 will play an important role in pharmacy enforcement activities especially in the prosecution of cases brought to trial. The continuation of this programme is imperative to increase the number of officers who are more knowledgeable in legal matters.

Pharmacy Regulatory Division

To further improve the services rendered by NPCB, the strategies that have been identified include developing human resource and maintaining staff with expertise, promoting IT culture within the organisation, increasing emphasis on training programmes, establishing an overall development plan for Quality Management System (QMS) and harnessing cooperation with other regulatory agencies. To improve the quality of services provided to the public, NPCB will ensure staff members acquire relevant knowledge and become experts in their areas of work. In order to retain experts within the organisation when staff members receive promotions, the NPCB needs to create several senior positions for the promoted staff members to assume such positions..

Efforts are being taken to promote the IT culture within the organisation by increasing exposure of staff to IT and improving the current online registration system by upgrading QUEST2 to QUEST3. There is additional emphasis on training programmes for staff to ensure their respective training needs are met. Efforts will be undertaken to increase the use of consultants for local training courses and increase overseas attachments for staff.

In terms of quality control, NPCB, which has been successful in attaining the MS ISO 9001:2000 certification, will continue its efforts towards obtaining ISO 17025 certification for the Centre for Quality Control. In addition, efforts will be taken to enhance the QMS of NPCB and to reinforce compliance to Pharmaceutical Inspection Cooperation Scheme (PIC/s). In the years ahead, the NPCB aims to be strengthened through enhancing cooperation with other regulatory agencies through information sharing on registration of New Chemical Entities and Biotechnology Products, sharing of GMP reports and information on surveillance activities.

Pharmacy Practice and Development

The restructuring of the Pharmacy Practice and Development Division and creation of more positions are to strengthen as well as improve the quality of services in tandem with the current practice. It is also to ensure that more patients would benefit from the pharmaceutical care services.

Many activities are being planned to strengthen and improve the quality of pharmaceutical care services as to ensure the provision of comprehensive and patient-centred services. The expansion and improvement in clinical pharmacy activities may enhance the role of a pharmacist in a multidisciplinary healthcare team delivering care to patients. The clinical activities will be extended to the health clinics and the opportunity in utilising the MTAC may also include Renal Transplant, Neurology, Rheumatology, Hepatitis C, Chronic Kidney Disease as well as Heart Failure.

The standard of pharmacy practice in aseptic preparations will be enhanced further in ensuring the provision of quality services. The expansion of the nuclear pharmacy service would increase the accessibility of the service to include radiopharmaceutical preparations in nuclear medicine. A new discipline, which could be explored, is psychiatry pharmacy where pharmacist can contribute and play an important role in such discipline.

To further enhance the medicine price monitoring activities, a survey on price structure is planned to be carried out in mid-2009 and is expected to be ready by the end of 2009. PSD, in the collaboration with the WHO would carry out the Medicines Price Control Project and the focus would be to study a suitable mechanism in controlling the price of medicine in Malaysia.

Specialisation in specific pharmacy niches and hands-on training would be identified locally as well as overseas with the focus on establishing specialised pharmacy practice to further improve the quality of pharmaceutical care. All these approaches are the result of long-term strategic planning to achieve sustainable excellence in pharmacy practice.

Human Capital Development

The PSD has expanded within the last one year with the consequent increase in demand for human resource. Apart from demand for pharmacists within the Programme itself, other divisions and departments also seek pharmacists. The Division has been working towards increasing more senior positions and as well as at state, institutional and health clinic levels.

In terms of training, more places for postgraduate training have been acquired. Postgraduate programmes have been expanded to include courses in more diversified and niche areas. More allocation was also given towards attachment trainings both locally and overseas in specialised clinical disciplines.

Strategic planning of human resource and capacity building is crucial in ensuring that succession at every level takes place smoothly and officers with the right training and expertise are placed where their expertise are needed.

Promotional Activities

The use of medicines requires proper regulation and management, as it is an important health goods for the society. In addition to medicines being safe, of high quality and efficacious, it is important that health-care providers and consumers rationally to ensure their continued quality, safety and cost-effectiveness for improvement in the quality of life also use them.

Towards this end the Division has intensified its activities to promote quality use of medicines among consumers. The Division has embarked on a holistic approach in its education campaign to increase consumers' awareness on the quality use of medicines and their rights to accurate and up-to-date information about the medicines that they take. In this approach, awareness and knowledge on all aspects of drug management from selection until disposal are conveyed.

While substantial amount of money has been spent for the campaign, only conventional methods such as organising talks, seminars and exhibitions, have been employed. Therefore, it remains a considerable challenge for the Division to reach the general public with its campaign messages unless the electronic and print media such as television, radio and newspapers are also used as dissemination channels. Efforts to obtain a larger allocation will need to be made for such effort in 2010.

Besides encouraging quality use of medicines among consumers, another promotional effort is on Good Governance of Medicines (GGM). This subject is considered contentious and initial efforts are taken towards instituting GGM within the pharmacy programme.

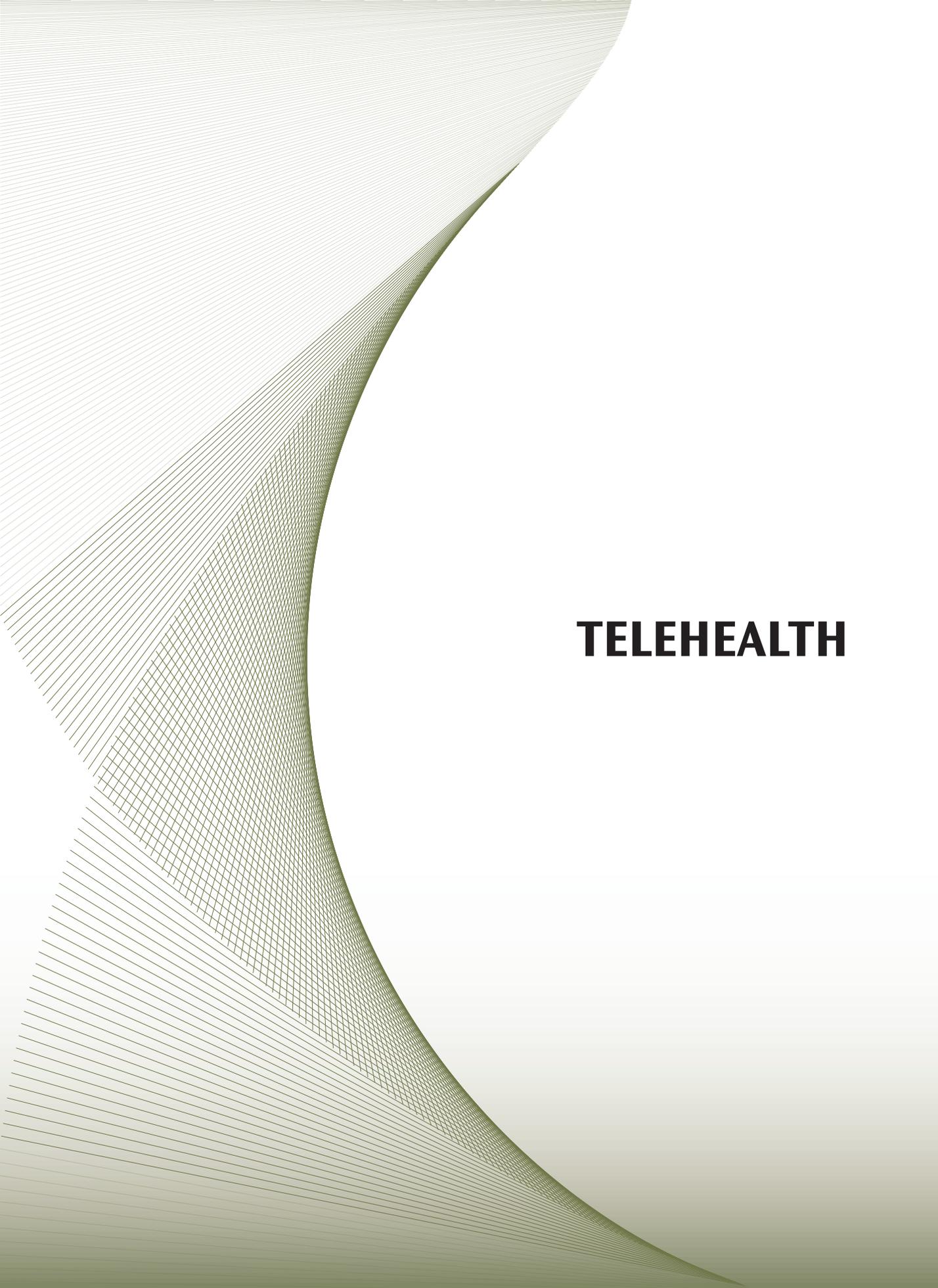
Various other promotional activities need to be undertaken in a more structured manner, and potential subjects to promote include, adverse drug reactions and medication error reporting among healthcare providers and consumers. A suitable administrative structure and support that oversees and coordinates all promotional activities needs to be in place so that all promotional activities can be carried out more efficiently.

Pharmacy Information System

To improve networking and facilitate the transmission and sharing of information and data, the Division has finally managed to acquire funding to develop an integrated pharmacy information system. This information system includes systems for both enforcement activities (SPPF) and pharmacy practice (SPF). The development of the system started in the second quarter of 2008 and is expected to be completed by July 2009. Although the system is yet to be test-run, it is with no doubt that the system will enable the Division to be connected with all state pharmacy administrations and pharmacy facilities throughout the country.

CONCLUSION

The growing number of pharmacists in the government sector was made possible by the implementation of the compulsory service, thus strengthening the Pharmacy Programme. As a result of this policy, new services can be introduced while the standard and quality of existing services are continuously improved. These combined efforts are necessary to ensure that the Pharmaceutical Services of MOH maintains its focus to ensure that pharmaceutical products in the market are of quality, safety and efficacy, used in a rational manner and are accessible and affordable to the Malaysian population.

The background features a series of thin, green, wavy lines that create a sense of motion and depth. These lines curve from the top left towards the bottom right. In the center of this curve, a grid of small squares is formed by the intersection of the lines, creating a textured, mesh-like appearance. The overall color palette is a soft, muted green against a white background.

TELEHEALTH

TELEHEALTH

INTRODUCTION

The Telehealth unit was set up as a project-based unit in the Ministry of Health in 2000 to implement the MSC-Telemedicine Flagship projects. In October 2004 the unit obtained Cabinet approval to be upgraded as a division under the Medical Services Programme. In 2008, it was officially recognised as a division in its own right within the Ministry of Health to spearhead telehealth activities together with the Information Management Division, Planning & Development Division and Multimedia Development Corporation.

Based on the 9th Malaysia Plan (MP) Mid Term Review in early 2008, Teleconsultation, Health Online, and Continuing Professional Development were implemented as planned. The Health Call Centre project has been deferred to the 10th MP.

ACTIVITIES AND ACHIEVEMENTS

TeleConsultation (TC)

In 2008, Teleconsultation services at 38 public hospitals were rendered through the continued maintenance and support of the existing hardware, software and infrastructure. Maintenance and support services that are being provided covered operations, centralised helpdesk service and maintenance services for hardware based on on-call basis. The Teleconsultation services encompassed 4 disciplines: Neurosurgery, Radiology, Cardiology and Dermatology.

A total of 1,073 case transactions using the Teleconsultation system was registered in 2008. The most active discipline using the service was Neurosurgery (62%), followed by Radiology (34%), Dermatology and Cardiology.

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. This portal which has been in operation since its official launch on 25 April 2006 has been getting numerous visits from individuals from within the country and abroad. Until December 2008, the portal has registered more than 565,000 hits, with an average of approximately 16,500 hits per month for year 2008.

The portal content is continuously being reviewed and new topics added. To date, more than 600 topics are available in 2 main languages namely Bahasa Malaysia and 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 more than 3,200 e-mails on matters related to health has 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.

Continuing Professional Development (CPD)

Online CPD Services

Online CPD Services is a programme 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 CPD Monitoring (myCPD) and Virtual Library.

MyCPD functions as an online logbook, allowing MOH staff members to plan, record and track their CPD activities and hence acquire CPD credit points which starting in 2008, can be used to complement competency assessment.

The system has been operational since February 2008, and for the first phase of implementation, 3 categories of MOH staff members (medical officers, dental officers and pharmacists) were required to record all their CPD activities. In the second phase of implementation which will commence in 2009, it will be expanded to include nurses and assistant medical officers.

Virtual Library (VL)

The Virtual Library portal will be a one-stop centre for information and knowledge sharing in medical, scientific and technical disciplines for MOH staff members. It will provide access to both local and commercial knowledge database as well as local publications. The portal can be accessed by all MOH officers as well as the general public; however subscribed content access is restricted to MOH officers only. In this project, the portal will link 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

The VL vendor was appointed on 7 November 2007 and the portal is expected to be operational by the second quarter of 2009.

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. Participating companies that have passed the necessary tests which include vendor compliance will be given a certificate. At the moment, this certificate will not be made as one of the compulsory requirements for companies that wish to participate in MOH IT projects.

This initiative will make sharing clinical information (such as clinical summary) electronically from existing clinical and hospital information system a reality since it has been proven possible during Malaysia Telehealth Connectathon I held at Putrajaya International Conference Centre on 29 April 2008.

A few educational series on IHE and Malaysia Telehealth Connectathon will be carried out in 2009 to create awareness and buy-in from various stakeholders from both public and private healthcare sectors.

Malaysian Health Information Exchange (myHIX)

MOH will be implementing the Lifetime Health Record (LHR) on a small scale through the development of the myHIX framework as one of the 'New Application Centre for Flagship' (NACF) initiatives with MDeC in 2009 to facilitate sharing of information between various health facilities. The National Health Institute and UKM Medical Centre will pioneer this initiative.

WAY FORWARD

TeleConsultation

Teleconsultation services will be provided through the clinical services network of the five (5) identified services. Priority will be given to neurosurgical services. There will be enhancement of accessibility by adoption of new Teleconsultation tools and better bandwidth management. In order to improve the services, a proposal for the expansion and upgrading of Teleconsultation Services has been presented and approved to be implemented in 2009.

Health Online

The Telehealth Division of Ministry of Health (MOH) continuously strives to provide improvements in the online services of the MyHealth portal. In 2009, more interactive services through the development of online 'Health Risk Assessment' (HRA) tools will be offered. Through the HRA tools, an individual can assess his/her own health risks and then make informed decisions to promote good health or seek necessary treatment at the nearest health facility. The HRA vendor was appointed on 28 October 2008 and is expected to be operational by July 2009.

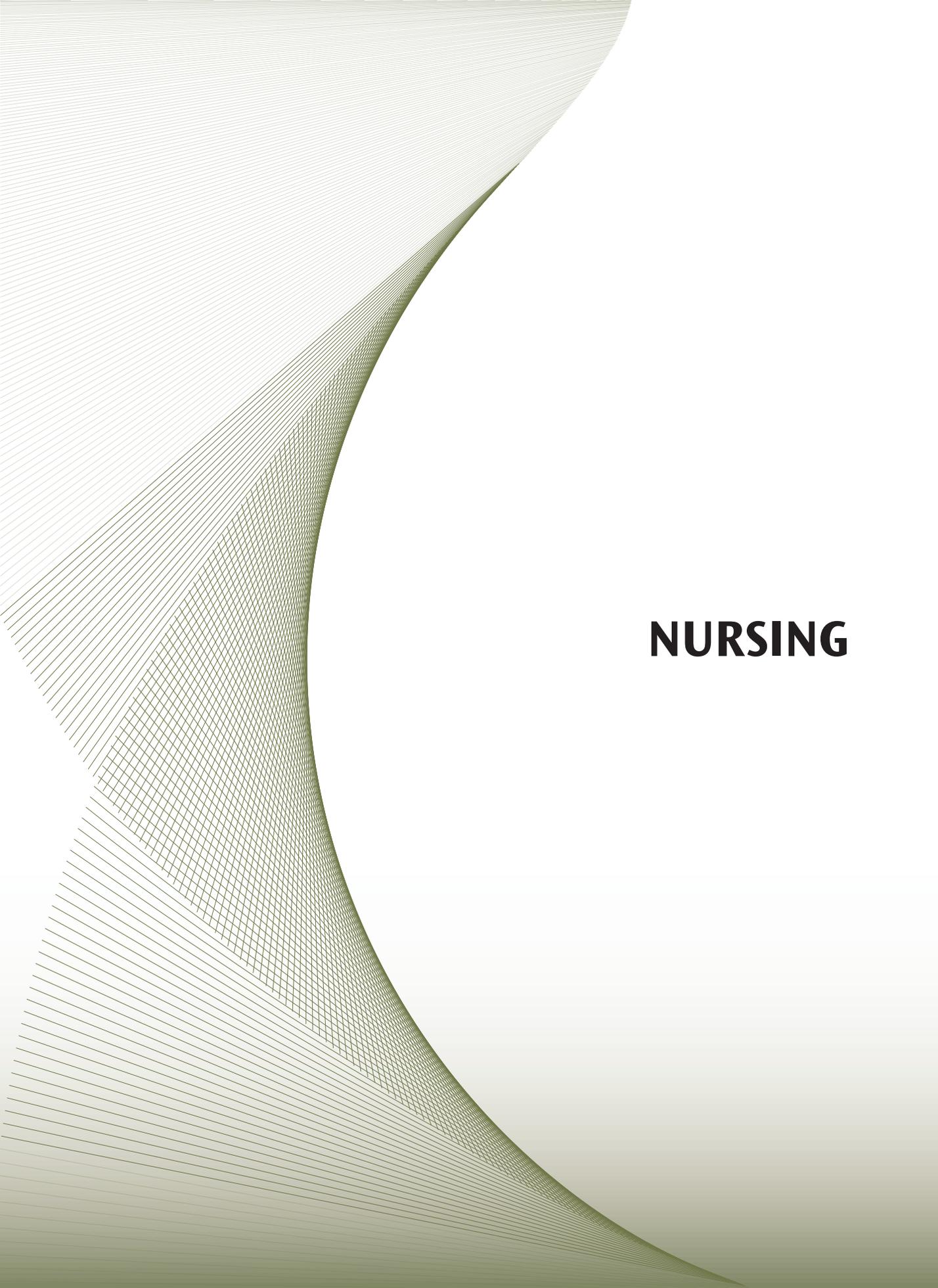
CONCLUSION

Teleconsultation services will be expanded and upgraded to fulfil the needs of the specialist services which has been in existence since year 2000.

Efforts will continuously be undertaken to improve the response time of 'Ask The Expert' services of MyHealth Portal by recruiting more specialists into the pool of panel of experts.

MyCPD has been successfully launched and is now being adopted by MOH both at national and state levels. To ensure the smooth implementation of MyCPD, a pool of system administrators has been identified and trained to facilitate MOH staff members to register, use the system and look into potential user issues.

The Telehealth Division strives to ensure that all the services will meet the expectations of various stakeholders in line with the health vision, mission and goals of the Ministry of Health.



NURSING

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, skillful 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 units as follows:

- A. Nursing Practice.
 - Research and Quality
 - Hospital Service
 - Public Health Service
 - Professional Development

- B. Regulatory Section (Comprising the Nursing Board and the Midwives Board in accordance with the Nurses Act 1950 and the Midwives Act 1966)
 - Curriculum
 - Examination(Nursing and Midwifery)
 - Registration
 - Annual Practicing Certificate(APC)
 - Temporary Practice Certificate (TPC)
 - Retention of Names
 - Enforcement

ACTIVITIES AND ACHIEVEMENTS

Various strategies have been outlined towards improving and upgrading the quality of nursing practice.

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.

Development of Nursing Practice Guidelines

A total of 25 Nursing Practice Guidelines comprising of Ophthalmology, ENT, O&G, Haematology, Plastic Surgery, Nephrology, ICU, Oncology, Perioperative, Urology, Psychiatrist, Neuro Medical, Burns, Geriatric, Cardiothoracic, NeuroSurgery, CSSU, Orthopedic, Dermatology, Surgical, Medical, Neonatology, CCU, Paediatric and Generic were developed and distributed to all public hospitals to adhere.

Registration of Nurses

Graduates from the Nursing and Midwifery programmes, 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 Nurses Act 1950 and Midwives Act 1966. A total of 5,344 General Nurses, 1,226 Community Nurses, 300 Assistant Nurses, 82 Public Health Nurses and 1 Mental Health Nurse were registered by the Nursing Board whereas 938 Midwives Division 1 were registered by the Midwives Board in 2008. Table 1 shows the number of Registered Nurses for the year 2006 until 2008. The unit also endorse training transcripts and verification of registration for Nurses and Midwives who wish to pursue tertiary education or practice abroad. Table 2 shows the number of transcripts endorsed and verified.

TABLE 1
NUMBER OF REGISTERED NURSES FOR THE YEAR 2006 - 2008

	Categories of Nurses	2006	2007	2008
1.	Staff Nurses	3456	6074	5344
2.	Community Nurses	1483	1484	1226
3.	Assistant Nurses	265	238	300
4.	Public Health Nurses	120	121	82
5.	Mental Health Nurses	12	12	1
6.	Midwifery Division 1	709	709	938
	Total	6048	8638	7891

Source: Nursing Division, MoH

TABLE 2
VERIFICATION AND ENDORSEMENT

No.	Activities	2007	2008
1.	Retention of Name	1585	1792
2.	Verification of Registration	327	280
3.	Verification of Transcripts	351	460

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 3 shows the number of issuance of APC for nurses in public and private sectors.

TABLE 3
NUMBER OF APCs ISSUED FOR NURSES IN PUBLIC AND PRIVATE SECTORS 2008

No.	Categories of Nurses	Public Sector		Private Sector	
		Number	Percentage	Number	Percentage
1.	Basic Diploma Nurses	36,547	66.4	15,633	85.1
2.	Community Nurses	16,230	29.5	406	2.2
3.	Assistant Nurses	2289	4.1	2327	12.7
	Total	55,066	100	18,366	100

Source: Nursing Division, MoH

Nursing Examination

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 one month of the Education and Examination Committee Meeting. Table 4 shows the results for diploma and pre-registration of the final examination from various institutions and Table 5 displays the results of the final examination for all categories of nurses in the year 2008.

TABLE 4
RESULTS OF FINAL EXAMINATION FROM KKM, IPTA, IPTS AND MINISTRY OF DEFENSE 2008

Institutions	No. of Candidates		Passed	Percentage	Ethnic* Composition				
					M	C	I	O	Total
Ministry Of Health	March	31	21	67.74	19	1	0	1	21
	June	1394	1390	99.71	989	31	69	301	1390
	Dec	774	773	99.87	675	4	25	69	773
Total		2199	2184	99.32	1683	36	94	371	2184
Higher Learning Institutions (Public)	March	2	2	100	0	2	0	0	2
	June	418	416	99.52	388	13	7	8	416
	Dec	20	20	100	20	0	0	0	20
Total		440	438	99.55	408	15	7	8	438
Higher Learning Institutions (Private)	March	77	33	42.86	14	7	6	6	33
	June	2056	1889	91.88	1042	237	213	397	1889
	Dec	1987	1655	83.29	1214	103	193	145	1655
Total		4120	3577	86.82	2270	347	412	548	3577
Ministry Of Defense	March	Nil	-	-	-	-	-	-	-
	June	Nil	-	-	-	-	-	-	-
	Dec	18	18	100	16	0	0	2	18
Total		18	18	100	16	0	0	2	18

Note: * M - Malay C - Chinese I - Indian O - Others
Source: Nursing Division, MoH

TABLE 5
RESULTS OF THE FINAL EXAMINATION FOR ALL CATEGORIES OF NURSES IN 2008

Categories Of Nurses	No. Of Candidates	Passed	Percentage
Community Nurses (Certificate)	1392	1362	97.84
Midwifery Part 1 Nurses (Certificate)	1489	1354	90.93
Assistant Nurses (Private Sector) (Certificate)	51	51	100
Basic Diploma (MOH)	2199	2184	99.32
Basic Diploma (Private Sector i.e. IPTA)	440	438	99.54
Basic Diploma (Private Sector)	4120	3577	86.82
Basic Diploma (Ministry of Defence)	18	18	100
Total	9709	8984	92.52

Source: Nursing Division, MoH

Approval and Accreditation of Nursing Programme

The LJM/LBM unit determines the Guidelines on Professional Standards & Criteria for the Approval and Accreditation of Nursing Programs offered locally by public and private nursing institutions. The Board which consists of the Ministry of Higher Education, Malaysian Qualifying Agency and Public Service Department assesses, approves and accredits Nursing Programs for private and public nursing institutions.

Issuance of Temporary Practicing Certificate (TPC)

The 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 2008, a total of 1,107 TPC were issued to nurses from abroad (Table 6).

TABLE 6
LIST OF ISSUANCE OF TEMPORARY PRACTICING CERTIFICATES (TPC)

No.	Country	2007	2008
1.	India	678	861
2.	Myanmar	77	83
3.	Philippines	41	100
4.	Indonesia	40	40
5.	Pakistan	0	1
6.	Bangladesh	0	1
7.	Albania	0	0
8.	Australia	2	1
9.	Zimbabwe	2	2
10.	United Kingdom	2	2
11.	Taiwan	1	2
12.	USA	1	3
13.	Iran	1	2
14.	Ireland	1	2
15.	Hong Kong	0	1
16.	Viet Nam	3	3
17.	Singapore	2	2
18.	Germany	0	1
	Total	851	1107

The Enforcement Unit

The unit was established with the objective to improve the Nursing Services. The main functions include planning, implementing and monitoring the nursing services to ensure it adhere to the Nurses Act 1950 and Midwives Act 1966 as well as policies by MOH, Ministry of Higher Education and other related agencies. The Unit carries out investigations and acts on complaints of non-compliance.

- The Professional Development Unit

The objective of this unit is to plan and organize training programmes, conferences, seminars and workshops (Table 7). The unit also awards CPD points to all participating nursing institutions that organize training for their nursing personnel.

TABLE 7
LIST OF COURSES ORGANIZED IN 2008

No.	Courses / Workshops	Date	No. of Participants
1.	Kursus Pengurusan Untuk Penyelia-Penyelia Jururawat (U36-U41)	7 - 9 March	165
2.	Kursus Pengurusan Untuk Penyelia-Penyelia Jururawat (U36-U41)	17 - 19 March	53
3.	English Communication Programmes (U29-U32)	19 - 22 May	40
4.	English Communication Programmes (U29-U32)	25 - 28 May	40
5.	English Communication Programmes (U29-U32)	1 - 4 June	42
6.	Workshops on Public Relations and Communication capabilities for Nurses (U29-U32)	29 - 30 June	42
7.	Orientation For Newly Appointed U41	1 - 2 July	30
8.	Course on Root Cause Analysis/Problem Solving and Competency U32-U41 (Selangor&Wilayah)	29 - 30 July	131
9.	Course on Root Cause Analysis/Problem Solving and Competency U32-U41 (Melaka,N.Sembilan,Johor)	8 - 9 October	60
10.	Course on Drugs Calculation, Drugs Administration and Preventing Error (U29)	14 October	40
11.	Course on Root Cause Analysis/Problem Solving and Competency U29-U32 (Perak)	14 - 15 October	100
12.	Course on Root Cause Analysis/Problem Solving and Competency U32-U41 (Pahang &Johor)	29 - 30 October	60
13.	Course on Root Cause Analysis/ Problem Solving and Competency U32-U41 (Trengganu &Kelantan)	5 - 6 Nov	70
14.	Workshops on How to lead a Passionate Nursing Life Through Systemic Constellations	12 - 13 Nov	50
15.	Course on Root Cause Analysis/ Problem Solving and Competency U32-U41 (Kedah, Perlis, P.Pinang)	17 - 18 Nov	72
16.	Course on Root Cause Analysis/ Problem Solving and Competency U32-U41 (East Malaysia)	28 - 30 Nov	73

Source: Nursing Division, MoH

- The Research and Quality Unit

The 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. In 2008, a total of 20,848 nurses attended “7S” courses and workshops while a total of 11,124 nurses participated in mentorship programmes.

- The Hospital and Public Health Services

The main functions are to enhance the nursing service delivery by addressing issues related to nursing including practice, ethics, facilities and human resources.

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 (e CPD) 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.

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HEALTH LEGISLATION

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 an important role in the 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 ACHIEVEMENTS

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. The Legal Advisor's Office together with the relevant divisions in the Ministry of Health also drafted new Bills and Regulations in relation to food as well as conducting prosecution extensively in accordance with the Private Healthcare Facilities and Services Act 2006 [Act 586].

Several existing health legislations were in the process of revision and amendment in consistent with the various new health policies introduced into law.

WAY FORWARD

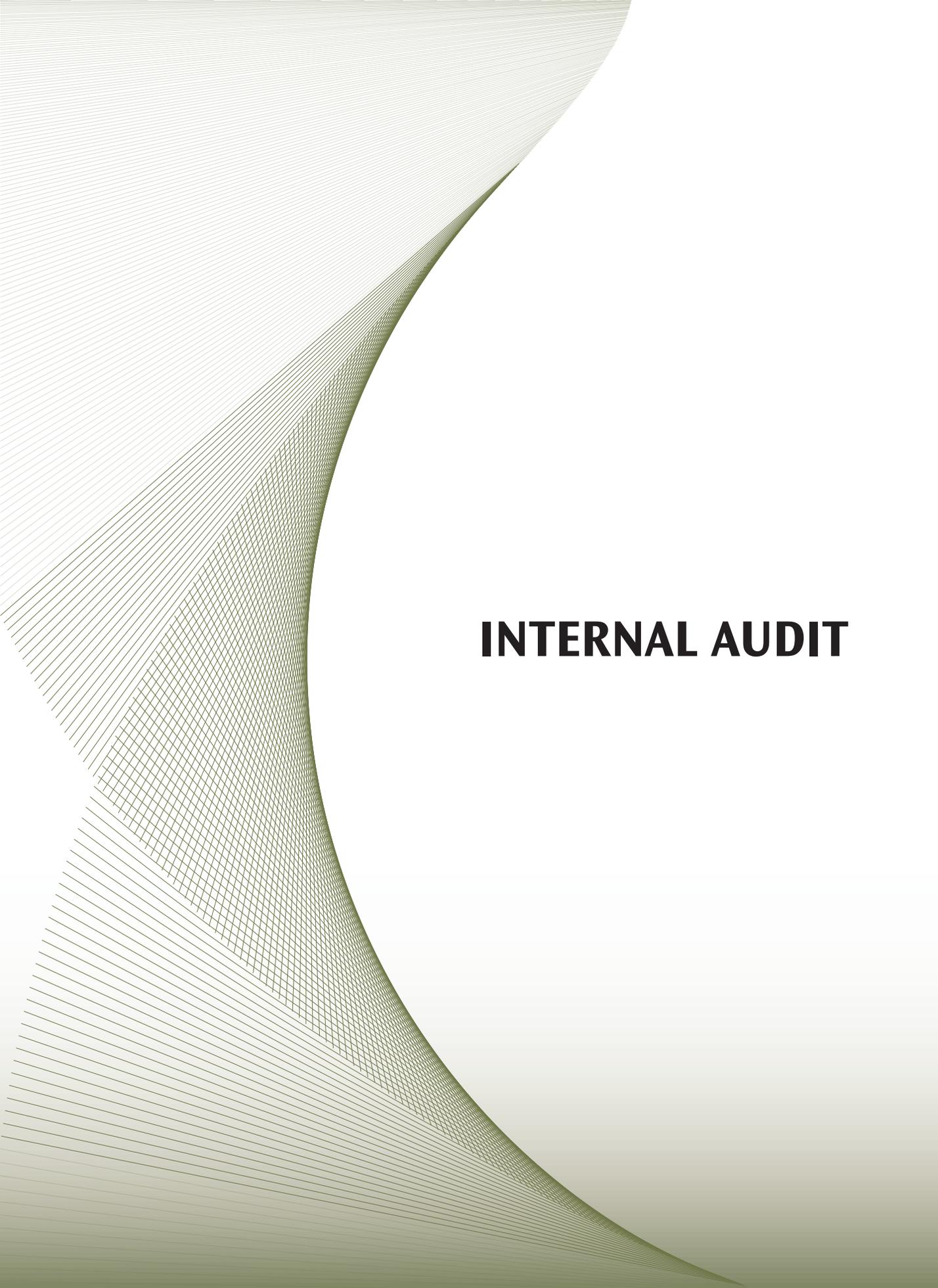
There were proposals of drafting new primary and subsidiary legislations to ensure Ministry of Health achieved its paramount objective of delivering safe and quality healthcare services to all Malaysians. In addition, all existing health legislations or any other legislations related to health will continue to be updated and amended, where necessary.

A list of several important and priority new laws are:

- a. Medical Devices Bill;
- b. Medical (Amendment) Bill;
- c. Food Analyst Bill; and
- d. Food Export (Issuance of Health Certificate for the Purpose of Exporting to EU) Regulation Draft.

CONCLUSION

Year 2008 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 given by every member and the full support received from the Ministry of Health had contributed to the effectiveness and productivity of the working process.



INTERNAL AUDIT

INTERNAL AUDIT

INTRODUCTION

The Internal Audit Division (IAD) of Ministry of Health (MoH) was established in May 1980 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 2008, 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 observations as shown in Table 1.

TABLE 1
IAD TARGETS AND ACHIEVEMENTS IN 2008

Programs / Activities	Target	Achievements
Financial Audit	65 RC	65 RC
Performance Audit	5 topics (25 RC)	4 topics (25 RC)
Special Audit	8 cases	10 cases

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 2008, IAD had carried out financial audits on 65 Responsibility Centres (RC) throughout the country.

Performance Audit

Performance Audit was carried out to ensure that MoH utilized its resources through its programs economically, efficiently and effectively. This audit was able to identify weaknesses or short-comings on the management and operation of MoH programs/activities/projects and suggested practical advice to resolve issues and overcome challenges to ensure quality service delivery to all stakeholders. In 2008, IAD had carried out 4 performance audits involving 25 RC.

Special Audit/Investigation

Special audits or investigations were carried out based on reports or instructions from the Secretary General. In 2008, IAD had carried out 10 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 12 lectures and advisory services were delivered by IAD officers in 2008.

WAY FORWARD

IAB is committed in helping MOH to enhance its service delivery system to its client in an economic and effective manner. Hence, IAB 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 IAB is to visit the RCs on regular basis once in every 3 to 4 years and performing ICT audit where ICT systems are used thoroughly in the ministry. IAD will also evaluate from time to time the management internal controls of MoH where 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.

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CORPORATE POLICY AND HEALTH INDUSTRY

POLICY AND INTERNATIONAL RELATIONS

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.

ACHIEVEMENTS

Cabinet Related Matters

In 2008, this Division prepared and coordinated 29 Cabinet Notes and Memoranda for tabling to the Cabinet. The Division also monitored, provided inputs and facilitated the preparation of 45 comments on Memoranda received from other ministries, 26 feedbacks to decisions made by the Cabinet and 1 Notification Paper for the 214th Conference of Rulers throughout the year 2008.

High Level Meetings within MoH

The Division was also the secretariat for 4 high level meetings in the Ministry in addition to 38 Post-Cabinet Meetings, 19 Morning Prayers, 2 Secretary-General's Meeting with State Health Directors and 2 Annual Work Plan Meetings for the MoH Senior Management.

Policy Evaluation

For the year 2008, the Division conducted a survey on the satisfaction level of patients and medical specialists enrolled in the Full Fee Paying (FPP) Scheme in Putrajaya and Selayang Hospitals. The findings of the survey will be presented in the FPP Main Committee Meeting chaired by the Secretary-General.

Training Courses

The Division conducted 2 Introductory Health Economics Courses for MOH administrative officers in 2008. A total of 45 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 2008, a total of 9 meetings were held in preparation for the launching of the MOH Corporate Culture Campaign which is scheduled in early 2009.

World Health Organization (WHO)

In 2008, the Division coordinated 12 WHO-sponsored study visits to Malaysia, placements of 12 foreign WHO consultants and 25 WHO fellows in various institutions in Malaysia. In addition, the Division also coordinated and processed applications from 92 participants and 13 short-term advisors comprising Malaysian professionals to attend 63 meetings/workshops/study visits overseas under WHO sponsorship.

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) Commonwealth Health Ministers Meeting in Geneva, Switzerland on 18 May 2008;
- ii) The 61st World Health Assembly in Geneva, Switzerland from 19 to 23 May 2008;
- iii) Topclinica Exhibition in Stuttgart, German from 11 to 13 June 2008;
- iv) The 59th WHO Western Pacific Regional Committee Meeting in Manila, Philippines from 22 to 26 September 2008; and
- v) The 9th ASEAN Health Ministers Meeting, the 3rd ASEAN+3 Health Ministers Meeting and the 2nd ASEAN+China Health Ministers Meeting from 6 to 10 October 2008 in Manila, Philippines.

The Division was the secretariat for the Asia Pacific Health Ministers Conference on Climate Change and Health which was held in Kuala Lumpur from 18 to 19 September 2008 and officiated by Y.A.B. Dato' Sri Mohd. Najib bin Abdul Razak, Deputy Prime Minister of Malaysia. The conference which was organized jointly by the Ministry of Health and Ministry of Natural Resources and Environment, was attended by Ministers of Health and Senior Officials from the Asia-Pacific region. Thematic sessions were held to discuss the issue of climate change and its implication on public health in the Asia-Pacific region. At the conclusion of the conference, a Ministerial Dialogue was held and a Communiqué was issued to record the aspirations of the participating nations.

In addition, the Division was also the secretariat for the 4th Bilateral Ministers of Health Meeting between Malaysia and Brunei Darussalam in Melaka from 19 to 20 November 2008. 2 meetings were held at both the Senior Officials and Ministerial levels that were co-chaired by both the Secretaries General and Ministers of Health from Malaysia and Brunei Darussalam respectively. During the meeting, various areas of cooperation were discussed and both Ministers of Health further enhance bilateral collaboration in the form of a Joint Ministerial Statement.

The Division represented MOH in Joint Commission Meetings (JCM) and Joint Trade Committee (JTC) Meetings between Malaysia and several countries such as Australia, Indonesia, Iran, Thailand, Cuba, Egypt, South Africa, Philippines and Uzbekistan either as a member of the Malaysian delegation or by providing inputs or talking points related to the health sector.

The Division is the focal point for the provision of technical expertise and assistance to foreign countries through study visits and training attachments. A total of 897 foreign visitors from 23 countries have visited MOH in 2008 either through study visits or training attachments in various institutions and divisions under MOH.

Trade in Health

The Division is responsible for coordinating trade in health related issues. In 2008, it worked closely with the Medical Practice Division, Pharmaceutical Services Division, Oral Health Division and the Ministry of International Trade and Industry (MITI) in providing inputs with respect to Malaysia's policy position on issues related to the health sector such as liberalization of the health services sector and protection of intellectual property rights in bilateral trade meetings between Malaysia and Australia, New Zealand, United States of America and India. Additionally, officers from the Division represented the Ministry in negotiations for the Malaysia-United States Free Trade Agreement, Malaysia-Australia Free Trade Agreement and Malaysia-India Comprehensive Economic Cooperation Agreement.

At the multilateral level, the Division coordinates health sector related issues that were discussed at the ASEAN and World Trade Organization (WTO) levels. Together with the Medical Practice Division, it represented MOH at the Services Negotiations in WTO, Geneva from 10 to 14 March 2008 where Malaysia requested several of its trading partners to liberalize their respective health services sector.

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.

In 2008, it was involved in the following promotional activities:

i. Malaysia Services Exhibition (MSE 2008) in Sharjah, United Arab Emirates from 13 to 15 January 2008

This exhibition was the first services exhibition organized by MATRADE to promote the development of the services industry in Malaysia. A total of 11 specific industry clusters were showcased in MSE 2008 and the healthcare cluster was led by MOH and the Association of Private Hospitals Malaysia (APHM). A total of 3,656 visitors visited MSE 2008.

ii. HOSPIMedica Australia 2008

HOSPIMedica Australia is part of the 'med by series' of medical trade fairs organized throughout the world, including MEDICA the world's largest medical trade fair held annually in Germany. The fair is an international exhibition for suppliers of hospital, diagnostic, pharmaceutical, medical and rehabilitation equipment products and services. MOH and MIDA led the Malaysia Pavilion, which consists of 8 small and medium enterprises (SMEs) to promote the Malaysian healthcare industry.

iii. Specialized Marketing Mission for Healthcare and Related Services in Jakarta, Indonesia

The event was held in Jakarta, Indonesia from 9 to 11 July 2008 and participated by 13 organizations comprising of 5 private hospitals and 8 medical products related companies. The program among others includes individual business meetings, seminar on "Malaysia-Indonesia Business Opportunities", and also visits to private hospitals and pharmaceutical manufacturing facilities.

iv. Malaysia Healthcare - Seminar & Exhibition 2008 in Vietnam and Cambodia

The exhibition was jointly organised by MOH and MATRADE from 2 to 8 November 2008 in Ho Chi Minh City, Vietnam and Phnom Penh, Cambodia. A total of 10 organisations representing 7 hospitals, 2 medical devices and 1 pharmaceutical company participated in the exhibition. The programme also includes seminars, business meetings, healthcare talks, networking dinner and visits to hospitals.

v. MEDICA 2008 in Dusseldorf, Germany from 19 to 22 November 2009

MEDICA is the world's largest medical devices and supplies trade show. The 40th World Forum for Medicine International Trade Fair with Congress (MEDICA 2008) was held in Dusseldorf, Germany from 19 to 22 November 2009. MOH led 9 other organisations to showcase its medical and health related products at the Malaysia Pavilion. A total of 4,313 exhibitors showcased their products where 137,000 visitors came to the event.

vi. Familiarisation Visit on Malaysian Healthcare Industry for Cambodia and Vietnam Delegation in Kuala Lumpur from 15 to 20 December 2008

The objective of this programme is to introduce the Malaysia healthcare industry to delegates from Cambodia and Vietnam as a follow up to the Malaysia Healthcare - Seminar and Exhibition which was held in November 2008. A total of 12 delegates from each country comprising of medical doctors and media representatives participated in this programme. During the programme, delegates had the opportunity to visit 6 private hospitals and a government hospital.

CONCLUSION

Throughout the year 2008, 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.



**IMPORTANT EVENTS
IN 2008**

IMPORTANT EVENTS IN 2008

13 - 15 January

Ministry of Health Malaysia and Association of Private Hospitals Malaysia (APHM) participated in the Health Cluster Exhibition in conjunction with the Malaysia Services Exhibition 2008 organized by MATRADE at Sharjah, United Arab Emirates.

16 January

Y.B. Dato' Seri Ong Ka Ting, Minister of Health Malaysia held a dinner in honor of Y.B. Dato' Dr. Chua Soi Lek, former Minister of Health Malaysia at Concorde Hotel, Shah Alam, Selangor.

21 January

Y.Bhg. Datin Dr. Norain bt Abu Talib, Principal Director of Oral Health launched the Plaque-Free Malaysia Campaign at Giant Hypermarket, Bandar Kinrara, Puchong.

25 - 27 January

Y.Bhg. Datin Dr. Norain bt Abu Talib, Principal Director of Oral Health officiated the 15th FDI (Federation Dentaire Internationale) / MDA (Malaysia Dentists Association) Scientific Convention and Trade Exhibition at Istana Hotel, Kuala Lumpur.

31 January

Y Bhg. Datin Dr. Norain Abu Talib, Principal Director of Oral Health officiated the inaugural meeting for the Oral Health Clinical Information System (OHCIS) at Equatorial Hotel, Bangi, Selangor.

13 - 15 March

Y. Bhg. Tan Sri Dato' Seri Dr. Haji Mohd Ismail Merican, Director-General of Health Malaysia officiated the International Nursing Conference at Santubong, Kuching Resort, Kuching, Sarawak.

18 March

Y. Bhg. Tan Sri Dato' Seri Dr. Haji Mohd Ismail Merican, Director-General of Health Malaysia represented the Ministry of Health Malaysia to receive the Personal Protection Equipment (PPE) Kit from Mr. David B. Shear, Charge d' Affaires of the United States Embassy in Kuala Lumpur.

21 March

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia succeeded Y.B. Dato' Seri Ong Ka Ting as the Minister of Health Malaysia.

21 March

Y.Bhg. Dato' Sri Dr. Haji Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia officiated Puspanita Day 2008 at Mutiara Auditorium, Institute of Health Management.

21 March

Y.Bhg. Dato' Ahmad bin Haji Kabit, Deputy Secretary-General (Management), Ministry of Health Malaysia officiated the Ministry of Health (MOH) National Level Nasyid Festival 2008 at MOH headquarters, Putrajaya.

24 March

Y. Bhg. Datin Dr. Rugayah binti Bakri, Deputy Director of the Health Technology Assessment Section unveiled the Nursing Practice Guidelines.

25 March

Y.Bhg. Dato' Sri Dr. Haji Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia officiated *Jasamu Dikenang* ceremony 2008 for MOH staffs below Grade 54 at MOH headquarters, Putrajaya.

11 - 13 April

Y.Bhg. Datin Dr. Norain binti Abu Talib, Principal Director of Oral Health officiated the Oral Health Month 2008 which includes oral health promotion activities themed “Zero Cavity for Healthy Smiles” and the launching ceremony for the book titled ‘Model Of Best Practice For The Mobile Dental Team’ at Tebrau City Shopping Mall, Johore Bahru, Johor.

14 - 16 April

Y.B. Datuk Dr. Hj. Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated the National Conference on Primary Health Care Kuala Lumpur at Sunway Convention Centre.

21 - 24 April

Y.B. Dato’ Sri Liow Tiong Lai, Minister of Health Malaysia launched the Fitballrobic Competition at Paroi Sports Complex, Negeri Sembilan.

26 April

Y.B. Dato’ Sri Liow Tiong Lai, Minister of Health Malaysia opened the 24th Asian Parliamentarians’ Meeting on Population and Development: Climate Change, Infectious Diseases And Population Issues at Parliament Building, Kuala Lumpur.

29 April

Y. Bhg. Dato’ Dr. Hj. Ramlee bin Hj. Rahmat, Deputy Director-General of Health Malaysia (Public Health) launched the Healthy Catering Training for caterers who serve at MOH headquarters at Sri Siantan Hall, Precint 3, Putrajaya.

3 May

DYMM Tuanku Tengku Fauziah, Raja Perempuan Perlis graced the opening of the National Level World Health Day at the 2020 Hall Kangar, Perlis.

5 May

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia hosted the Mesra Kenangan Night 2008 in appreciation of MOH Premier Grade C and above senior officials at the Marriott Hotel, Putrajaya.

18 May

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia led the Malaysian delegation to The Pre-World Health Assembly for Commonwealth's Minister of Health Meeting in Geneva, Switzerland.

19 - 23 May

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia headed the Malaysian delegation to the 61st World Health Assembly in Geneva, Switzerland.

20 May

DYMM Tuanku Tengku Fauziah, Raja Perempuan Perlis graced the launching of the MRI Service at the Hospital Tuanku Fauziah, Kangar.

23 May

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Ismail Merican, Director-General of Health officiated and delivered keynote address in 14th Biannual Malaysia Medical students Conference.

24 May

DYMM Sultan Paduka Seri Sultan Azlan Shah Sultan Azlan Muhibbuddin Shah Ibni Almarhum Sultan Yussuf Izzuddin Shah Ghafarullahu-lah, DYMM Paduka Seri Sultan Perak graced the opening of the Health Clinic at Taiping, Perak.

28 May

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated the National Thalassemia Seminar in conjunction with the celebration of the National Level Thalassemia Day 2008 at Kuala Lumpur.

31 May

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the World No Tobacco Day 2008 at MSN Training Stadium, Bukit Jalil, Kuala Lumpur.

2 June

Y.Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd. Ismail bin Merican, Director-General of Health Malaysia launched the Epidemiological Intelligence and Management Programme (EIMP) (MTCP) 2008 Course at the Institute of Health Management.

12 June

DYMM Sultan Paduka Seri Sultan Azlan Shah Sultan Azlan Muhibbuddin Shah Ibni Almarhum Sultan Yussuf Izzuddin Shah Ghafarullahu-lah, DYMM Paduka Seri Sultan Perak graced the ceremony to rename Hospital Ipoh to Hospital Raja Permaisuri Tuanku Bainun.

16 June

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the National Level *Jom Tangani Stres* Programme at SMK Seri Permaisuri, Cheras, Kuala Lumpur.

23 - 26 June

Y. Bhg. Dato' Che Mohd Zin Che Awang, Principal Director of Pharmacy Services officiated the inaugural International Pharmacy Enforcement Conference at Bayview Beach Resort, Pulau Pinang.

26 June

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health presented the Excellence Service Award 2008 to MOH officers and staff at Complex E Auditorium, Putrajaya.

26 June

The Midterm Review (MTR) of the Ministry of Health 9th Malaysia Plan (9MP) which included the MTR Report for the Overall Evaluation of the achievement of the 9MP Programmes/Projects and the MTR Report of 9MP 2006-2010 (Thrust 4: Improving Quality of Life).

10 July

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the Marketing Ethics Book on Infant Food and Related Products in conjunction with the World Breastfeeding Week 2008 at Hospital Selayang, Kuala Lumpur.

11 July

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the Early Childhood Oral Healthcare Programme in conjunction with the Sixth Conference of Paediatric Dentistry Association of Asia 2008 at Berjaya Times Square Convention Centre, Kuala Lumpur.

14 July

Y. Bhg. Tan Sri Dato' Seri Dr. Haji Mohd Ismail Merican, Director-General of Health Malaysia was awarded the Honorary Fellowship from the Royal College of Surgeons, Ireland.

17 July

TYT Tun Dato' Seri Utama (Dr.) Haji Abdul Rahman bin Haji Abbas, TYT Pulau Pinang opened the Sg. Bakap Hospital, Seberang Prai.

24 July

KDYMM Tuanku Alhaj Abdul Halim Mu'adzam Shah Ibni Almarhum Sultan Badlishah, KDYMM Tuanku Sultan Kedah graced the opening of the Sultanah Bahiyah Hospital at Alor Setar, Kedah in conjunction of the *Perayaan Jubli Emas Pemerintahan Kebawah Duli Yang Maha Mulia Tuanku Sultan Kedah*.

27 July

The Pediatric Cardiothoracic Programme for children of poor families was implemented by MOH at Narayana Hrudayalaya Hospital, Bangalore, India as an interim measure to reduce the waiting time for cardiothoracic pediatric patients.

28 - 30 July

Y. Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd. Ismail Merican, Director-General of Health Malaysia officiated the Fifth Pharmacy Research and Development Conference 2008 at Putrajaya Hospital.

30 July - 1 August

Y.Bhg. Datin Dr. Norain bt Abu Talib, Principal Director of Oral Health officiated the Oral Health Research Conference at Putrajaya International Convention Centre. The first interactive forum among the oral academia on "Setting Priorities for Oral Health Research" was held in conjunction with the conference.

31 July

KDYMM Sultan Haji Ahmad Shah Al-Musta'in Billah Ibni Al-Marhum Sultan Abu Bakar Ri'ayatuddin Al-Mu'adzam Shah, KDYMM Sultan Pahang graced the ceremony to rename the Cameron Highlands Hospital to Sultanah Hajjah Kalsom Hospital in Cameron Highlands.

1 August

Y.Bhg. Dato' Sri Dr. Haji Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia launched the *Bicara Mufti* Programme with Sahibul Samahah Dato' Wan Zahidi Wan Teh, the Federal Territory Mufti in conjunction with the Isra' Mikraj celebration at MOH headquarters, Putrajaya.

6 - 10 August

Y.Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd Ismail Bin Merican, Director-General of Health Malaysia officiated the East Zone Quality Convention 2008 at Terengganu State Library, Kuala Terengganu.

7 August

Y. B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the MOH Health Cafeteria Concept and opened the first Health Cafeteria in Malaysia, Health Food Bistro MyNutri Biz at Bandar Kinrara, Puchong, Selangor.

14 August

Y.A.B. Dato' Haji Abdul Ghani Bin Othman, Chief Minister of Johor launched the Johor State Level 10,000 Steps Programme 2008 at Pontian District Mini Stadium, Johor.

18 August

Y. B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia launched the MOH level National Independence Month 2008 at Complex E, Putrajaya.

18 August

Y.B. Dr. Hj. Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated the pilot project Manual on General and High Risk Food Preparation for School Canteen and Boarding-School Kitchen at Plaza Alam Sentral, Shah Alam, Selangor.

25 - 28 August

Y.Bhg. Tan Sri Dato' Seri Dr. Hj. Mohd. Ismail Merican, Director-General of Health Malaysia officiated the National Regulatory Conference 2008 at Hotel Sheraton, Subang.

27 August

I-retractor for tracheostomy an innovation project by Specialist Oral Clinic, Sarawak General Hospital was awarded the winner of the Public Services Innovation Award (AIPA) 2008 at Putrajaya International Conference Centre.

22 - 26 September

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia led the Malaysian delegation to the 59th WHO Western Pacific Regional Committee Meeting at Manila, Filipina.

26 September

Drive-Thru Pharmacy project by Penang Hospital received The Asian Hospital Management Award in Manila, Philippines.

1 October

Y. Bhg. Tan Sri Dato' Sri Dr. Hj. Mohd. Ismail Merican, Director General of Health officiated and delivered keynote address in 'Scientific Meeting on Acute Emergencies' of Institute of Health Management.

6 - 10 October

Y.B. Datuk Dr. Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia headed the Malaysian delegation to the 9th ASEAN Health Ministers Meeting, the 3rd ASEAN+3 Health Ministers Meeting and the 2nd ASEAN+China Health Ministers Meeting in Manila, Philippines.

9 - 10 October

Y. Bhg. Dato' Sri Dr. Hj. Mohd Nasir bin Mohd Ashraf, Secretary-General, Ministry of Health Malaysia officiated the National Seminar on Health Technology Assessment in Crown Princess Hotel, Kuala Lumpur.

10 - 13 October

Y.Bhg. Dato' Ahmad Bin Hj. Kabit and Y.Bhg. Datuk Kamarul Zaman Bin Md.Isa Chaired the Meeting of the Deputy Secretary-General, Ministry of Health Malaysia (Management Finance) with all head of division and Deputy Director (Management) at States Health Department, MOH Hospitals and Institutes Bil 3/2008 at Felda Residence, Kuala Terengganu.

18 October

Y.B. Datuk Dr. Haji Abd. Latiff bin Ahmad, Deputy Minister of Health Malaysia opened the fourth Convocation of the Sungai Buloh Allied Health Science College at Putrajaya International Conference Centre.

22 October

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated the MOH joint celebration of Hari Raya Aidilfitri and Deepavali at Dataran Merdeka, MOH headquarters, Putrajaya.

23 - 25 October

Y.Bhg. Dato' Dr. Maimunah A.Hamid, Deputy Director-General of Health (Research and Technical Support), officiated the 11th National Institutes of Health (NIH) Scientific Conference at Institute of Health Management, Kuala Lumpur.

23 - 25 October

Y.B. Datuk Dr. Haji Abd. Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated *Jom Jaga Gigi & Kesihatan Masyarakat Orang Asli* Campaign at Kg. Peta, Mukim Endau-Mersing.

28 - 30 October

Y.Bhg. Dato' Sri Haji Mohd. Nasir Bin Mohd. Ashraf, Secretary-General, Ministry of Health Malaysia launched the MOH level National Tilawah Al-Quran 2008/1429H at Kolej Multimedia Timur Rusila Hall, Marang, Terengganu.

30 October

Tuan Hj. Abd. Jabar Ahmad, Director of Health Education Division officiated the inaugural National Communication Conference 2008 at Grand Klana Resort, Seremban, Negeri Sembilan.

4 November

Y.Bhg. Dato' Sri Dr. Haji Mohd Nasir Mohd Ashraf, Secretary-General, Ministry of Health Malaysia held a dialogue with representatives from MOH Association/ Employee Union 2008 at MOH headquarters, Putrajaya.

1 - 6 November

Y.Bhg. Dato' Dr. Hj. Ramlee bin Hj. Rahmat, Deputy Director-General of Health (Public Health) officiated the fifth Global Tephinet Conference 2008 at Kuala Lumpur.

4 - 6 November

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated the inaugural Asia Pacific Traditional and Complementary Medicine Conference at Grand Seasons Hotel, Kuala Lumpur.

6 - 11 November

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia led the Malaysian delegation to the World Health Organization (WHO) Congress on Traditional Medicine in Beijing, China.

18 - 19 November

Y.A.B. Dato' Sri Mohd Najib bin Abdul Razak, Deputy Prime Minister Malaysia officiated the Asia-Pacific Health Ministers' Conference on Climate Change and Health at Mutiara Crowne Plaza Hotel, Kuala Lumpur.

19 - 20 November

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia headed the Malaysian delegation to the 4th Bilateral Ministers of Health Meeting Between Malaysia and Brunei Darussalam in Malacca.

22 November

Y.B. Datuk Dr. Hj. Abdul Latiff bin Ahmad, Deputy Minister of Health Malaysia officiated Sandakan Nursing Complex at Sandakan Sabah.

26 November

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated concurrently the Management Conference, Quality Day Celebration, Mesra Kenangan Night and MOH Annual Dinner 2008 at Royale Bintang Hotel, Negeri Sembilan.

26 November

Y. B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia presented the Finance Quality Award to the Oral Health Office, Miri Division, Sarawak in Seremban, Negeri Sembilan.

3 - 5 December

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated The Third National Health and Morbidity Survey (NHMS III) Scientific Conference – State Findings and launched the report of The Third National Health and Morbidity Survey (NHMS III) 2006 at Royale Bintang Hotel, Seremban, Negeri Sembilan.

16 December

Y.B Dato' Sri Liow Tiong Lai, Minister of Health Malaysia officiated the National Level World Aids Day 2008 at Sunway Resort Hotel & Spa, Kuala Lumpur.

17 December

Y.B. Dato' Sri Liow Tiong Lai, Minister of Health Malaysia visited the proposed Maternity Specialist Complex and Psychiatric Specialist Complex sites whose construction are due to commence in early 2009 at Sultanah Nur Zahirah Hospital.