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NATIONAL HEALTH ACCOUNTS

MINISTRY OF HEALTH
(MOH) SUB-ACCOUNT
(1997 – 2009)

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This Ministry of Health (MOH) sub-account is a new sub-set of Malaysia National Health Accounts (MNHA) data that is produced for the first time. It contains the MOH expenditure and revenue data over a time period from 1997 to 2009. The aim of this sub-account is to provide financial data beyond the MNHA framework for health policy and planning especially to government agency stakeholders. In addition to the outputs using the MNHA framework, a MOH sub-account framework was designed to produce a set of expected data under this sub-account.

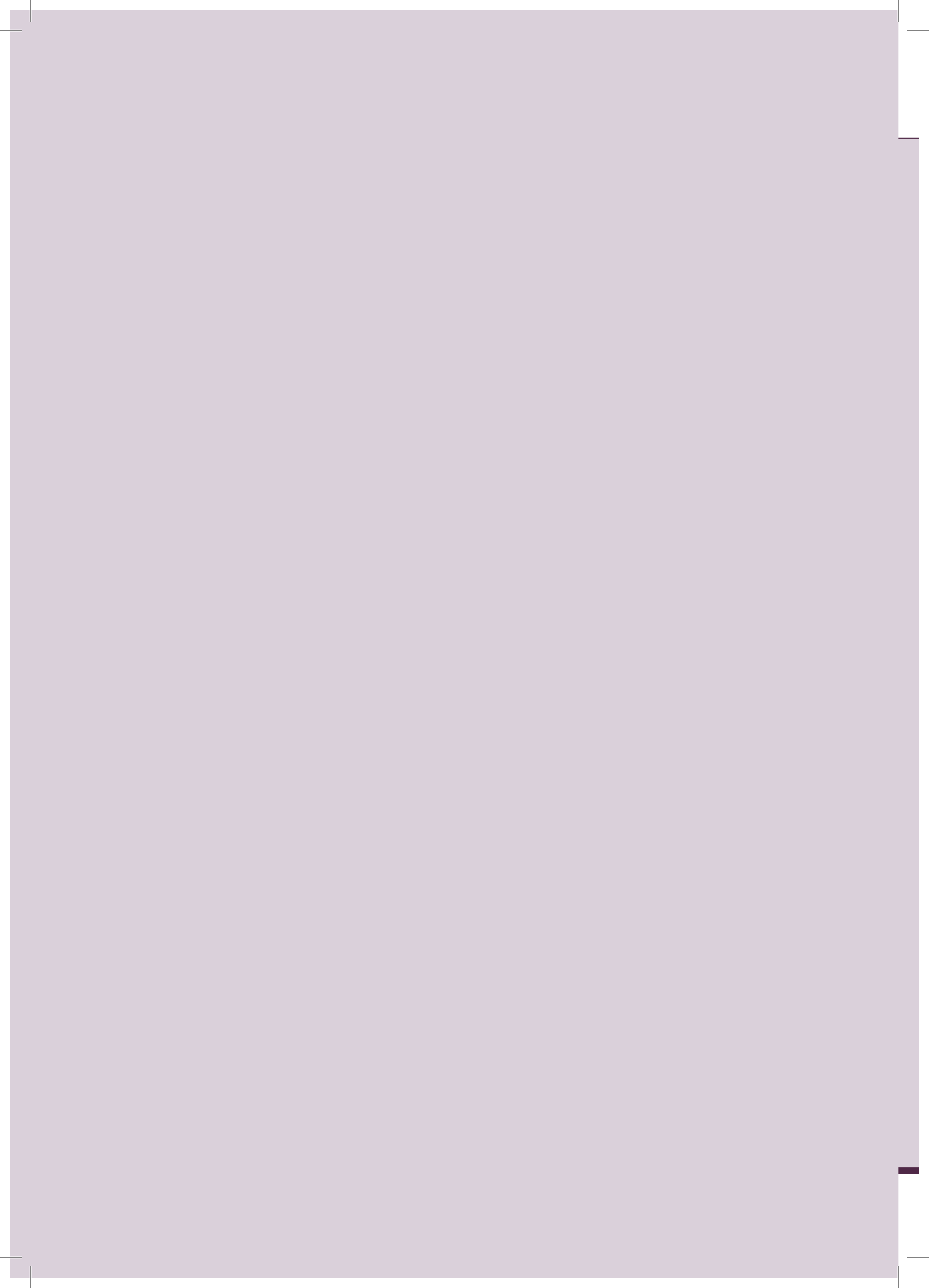
The total MOH expenditure which is a composite of the operational and development expenditure is compared to total public sector expenditure and gross domestic product (GDP). The expenditure is then tabled as spending at various facilities and expenditure under multiple programmes and sub-activities. Furthermore the MOH sub-account provides the state expenditure disaggregation. The expenditures in some areas of special interest are also tabled separately. This includes expenditure at hospitals and various sub-activities under the public health services. For hospital expenditure, the results of the hospital cost accounting study conducted in 2002 were applied to produce the hospital functional disaggregation of curative care. It is hoped that in future the MNHA Unit will be able to repeat this specific study to provide better updates. Similarly the public health expenditure is disaggregated into the various activities related to maternal and child health, school health, communicable and non-communicable diseases and others. Expenditures for wages and pharmaceuticals under the MOH are also identified.

The total MOH revenue is the summation of collection from patients and other sources. This includes collection for both MOH inpatient and outpatient services. The revenue is usually sent back to the Treasury as part of the national consolidated fund. This is usually a very minimal amount compared to the actual expenditure under the ministry. There have been discussions to retain this revenue as an incentive to improve revenue collection and the data in this document becomes an important reference base for future changes.

The financial aid and technical expertise in support towards all the activities under the MOH sub-account have led to the production of this document. World Health Organization (WHO) kindly funded the consultancy under Dr. Ravindra P Rannan-Eliya from Institute of Health Policy in Sri Lanka who has been instrumental in the institutionalization of NHA in this country. The MNHA Unit wishes to express our extended gratitude to the financier, consultant and all those who assisted to materialize the MOH Sub-account.

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ABBREVIATIONS



AG	Accountant-General
CD	Communicable Diseases
CRCC	Cost Responsibility Centre Code
DOS	Department of Statistics
GDP	Gross Domestic Product
GOM	Government of Malaysia
HIC	Health Informatics Center
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HKL	Kuala Lumpur Hospital
HQ	Headquarters
HR	Human Resources
ICT	Information and Communication Technology
JKN	<i>Jabatan Kesihatan Negeri</i> (State Health Office)
MCH	Maternal and Child Health
MF	MNHA Code for Functions of Health Services
MNHA	Malaysia National Health Accounts
MOH	Ministry of Health
MOHE	Ministry of Higher Education
NCD	Non-Communicable Diseases
NHA	National Health Accounts
NIH	National Institutes of Health
NRI	National Respiratory Institute
P&D	Planning and Development
PH	Public Health
PTJ code	<i>Kod Pusat Tanggung Jawab</i> (Cost Responsibility Centre Code)
R&D	Research & Development
RM	<i>Ringgit Malaysia</i> (Malaysia Currency)
SODO code	Specific Object and Detailed Object code
TCM	Traditional Complementary Medicines
Vs	Versus
W.P	<i>Wilayah Persekutuan</i> (Federal Territories)
WHO	World Health Organisation

Background

Currently the Malaysia National Health Accounts (MNHA) has a database of national health expenditure for a thirteen year period spanning from 1997 to 2009. This data shows that the total health expenditure has increased from RM8,045 million or 2.85% GDP in 1997 to RM33,691 million or 4.96% GDP in 2009 (Figure 1.1). In 2009 the public share was 2.71% GDP whereas the private share was 2.25% GDP (Figure 1.2). Throughout 1997 to 2009, although both the public and private sector expenditures have been on the upward trend, the public share has remained higher than the private share of expenditure.

The public share of expenditure is a composite of expenditures by several sources of financing for health care services and products ranging from the Ministry of Health (MOH), Ministry of Higher Education (MOHE), government statutory bodies and other government agencies. The MNHA 1997 - 2009 time series data shows that the MOH remains the largest single funder throughout this period contributing to about 40-50% of the total health expenditure or around 80% of public sector expenditure (Figure 1.3). As a result policy makers and other stakeholders often require further disaggregated data beyond the MNHA framework. This MOH Sub-account document is produced to meet this need.

FIGURE 1.1 : Total Health Expenditure as Percentage of GDP, 1997-2009

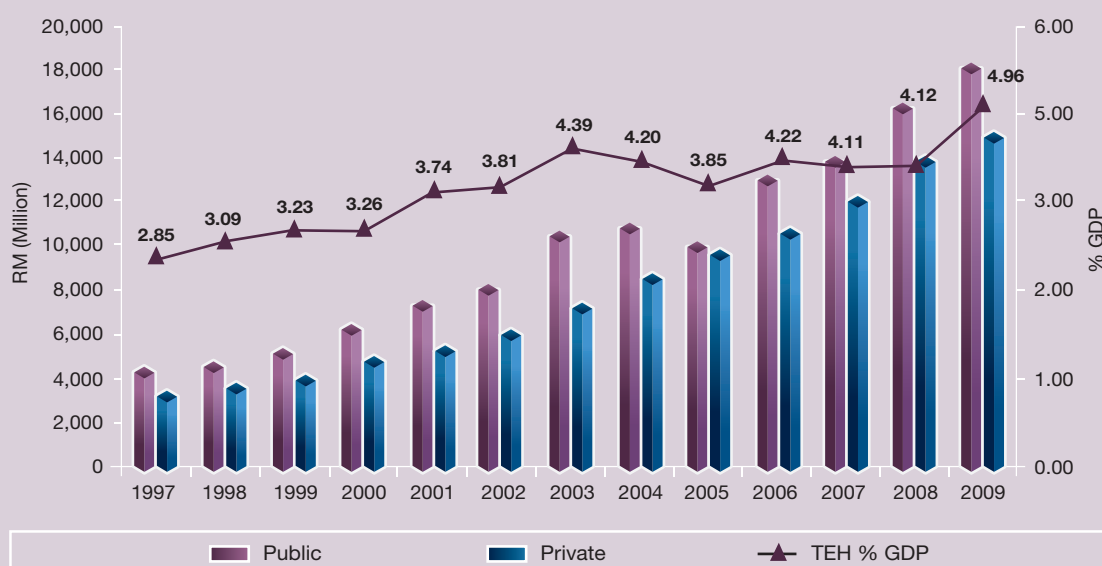


FIGURE 1.2 : Public Private Share of Total Health Expenditure, 1997-2009

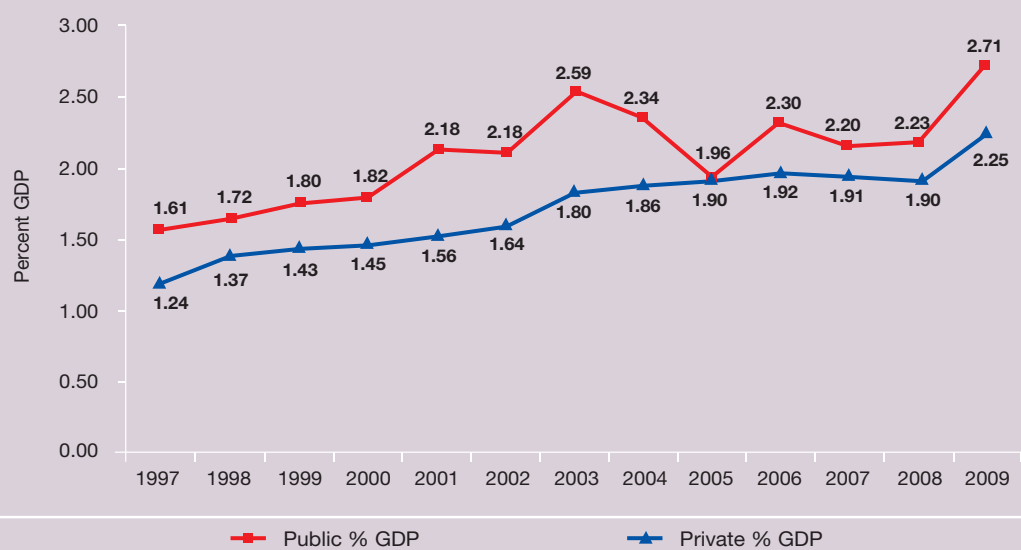


FIGURE 1.3 : MOH Share of Total and Public Sector Expenditure, 1997-2009





CHAPTER 2

Methodology

The Accountant-General (AG) raw database for the MOH is the primary source of data in this MOH Sub-account. An analysis framework was designed specifically based on this database to extract the necessary data. This analysis framework was based on two pathways of data retrieval from the raw AG database, one using the MNHA framework and the other using the existing accounting system in the MOH. In addition, several related references including the Annual MOH budget allocation document were also used (Appendix 1). Multiple dummy tables were finally populated to produce the various tables and figures of potential policy importance.

The MNHA framework is adapted from the System of Health Accounts framework whereby all health expenditure is captured in a tri-axial coding system under the dimensions of sources of funding, providers and functions of health services and products. The existing accounting system in the MOH uses the coding system designed for the MOH and other general codes produced by the Treasury for all government agencies. This existing coding system includes the Cost Responsibility Centre Codes or *Kod Pusat Tanggung Jawab* (CRCC or PTJ code) and the programme and activities codes specific to the MOH. Furthermore, the Specific Object and Detailed Object (SODO) codes produced by the Treasury allow some detailed disaggregation of the expenditures.

Universal sampling of all data from 1997 till 2009 ensured there was comprehensive tracking and reporting of total health expenditures and revenues under the MOH. The raw data from AG were submitted in several formats which had to be merged into one dataset for the years 1997 to 2009. This master dataset then had to be cleaned before analysis. A MOH sub-account framework was designed based on potential policy implications. Several dummy tables were designed to retrieve the data according to the expected outputs of the sub-account framework.

Since the MOH raw database is large, the analysis was mainly carried out using the software Stata with some minimal use of Microsoft Excel. Multiple Stata programmes were written to extract the necessary data. No extrapolation or interpolation methods of National Health Account (NHA) were used for any data gaps so as to reflect the real expenditure. Clarifications regarding fund flows and the actual expenditures were made with several individuals, various divisions and multiple units of the MOH as problems and issues sprouted during the analysis period.



MOH Sub-Account Framework

The MOH sub-account framework is a format to report the time series MOH expenditure and revenue data. The aim of this reporting format is to provide information on spending and collection trends within the MOH. Such information is important for financial related policy decisions, budget planning and also future projections for health financial reforms.

The total MOH expenditure is the summation of the operating and development expenditures. The government accounting system records the MOH operating or recurrent expenditure under the code B42 (previously B34) and the MOH development expenditure as P42 code (previously B42).

The total MOH expenditure can be reported by expenditures at various facilities or agencies, or expenditures by Programmes and Activities. The expenditures at the facilities can be disaggregated to operational and development expenditure. The MOH sub-account framework further provides MOH disaggregation of expenditure by state level, MOH expenditure under the MNHA framework, namely by the dimensions of provider and function of healthcare services and products, and lastly some expenditures on areas of interest.

It is important to note that the expenditures reported under the various formats in this sub-account may have some limitations due to the complex accounting system in a large ministry with multiple types and levels of activities. This MOH sub-account is based on expenditures as recorded under particular codes and may not reflect the exact situation. However, the sub-account provides a rather accurate financial trend of the spending. As an example, expenditure at a certain facility can be channelled to another facility based on priority needs. Similarly the movement of activities under one programmes to another can also affect the expenditure patterns. There are some facilities which in the past years may have had their financial resources recorded as part of another facility. Examples of these situations can be seen in expenditures reported under the facilities such as District Dental Office or expenditures reported under Oral Health Programme. These limitations must be considered when reference is made to the data in this document.

In addition to the expenditure data, the MOH sub-account framework also produce the total revenue collected at the various facilities. These revenue are usually channelled back to the Treasury as part of the Government Consolidated Funds.

All the data on expenditure and revenue are from the period 1997 till 2009 and is reported in nominal ringgit value. Various tables and figures are used to display the MOH sub-account data. Some of the figures on proportions have been adjusted to total up to 100 per cent. **Components on tables may not add to total of 100 per cent due to rounding up.** Also, the sub-account database is a large database of the MOH disaggregated expenditure and only some examples are produced in this document.



CHAPTER 4

Total MOH Expenditure

The total MOH expenditure over the 1997 to 2009 time period shows an upward trend with expenditure increase from RM3,707 million in 1997 to RM14,713 million in 2009 (Figure 4.1 and Table 4.1). This is equivalent rise of 1.32% GDP in 1997 to 2.16% GDP in 2009. This total expenditure consists of both operational and development expenditure. The share of development to total expenditure fluctuates over the time period with a minimum of RM1,467 million in 2008 or 11% of total to a maximum of RM2,690 million in 2003 or 30% of total MOH expenditure (Figure 4.2 and Table 4.2). Also in general the expenditure data when compared to the budget allocation shows some variation with operational expenditure slightly exceeding the allocation and development expenditure slightly under the allocation.

FIGURE 4.1 : Total MOH and MOH Expenditure as Per cent GDP, 1997-2009

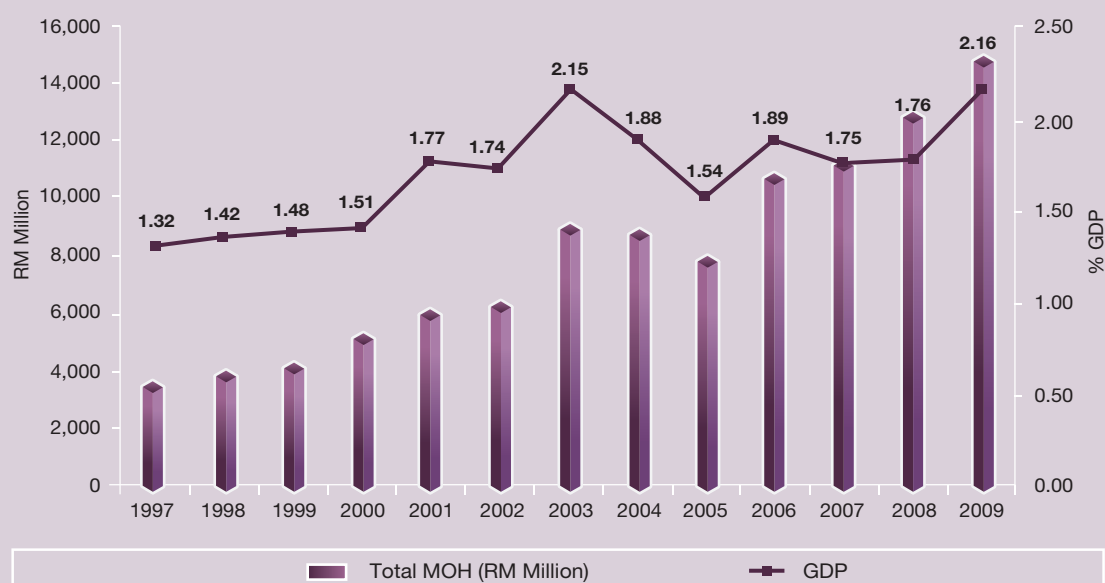


TABLE 4.1 : Total MOH and Per cent GDP Expenditure, 1997-2009

Year	Total Health Expenditure (RM Million)	% GDP	Total GDP (RM Million)*
1997	3,707	1.32	281,795
1998	4,033	1.42	283,243
1999	4,450	1.48	300,764
2000	5,367	1.51	356,401
2001	6,251	1.77	352,579
2002	6,670	1.74	383,213
2003	9,013	2.15	418,769
2004	8,917	1.88	474,048
2005	8,060	1.54	522,445
2006	10,838	1.89	574,441
2007	11,243	1.75	642,049
2008	13,036	1.76	742,470
2009	14,713	2.16	679,938

Source: *Department of Statistics Malaysia



FIGURE 4.2 : Operational and Development Expenditure as Share of Total MOH Spending, 1997-2009



TABLE 4.2 : Total MOH Budget Allocation and Expenditure, 1997-2009*

Year	Operational		Development	
	Allocation (RM Million)	Expenditure (RM Million)	Allocation (RM Million)	Expenditure (RM Million)
1997	3,236	3,258	579	449
1998	3,359	3,316	733	716
1999	3,612	3,615	900	835
2000	4,214	4,091	1,290	1,276
2001	4,631	4,680	1,500	1,570
2002	5,139	5,157	1,715	1,514
2003	5,786	6,322	1,990	2,690
2004	7,026	6,686	2,643	2,231
2005	7,302	6,866	1,197	1,194
2006	8,206	9,538	1,297	1,300
2007	9,572	9,772	1,629	1,471
2008	10,880	11,569	2,222	1,467
2009	11,863	12,173	2,567	2,540

Note: *This expenditure data is extracted from the MNHA Framework and is based on AG database



Expenditure At Facilities / Agencies

The MOH expenditure can be disaggregated to the spending at various facilities or agencies based on the RCC or PTJ codes. The existing code system allows the breakdown of expenditures at 11 facilities or agencies (Appendix 4). The functions of these facilities are explained briefly.

1. **Headquarters (*Ibu Pejabat*)**

This is the federal level which comprises of all the various divisions under the MOH. The offices are mostly situated at Putrajaya and they carry out the macro level administrative functions of the ministry such as policy settings, programme developments, budget allocations, service and facility planning and other activities.

2. **State Health Offices (*Jabatan Kesihatan Negeri*)**

Every state has a state health office that is responsible for the implementation of all federal policies and programmes in their respective states. These offices also convey the state special needs to the federal level for support and resource allocations.

3. **District Health Offices (*Pejabat Kesihatan Negeri*)**

Every state health office has several district health offices that tend to all the medical health needs especially the public health or community health services of the population under their district. These health services are rendered to the population through several clinics such as health clinics, maternal and child health clinics, and 1Malaysia clinics.

4. **District Dental Offices (*Pejabat Pegawai Pergigian Daerah*)**

These are newly established facilities in some states that tend to all the dental health needs of the population under their district. There are states with dental clinics as a part of the medical clinics.

5. **Division of Vector Borne Diseases (*Cawangan Kawalan Penyakit Bawaan Vektor*)**

This division with offices at the federal level and some states are responsible for all the vector borne diseases which includes dengue, malaria, leptospirosis, chikungunya, filariasis, and others. In some states this function is under the Public Health Services of the State Health Office.

6. **Hospitals**

The State Health Office oversees to all the hospital needs under their respective states and they are under the administrative control of the Medical Division of the MOH at the federal level.

7. **Public Health Laboratories (*Makmal Kesihatan Awam*)**

These laboratories provide services to both the MOH hospitals and clinics and are regionalized for cost efficiency.



8. **Research Institutions**

There are 6 institutes under the National Institutes of Health (NIH) that specializes in providing training and are involved in Research and Development (R&D) for healthcare services in the country.

9. **National Blood Bank**

The main objective in the establishment of the National Blood Bank is the provision of blood supplies to all public hospitals and registered private hospitals in the Klang Valley.

10. **Petaling Jaya (PJ) Pharmacy Division & Sarawak Pharmaceutical Laboratory**

These are the 2 specific divisions that cater for pharmaceutical services in the country.

11. **Nursing & Allied Health Colleges**

Most of the public sector training for these categories of healthcare providers is conducted by these colleges.

The 1997-2009 time series MOH sub-account shows that all facility expenditure has been on the upward trend. Hospitals had the highest share of spending in the total MOH expenditure with a steeper increase than any other facility especially over the last five years (Figure 5.1 and Table 5.1). The next highest is expenditures at headquarters with fluctuating expenditure pattern which is mostly affected by the development expenditure. If the development expenditure is excluded, the expenditure at district health offices or clinics exceeds that at headquarters (Figure 5.2). As an example, in 2009, the total hospital expenditure was RM7,903 million or 54% of MOH expenditure followed by headquarters expenditure at RM2,975 million or 20% (Figure 5.3). The exclusion of development expenditure drops the hospital expenditure to RM7,781 million or 64% share of operational expenditure and the headquarters expenditure to RM973 million or 8% (Figure 5.4).

However, although the hospital expenditure in absolute ringgit value is on the upward trend, as a share of total or operational expenditure it shows a downward trend (Table 5.2). Hospital expenditure share of the total MOH expenditure decreased from 61% in 1997 to 54% in 2009. Similarly hospital share of the MOH operational expenditure decreased from 68% in 1997 to 64% in 2009 (Table 5.3 & Table 5.4). All the other facilities spent less than RM1,000 million each throughout the time period.

Besides the 11 groups of facility expenditure disaggregation to operational and development expenditure, the MOH sub-account is able to produce the operational and expenditure trends of each component of the 11 groups of facilities and several comparable expenditure data can be produced for stakeholders. A comprehensive list of the facilities is provided in Appendix 1 - 4. As an example, there are a total of 137 MOH hospitals. The operational and development expenditure at Kuala Lumpur Hospital is given as an example of the possible data that can be produced (Table 5.5).

FIGURE 5.1 : Total MOH Expenditure at Facilities / Agencies, 1997-2009

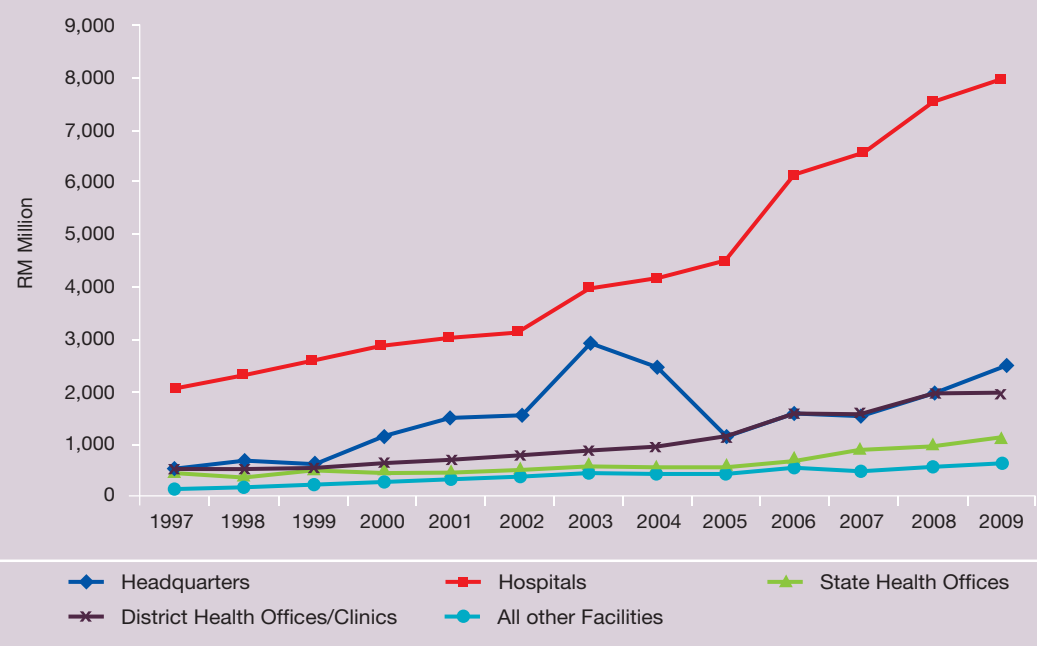


FIGURE 5.2 : MOH Operational Expenditure at Facilities / Agencies, 1997-2009

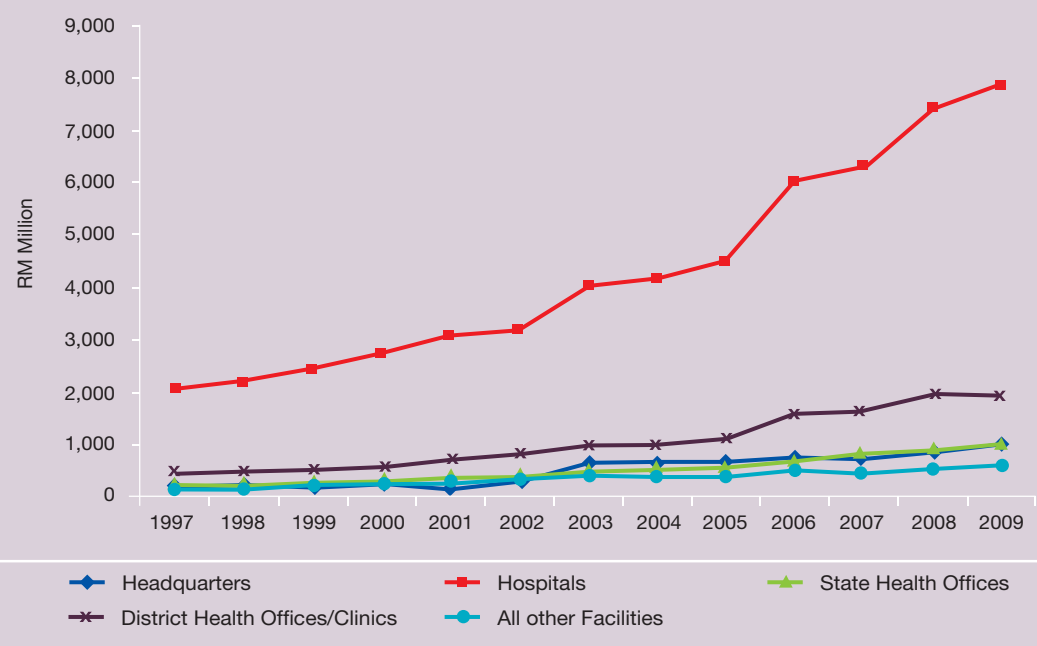
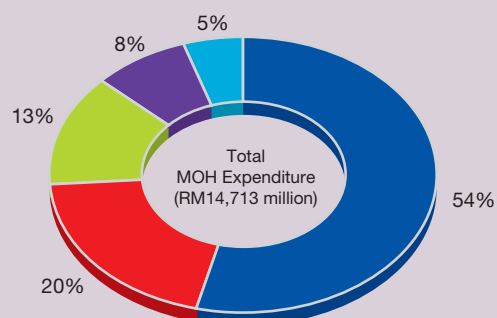


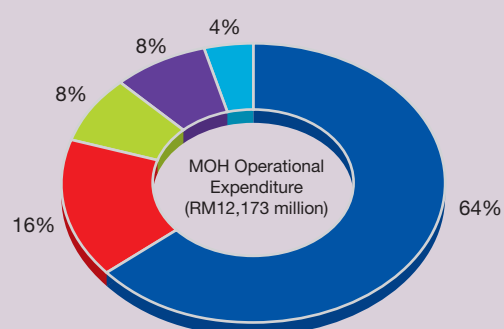


FIGURE 5.3 : Total MOH Expenditure at Facilities / Agencies, 2009



- Hospitals
- Headquarters
- District Health Offices/Clinics
- State Health Offices
- All Other Facilities

FIGURE 5.4 : MOH Operational Expenditure at Facilities / Agencies, 2009



- Hospitals
- Headquarters
- District Health Offices/Clinics
- State Health Offices
- All Other Facilities



TABLE 5.1 : Total Expenditure at Various MOH Facilities / Agencies, 1997-2009 (RM Million)

Facility/Agency	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Headquarters	508	736	729	1,257	1,527	1,600	2,903	2,455	1,239	1,628	1,584	1,959	2,975
2 Hospitals	2,248	2,361	2,552	2,829	3,216	3,323	3,993	4,306	4,542	6,184	6,532	7,531	7,903
3 State Health Offices	359	327	434	440	447	523	690	658	703	836	894	1,011	1,242
4 District Health Offices/ Clinics	486	505	577	666	782	878	1,026	1,113	1,202	1,651	1,707	1,929	1,957
5 Vector Disease Control Division	20	20	37	22	32	26	9	0	2	6	6	6	6
6 National Blood Bank	0	0	0	2	29	51	51	53	54	74	74	87	87
7 PH Laboratories	0	0	0	6	9	11	18	19	17	38	38	34	32
8 P.U Pharmacy Division	10	13	14	10	13	17	20	17	16	21	21	25	38
9 Nursing & Allied Health College	35	35	72	100	152	192	246	243	234	276	299	327	341
10 Research Institutions (6 institutes under NIH)	41	36	35	34	42	50	58	53	51	124	106	128	132
Total	3,707	4,033	4,450	5,367	6,251	6,670	9,013	8,917	8,060	10,838	11,243	13,036	14,713

TABLE 5.2 : Total Expenditure at Various MOH Facilities / Agencies, 1997-2009 (Per cent, %)

Facility/Agency	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Headquarters	14%	18%	16%	23%	24%	24%	32%	28%	15%	15%	15%	15%	20%
2 Hospitals	16%	59%	57%	53%	51%	50%	44%	48%	56%	57%	58%	58%	54%
3 State Health Offices	10%	8%	10%	8%	7%	8%	8%	7%	9%	8%	8%	8%	8%
4 District Health Offices/ Clinics	13%	13%	13%	12%	13%	13%	11%	12%	15%	15%	15%	15%	13%
5 Vector Disease Control Division	1%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
6 National Blood Bank	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
7 PH Laboratories	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8 P.U Pharmacy Division	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9 Nursing & Allied Health College	1%	1%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	2%
10 Research Institutions (6 institutes under NIH)	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



TABLE 5.3 : MOH Operational Expenditure at Various Facilities / Agencies, 1997-2009 (RM Million)

Facility/Agency	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Headquarters	198	204	195	221	248	327	610	601	579	766	682	795	973
2 Hospitals	2,215	2,308	2,474	2,766	3,086	3,255	3,872	4,151	4,295	6,008	6,318	7,427	7,781
3 State Health Offices	267	246	275	313	364	430	510	558	556	739	747	911	943
4 District Health Offices/ Clinics	472	461	522	624	712	831	951	1,027	1,091	1,547	1,571	1,890	1,902
5 Vector Disease Control Division	20	20	36	21	32	26	9	0	2	6	6	6	6
6 National Blood Bank	0	0	0	2	29	34	51	48	46	74	62	87	86
7 PH Laboratories	0	0	0	4	8	11	18	15	15	34	25	33	32
8 PU Pharmacy Division	10	11	12	10	13	13	14	17	16	20	20	23	26
9 Nursing & Allied Health College	35	33	68	96	147	186	231	222	218	270	274	310	325
10 Research Institutions (6 institutes under NIIH)	40	34	33	33	41	45	55	50	47	73	67	87	100
Total	3,258	3,316	3,615	4,091	4,680	5,157	6,322	6,686	6,866	9,538	9,772	11,569	12,173

TABLE 5.4 : Operational MOH Expenditure at Various Facilities / Agencies, 1997-2009 (Per cent, %)

Facility/Agency	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Headquarters	6%	6%	5%	5%	5%	6%	10%	9%	8%	8%	7%	7%	8%
2 Hospitals	68%	70%	68%	68%	66%	63%	61%	62%	63%	63%	65%	64%	64%
3 State Health Offices	8%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
4 District Health Offices/ Clinics	14%	14%	14%	15%	15%	16%	15%	15%	16%	16%	16%	16%	16%
5 Vector Disease Control Division	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
6 National Blood Bank	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
7 PH Laboratories	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8 PU Pharmacy Division	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9 Nursing & Allied Health College	1%	1%	2%	2%	3%	4%	4%	3%	3%	3%	3%	3%	3%
10 Research Institutions (6 institutes under NIIH)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



TABLE 5.5 : Hospital Kuala Lumpur Expenditure, 1997-2009

Year	RM Million				Per cent
	Operational Expenditure	Development Expenditure	Total HKL Expenditure	All Hospital Operational Expenditure	HKL Share of All Hospital Operational Expenditure
1997	315	4	319	2,215	14%
1998	335	9	344	2,308	15%
1999	335	9	343	2,474	14%
2000	345	6	351	2,766	13%
2001	379	31	410	3,086	13%
2002	377	25	402	3,255	12%
2003	431	10	441	3,872	11%
2004	473	21	494	4,151	12%
2005	484	20	504	4,295	12%
2006	635	17	652	6,008	11%
2007	575	14	589	6,318	9%
2008	633	8	641	7,427	9%
2009	690	11	702	7,781	9%

Expenditure By Activities Assigned To Programmes

The aim of the reporting under this section is to provide the expenditure trend of major activities under the MOH. The MOH operating expenditure is used to disaggregate the spending for various activities under the current six main programmes. The expenditure assignment is done under the heading of the programmes for the time series even if it did not exist in the particular year. An example is the oral health programme and pharmacy programme which prior to 2008 was functional as separate unit or division under the MOH and the operational budget flow for these activities came through the Public Health Programme and the Research and Technical Programme respectively.

However, in almost every programme there is often a “New Policy” or *Dasar Baru* expenditure which is a special additional expenditure beyond the annual estimated budget. This is the financial provision for new or unscheduled activities and policies for the year. Often this expenditure which is usually a very small proportion of the total expenditure becomes part and parcel of the subsequent year operational budget allocation. The tables produced under this section are exclusive of this additional expenditure.

During the 1997 to 2009 time period, the MOH sub-account assigns the various activities under a total of 6+1 programmes, namely, Management Programme, Public Health Programme, Medical Programme, Pharmacy Programme, Oral Health Programme, Research and Technical Support Programme and an additional group of miscellaneous activities which includes health promotion board, the one-off and other expenditures. Of these 6+1 programmes, activities related to the Medical Programme had the highest expenditure followed by those under Public Health Programme (Figure 6.1 and Table 6.1).

In 2009, the expenditure for activities under the Medical Programme was RM7,855 million or 64% of the total MOH operating expenditure and for the Public Health Programme expenditure was RM2,369 or 19% of the total MOH operating expenditure (Figure 6.2). The shares of activities under these two programmes have also remained about the same throughout 1997 to 2009 time period (Table 6.2).

The MOH sub-account is able to produce the expenditure trends for the time period of the various sub-activities under each main activity. The expenditure of the sub-activities of the programmes with the three highest expenditures, the Medical Programme, the Public Health Programmes, and the Management Programme are used as examples to explain the tables that can be produced under the MOH sub-account.

In 2009, there were a total of 37 sub-activities under the Medical Programme (Table 6.3). These include administration at various levels such as headquarters, state and hospitals, and 35 clinical discipline services. The administrative expenditure for the same year was RM2,439 million or

31% and the remaining expenditure was for the various clinical disciplines. The Pharmaceutical and Supplies expenditure under the Medical Programme activities was RM1,180 million or 15%, the Laboratory and Pathology services was RM332 million or 4% and the Radiological and Diagnostic Imaging services was RM108 million or 1% of the total activities related to the Medical Programme.

Likewise, expenditures of activities and sub-activities assigned to the Public Health Programme and Management Programme can be produced (Table 6.4 and Table 6.5).

FIGURE 6.1 : MOH Operational Expenditure by Activities Assigned to Programmes, 1997-2009

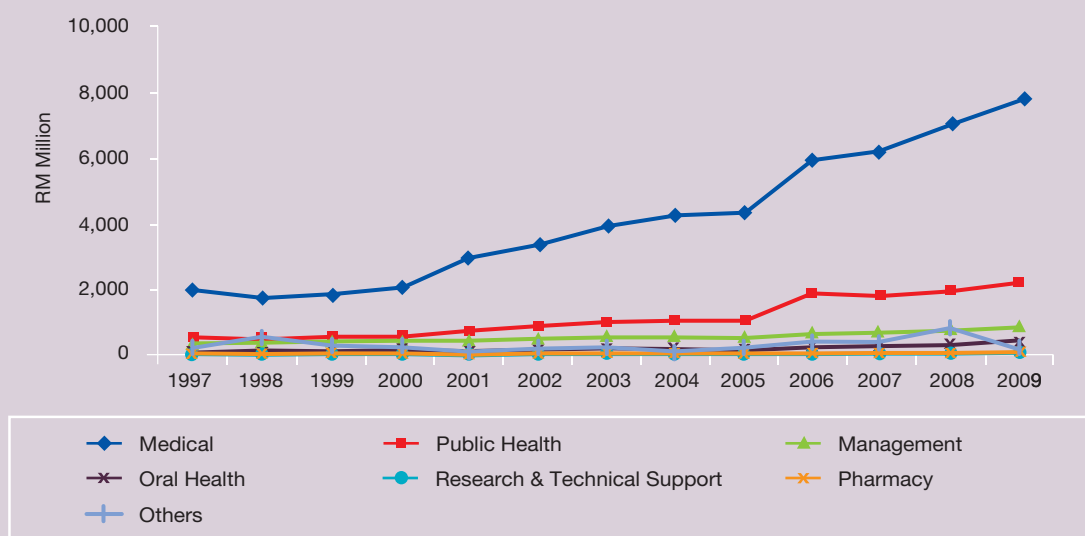


FIGURE 6.2 : MOH Operational Expenditure by Activities Assigned to Programmes, 2009

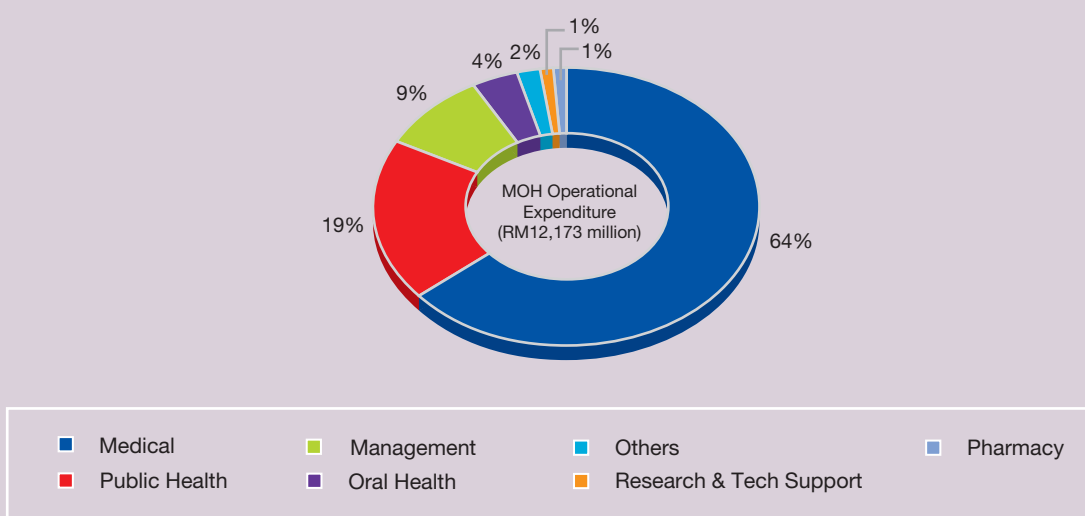




TABLE 6.1 : Total MOH Operational Expenditure Under Various Activities Assigned to Programmes, 1997-2009 (RM Million)

	MOH Programmes	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	Medical	2,079	1,784	1,841	2,113	3,020	3,258	3,981	4,315	4,402	5,904	6,203	7,025	7,855
2	Public Health	556	547	618	708	866	1,002	1,209	1,333	1,343	1,822	1,812	2,081	2,369
3	Management	250	265	283	316	402	437	633	684	657	888	868	947	1,046
4	Oral Health	113	112	119	132	150	179	194	225	241	317	314	418	444
5	Research & Technical Support	67	26	558	579	102	56	72	84	77	115	120	122	147
6	Pharmacy	18	16	16	18	24	28	32	41	40	64	63	115	102
7	Others	176	567	178	225	116	197	202	4	105	428	392	860	212
	Total	3,258	3,316	3,615	4,091	4,680	5,157	6,322	6,686	6,866	9,538	9,772	11,569	12,173

Note: Excludes expenditure under "New Policy

TABLE 6.2 : Total MOH Operational Expenditure Under Various Activities Assigned to Programmes, 1997-2009 (Per cent, %)

	MOH Programmes	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	Medical	64%	54%	51%	52%	65%	63%	63%	65%	64%	62%	63%	61%	65%
2	Public Health	17%	17%	17%	17%	19%	19%	19%	20%	20%	19%	19%	18%	19%
3	Management	8%	8%	8%	8%	9%	8%	10%	10%	10%	9%	9%	8%	9%
4	Oral Health	3%	3%	3%	3%	3%	3%	3%	3%	4%	3%	3%	4%	4%
5	Research & Technical Support	2%	1%	15%	14%	2%	1%	1%	1%	1%	1%	1%	1%	1%
6	Pharmacy	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
7	Others	5%	17%	5%	5%	2%	4%	3%	0%	2%	4%	4%	7%	2%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note: Excludes expenditure under "New Policy



TABLE 6.3 : Medical Programme Sub-activities Expenditure, 2009

	Medical Programme	RM Million	Per cent
1	HQ & State Administration	1,196	15.23%
2	Hospital Administration	1,243	15.82%
3	Pharmacy & Supplies	1,180	15.02%
4	Lab/Pathology	332	4.23%
5	Radiology/Diagnostic Imaging	108	1.37%
6	Other Clinical Disciplines (32)	3,796	48.33%
	Total	7,855	100%

TABLE 6.4 : Public Health Programme Sub-activities Expenditure, 2009

	Public Health Programme	RM Million	Per cent
1	HQ & State Administration	203	9%
2	Family Health Development	1,539	65%
3	Vector Disease Control	505	21%
4	Food Safety & Quality	48	2%
5	Health Education	74	3%
	Total	2,369	100%

Note: The Oral health activity is excluded under this grouping of Public Health Programme

TABLE 6.5 : Management Programme Sub-activities Expenditure, 2009

	Management Programme	RM Million	Per cent
1	HQ & State Administration	223	21%
2	HR Planning & Training	362	35%
3	Finance	285	27%
4	Human resource	86	8%
5	ICT	84	8%
6	Competency Development	5	1%
	Total	1,046	100%



CHAPTER 7

MOH State Expenditure

The total MOH expenditure can be disaggregated by expenditures at various states in the country. There are a total of thirteen states and three additional Federal Territories, namely Kuala Lumpur, Labuan and Putrajaya. The expenditure for Putrajaya is included under the state of Selangor to follow the state population census as reported under the Department of Statistics Malaysia. The state expenditure in the figures and tables under this section are arranged according to the population of the state commencing with the largest populated state.

In 2009, a total of RM11,520 million or 78% of the total MOH expenditure was disaggregated into state expenditure. The remaining RM3,193 million or 22% of total MOH expenditure was spending at the Federal level by offices at the headquarters, National Institute of Health with six research institutes, National Blood Bank and Vector Control Division of the MOH.

The most populated state of Selangor had the highest expenditure at RM1,721 million or 12% of the disaggregated expenditure (Figure 7.1 and Table 7.1). In general, the states with the higher population also had the higher MOH spending. The median per capita MOH spending amongst all states for the year 2009 was RM456 with a range of RM359 to RM682 (Figure 7.2 and Table 7.2). The MOH sub-account is able to produce health expenditure by states and per capita expenditure by states for all the remaining years from 1997 to 2008.

FIGURE 7.1 : Total MOH Expenditure by States, 2009



TABLE 7.1 : Population and MOH Expenditure by States, 2009

State	Population (Thousand*)	Expenditure (RM Million)
Selangor	5,034	1,721
Johore	3,269	1,194
Sabah	3,184	1,178
Sarawak	2,471	1,127
Perak	2,428	1,127
Kedah	1,943	757
WP KL	1,703	831
Kelantan	1,639	589
P. Pinang	1,580	727
Pahang	1,517	663
Terengganu	1,036	482
N. Sembilan	1,000	539
Malacca	762	378
Perlis	237	162
WP Labuan	94	45
Federal Allocation		3,193
Total	27,895	14,713

Source: *Department of Statistics Malaysia

FIGURE 7.2 : State Population and Per Capita Health Spending by MOH, 2009

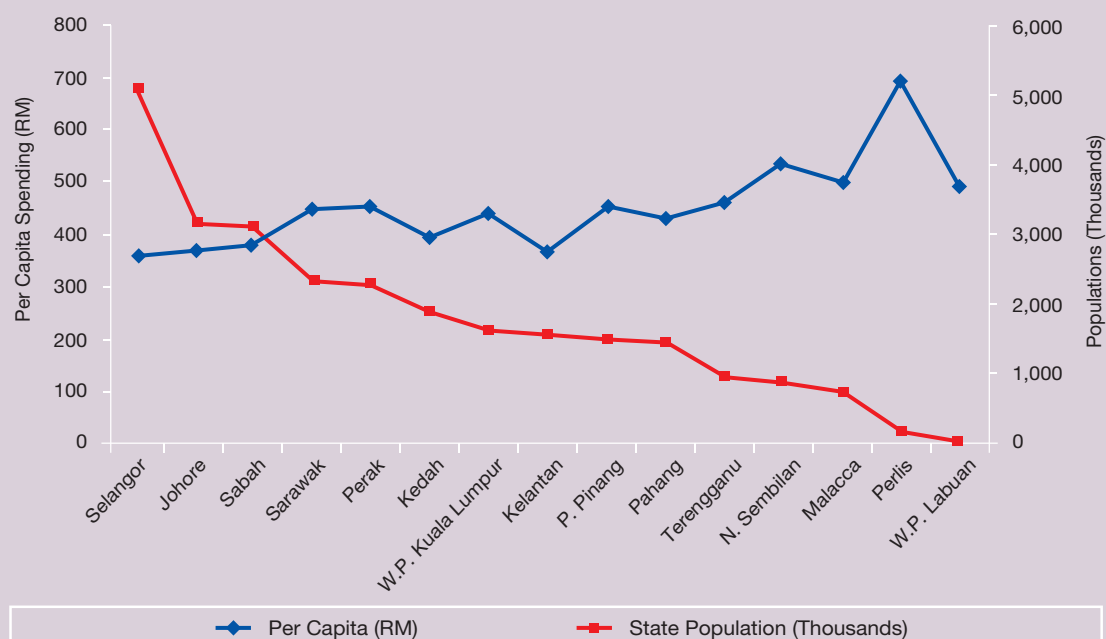


TABLE 7.2 : State Population and Per Capita Health Expenditure by MOH, 2009

State	Per Capita (RM)	Population (Thousand)*
Selangor	359	5,034
Johore	365	3,269
Sabah	370	3,184
Sarawak	456	2,471
Perak	464	2,428
Kedah	390	1,943
WP KL	437	1,703
Kelantan	359	1,639
P. Pinang	460	1,580
Pahang	437	1,517
Terengganu	465	1,036
N. Sembilan	539	1,000
Malacca	497	762
Perlis	682	237
WP Labuan	481	94
Total Population		27,895

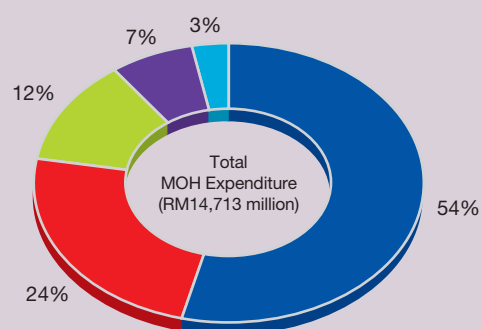
Note: RM3,193 million or 22% of total MOH expenditure was federal allocation
Source: *Department of Statistics Malaysia

MOH Expenditures By Providers And Functions

This section provides total MOH expenditure disaggregation using MNHA framework to provide expenditures under the dimension of providers and functions. The dimension of providers indicates the various groups of health care providers through whom the MOH provides the necessary health care services and products for the population. The dimension of function indicates the type of services that are purchased by the MOH.

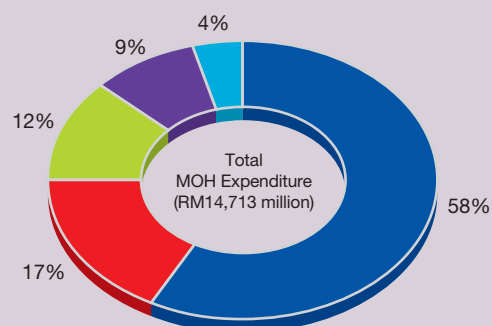
In 2009, under the dimension of providers, hospitals consumed RM7,903 million or 54% followed by general health administration expenditure mainly at the federal and state health offices at RM3,503 million or 24% of the total MOH expenditure (Figure 8.1 and Table 8.1). In the same year, under the dimension of function, curative care consumed RM8,445 million or 58% followed by capital formation at RM2,572 million or 17% of the total MOH expenditure (Figure 8.2 and Table 8.2).

FIGURE 8.1 : Total MOH Expenditure by Providers of Health Care Services & Products, 2009



- Hospitals
- General Health Admin
- Ambulatory Health Care
- Provision & Admin of Public Health Programmes
- Others

FIGURE 8.2 : Total MOH Expenditure by Functions of Health Care Services & Products, 2009



- Curative Care
- Capital Formation
- Health Program Admin
- Prevention Public Health Services
- Others



TABLE 8.1 : MOH expenditure by Providers of Health Care Services & Products, 1997-2009 (RM, Million)

	Providers of Health Care Services & Products	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	Hospitals	2,248	2,361	2,552	2,829	3,216	3,323	3,993	4,306	4,542	6,184	6,532	7,531	7,903
2	General health administration and insurance	713	943	1,050	1,567	1,814	1,878	3,308	2,792	1,669	2,106	2,130	2,483	3,503
3	Providers of ambulatory health care	295	307	355	419	519	622	844	964	1,023	1,435	1,444	1,737	1,828
4	Provision and administration of public health programmes	365	339	371	406	494	588	544	543	523	693	710	806	969
5	Institutions providing health related services	76	71	107	134	194	241	304	296	285	400	405	455	472
6	Retail sale and other providers of medical goods	10	13	14	10	13	17	20	17	16	21	21	25	38
	Total	3,707	4,033	4,450	5,367	6,251	6,670	9,013	8,917	8,060	10,838	11,243	13,036	14,713

TABLE 8.2 : MOH expenditure by Functions of Health Care Services & Products, 1997-2009 (RM, Million)

	Providers of Health Care Services & Products	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	Services of curative care	2,416	2,517	2,720	3,010	3,424	3,675	4,164	4,518	4,666	6,192	6,731	8,000	8,445
2	Capital formation of health care provider institutions	449	716	835	1,276	1,570	1,514	2,690	2,230	1,192	1,287	1,456	1,450	2,527
3	Health program administration and health insurance	540	508	535	630	713	882	1,142	1,128	1,098	1,491	1,433	1,721	1,817
4	Prevention and public health services	227	224	259	315	317	323	661	707	775	1,403	1,180	1,331	1,368
5	Education and training of health personnel	35	33	68	96	147	186	231	222	218	270	275	310	325
6	Ancillary services to health care	0	0	0	6	37	45	69	96	93	161	136	187	189
7	Research and development in health	40	34	33	33	41	45	55	18	17	34	31	37	42
	Total	3,707	4,033	4,450	5,367	6,251	6,670	9,013	8,917	8,060	10,838	11,243	13,036	14,713

Interest Area Expenditures

The data in this section on MOH expenditures in specific areas of interest are further examples of data that can be extracted from the MOH sub-account database to provide meaningful information of importance to policy makers.

MOH WAGE EXPENDITURE

The term “wage” in this document refers to all monetary payouts to employees of MOH inclusive of permanent, temporary and contract employees. It includes their emolument, allowances and all claims. The SODO codes 10000, 21000 and 29300 were used to extract the data from the raw AG database. The wage expenditure is then disaggregated into spending under various Programmes of the MOH. Under this section the term Programmes refers to the actual programme code and not the assigned programme as stated in the earlier section.

Throughout the 1997-2009 time period the median total wages paid to employees of MOH was 51% of total MOH or 42% of operating expenditure with the wages increasing almost parallel to the operating expenditure (Figure 9.1 and Table 9.1). In 2009, the Medical Programme had the highest wage payouts amounting to RM4,181 million or 64% of all wages. This was followed by wage payouts of RM1,501 million or 23% under the Public Health Programme. The Oral Health Programme spent RM366 million and the Management Programme spent RM325 million both of which was equal to 6% of total MOH wages (Figure 9.2 and Table 9.2). The wages paid out under all other programmes were less than 5% each of all wage expenditure.

As mentioned earlier in this document, it is important to note that some programmes became standalone only much later in the year and this can affect the time series expenditure trends of the programme. As an example, prior to 2008 the Public Health Programme included activities related to oral health which later became the standalone Oral Health Programme. Similarly prior to 2008 the Research and Technical Support Programme included the Pharmacy Programme.

FIGURE 9.1 : Total Wage and MOH Operational Expenditure, 1997-2009 (RM Million)



TABLE 9.1 : Total Wage, Operating and Total MOH Expenditure, 1997-2009 (RM Million)

Year	Total Wage	Operating Expenditure	Total MOH Expenditure
1997	1,634	3,258	3,707
1998	1,709	3,316	4,033
1999	1,848	3,615	4,450
2000	2,085	4,091	5,367
2001	2,342	4,680	6,251
2002	2,808	5,157	6,670
2003	3,067	6,322	9,013
2004	3,341	6,686	8,917
2005	3,622	6,866	8,060
2006	4,782	9,538	10,838
2007	4,864	9,772	11,243
2008	6,133	11,569	13,036
2009	6,511	12,173	14,713



FIGURE 9.2 : Wage Expenditure by Programmes, 2009 (Per cent)

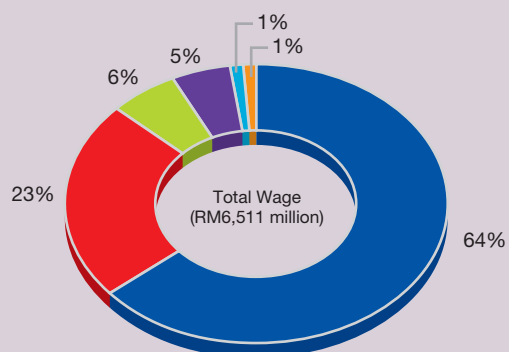


TABLE 9.2 : Total Wage Expenditure By Programmes, 1997-2009 (RM Million)

Year	Expenditure By Programmes							Total
	Medical	Public Health	Oral Health	Management	Pharmacy	Research & Technical Support	Others	
1997	1,017	495	0	91	0	29	2	1,634
1998	1,065	516	0	90	0	31	6	1,709
1999	1,129	573	0	99	0	45	1	1,848
2000	1,290	650	0	104	0	39	2	2,085
2001	1,460	729	0	112	0	39	2	2,342
2002	1,751	877	0	132	0	48	1	2,808
2003	1,901	959	0	149	0	54	4	3,067
2004	2,069	1,034	0	168	0	66	4	3,341
2005	2,245	1,114	0	189	0	70	4	3,622
2006	2,977	1,438	0	270	0	90	7	4,782
2007	3,079	1,423	0	257	0	91	13	4,864
2008	3,900	1,431	348	318	55	61	19	6,133
2009	4,181	1,501	366	325	65	69	4	6,511

Note: Some programmes were non-existent in earlier year

PHARMACEUTICAL & SUPPLIES EXPENDITURE

This expenditure captures the expenditure for purchases of drugs & pharmaceuticals and medical & dental supplies under the SODO codes 27401 and 27499. It is different from the expenditure under the Pharmacy Programme which captures mainly the pharmacy administrative and management expenditure.

The Pharmaceuticals & Supplies expenditure has increased much faster than the MOH operating expenditure rising from RM459 million in 1997 to RM2,132 million in 2009 (Figure 9.3 and Table 9.3). This increase is largest in expenditures of drugs & pharmaceuticals with a 5-fold increase over the time period.

The expenditure can be disaggregated by expenditures under various Programmes of MOH. Oral Health Programme has the highest expenditures for supplies followed by Public Health Programme (Figure 9.4). However, the Medical Programme has the highest expenditure for drugs & pharmaceuticals followed by Public Health Programme (Table 9.4).



FIGURE 9.3 : Pharmaceuticals & Supplies Vs Operating Expenditure, 1997-2009 (RM Million)

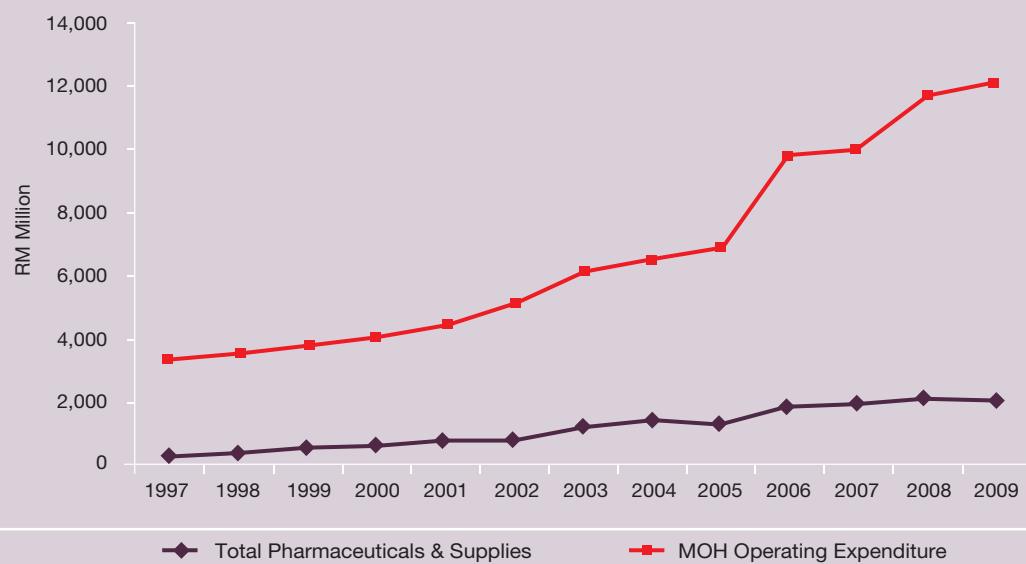


TABLE 9.3 : MOH Pharmaceuticals, Supplies and Operating Expenditure, 1997-2009 (RM Million)

Year	Drugs & Pharmaceuticals	Medical & Dental Supplies	Total Pharmaceuticals & Supplies	MOH Operating Expenditure
1997	285	174	459	3,258
1998	323	182	506	3,316
1999	361	233	594	3,615
2000	421	232	654	4,091
2001	540	266	806	4,680
2002	562	258	820	5,157
2003	809	354	1,163	6,322
2004	940	397	1,337	6,686
2005	891	358	1,249	6,866
2006	1,282	576	1,858	9,538
2007	1,389	631	2,020	9,772
2008	1,543	666	2,209	11,569
2009	1,497	635	2,132	12,173

FIGURE 9.4 : Medical Supplies Expenditure By Programmes, 1997-2009 (RM Million)

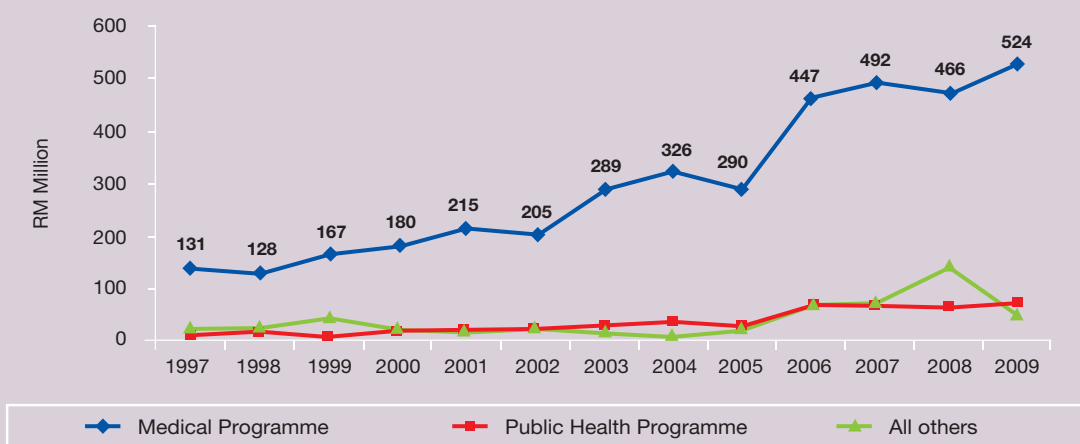


TABLE 9.4 : Drugs & Pharmaceutical Expenditure By Programmes, 1997-2009 (RM Million)

Year	Medical Programme	Public Health Programme	All Other*	Total
1997	245	34	7	285
1998	220	28	75	323
1999	296	42	23	361
2000	353	50	18	421
2001	460	62	18	540
2002	452	73	37	562
2003	644	130	35	809
2004	769	166	5	940
2005	725	144	21	891
2006	984	234	64	1,282
2007	1,078	219	92	1,389
2008	1,062	222	259	1,543
2009	1,161	319	17	1,497

Note: Includes the "New Policy" expenditure for drugs & pharmaceuticals



HOSPITAL EXPENDITURES

The chapter under expenditures by facilities or agencies provides the expenditure at all MOH hospitals throughout the 1997-2009 time series. However, these expenditures can also be disaggregated as expenditures by various categories of hospitals. The MNHA framework categorizes the MOH hospitals into six groups based on the type of services and the specialists available at the hospitals (Figure 9.5 and Appendix 3).

The MOH sub-account is able to produce the expenditure of these different categories of hospitals over the 1997-2009 time periods. A summary of the expenditure for 2009 is provided to explain the expenditure disaggregation. There are a total 6 categories of hospitals. The expenditure of the national referral hospital, Hospital Kuala Lumpur has been mentioned earlier in the document. The average, median, minimum and maximum expenditure is dependent on the category of the hospital. The 2009 distribution of these expenditures are shown as an example of these differences (Table 9.5). Category 3 hospitals are split into a sub-set whereby the hospitals that function as “Centers of Excellence” or Regional Referral Centers for specific illnesses or conditions have higher expenditures.

The expenditures of the various categories of hospitals can be also disaggregated by the functional dimension of inpatient, outpatient and day care services as described under the MNHA framework. This uses the hospital cost accounting methodology to assign the total hospital expenditure into the three functional curative care services. The expenditures of inpatient, outpatient and daycare services in the six categories of hospitals shows that in general the higher level of hospital has higher expenditures (Figure 9.6-Figure 9.11 and Table 9.6-Table 9.11). The expenditure for curative care services in psychiatric hospital shows a pattern similar to category 4 hospitals.

FIGURE 9.5 : Pharmaceuticals & Supplies Vs Operating Expenditure, 1997-2009 (RM Million)



TABLE 9.5 : Expenditure By Category of Hospital, 2009*

Hospital Category	Number of Hospitals	RM Million			
		Average	Median	Minimum	Maximum
Category 1	1	690			
Category 2	13	224	217	103	325
Category 3s**	5	172	162	110	258
Category 3#	13 (+NRI)	93	88	56	126
Category 4	17	38	36	9	92
Category 5	83	14	14	1	31
Category 6	4	48	36	19	102

Note: *This expenditure estimate is based on total expenditure

** This sub-set of hospitals include Ampang, Serdang, Selayang, Putrajaya & Sungai Buloh

This expenditure estimates exclude sub-set hospitals and National Respiratory Institute (NRI)

FIGURE 9.6 : Category 1 Hospital Expenditure By Curative Care Services, 2009

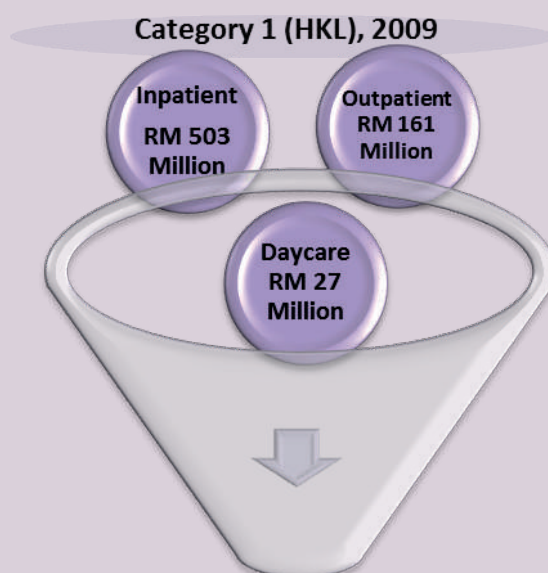


TABLE 9.6 : Curative care Expenditure in Category 1 Hospital, 1997-2009 (RM Million)*

Year	Inpatient	Outpatient	Daycare	Total
1997	229.46	73.22	12.31	314.98
1998	244.38	77.98	13.11	335.46
1999	243.95	77.84	13.08	334.87
2000	251.68	80.31	13.50	345.49
2001	276.15	88.12	14.81	379.08
2002	274.54	87.60	14.72	376.87
2003	313.86	100.15	16.83	430.84
2004	344.84	110.03	18.49	473.36
2005	352.57	112.50	18.91	483.98
2006	462.46	147.56	24.80	634.83
2007	419.23	133.77	22.48	575.49
2008	461.36	147.21	24.74	633.32
2009	503.01	160.50	26.98	690.49

Note: *This expenditure estimate is based on total expenditure

FIGURE 9.7 : Category 2 Median Hospital Expenditure By Curative Care Services, 2009

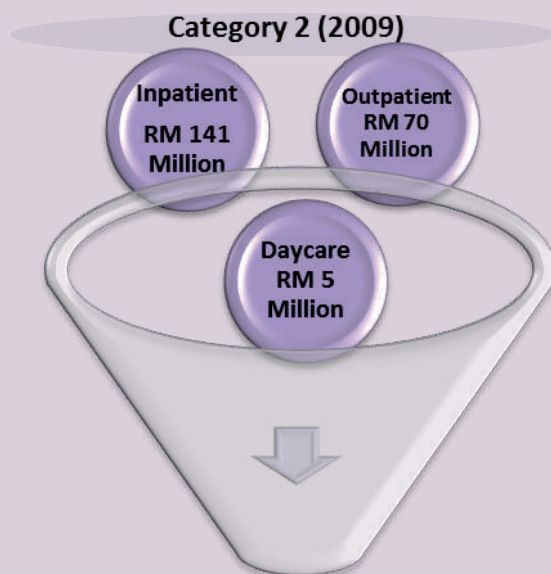


TABLE 9.7 : Median Curative care Expenditure in Category 2 Hospital, 1997-2009 (RM Million)*

Year	Inpatient	Outpatient	Daycare	Total
1997	44.48	22.14	1.68	68.30
1998	45.29	22.54	1.71	69.55
1999	47.98	23.88	1.81	73.68
2000	53.45	26.61	2.02	82.08
2001	63.22	31.47	2.39	97.08
2002	64.15	31.93	2.43	98.51
2003	78.41	39.03	2.96	120.40
2004	84.87	42.24	3.21	130.32
2005	85.66	42.64	3.24	131.54
2006	114.85	57.17	4.34	176.36
2007	119.34	59.40	4.51	183.25
2008	136.96	68.17	5.18	210.31
2009	141.01	70.19	5.33	216.53

Note: *This expenditure estimate is based on total expenditure



FIGURE 9.8 : Category 3 Median Hospital Expenditure By Curative Care Services, 2009#

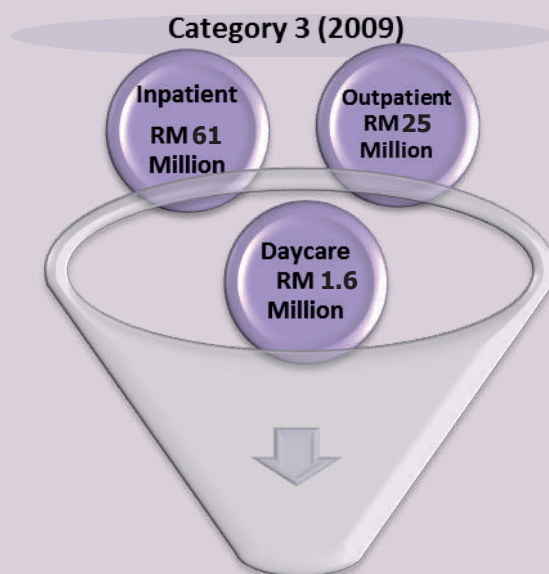


TABLE 9.8 : Median Curative care Expenditure in Category 3 Hospital, 1997-2009 (RM Million)*#

Year	Inpatient	Outpatient	Daycare	Total
1997	16.19	6.54	0.41	23.14
1998	16.70	6.74	0.43	23.87
1999	18.68	7.54	0.48	26.70
2000	21.52	8.68	0.55	30.75
2001	23.49	9.48	0.60	33.56
2002	23.85	9.63	0.61	34.09
2003	31.40	12.67	0.80	44.87
2004	32.26	13.02	0.82	46.10
2005	34.82	14.05	0.89	49.75
2006	46.26	18.67	1.18	66.11
2007	50.15	20.24	1.28	71.66
2008	60.05	24.23	1.53	85.82
2009	61.25	24.72	1.56	87.53

Note: *This expenditure estimate is based on total expenditure

Note: # This excludes 5 hospitals of centers of excellence & National Respiratory Institute

FIGURE 9.9 : Category 4 Median Hospital Expenditure By Curative Care Services, 2009

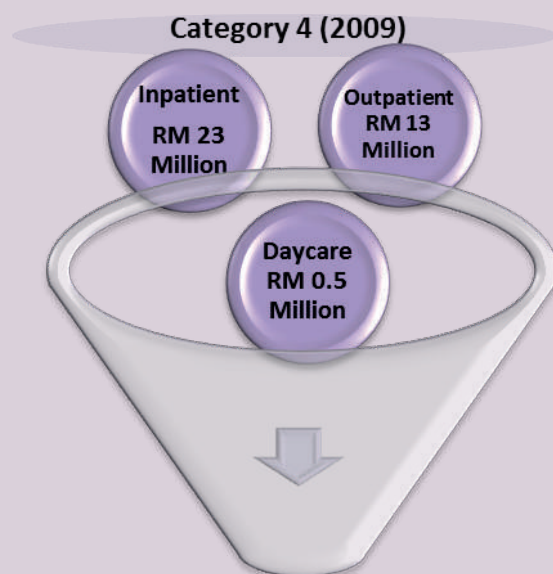


TABLE 9.9 : Median Curative care Expenditure in Category 4 Hospital, 1997-2009 (RM Million)*

Year	Inpatient	Outpatient	Daycare	Total
1997	5.18	2.83	0.11	8.12
1998	5.43	2.97	0.12	8.52
1999	6.08	3.33	0.13	9.54
2000	7.08	3.87	0.15	11.10
2001	7.62	4.17	0.16	11.95
2002	8.05	4.40	0.17	12.63
2003	9.68	5.30	0.21	15.19
2004	10.39	5.68	0.22	16.28
2005	12.54	6.86	0.27	19.66
2006	18.68	10.21	0.40	29.28
2007	17.91	9.79	0.38	28.09
2008	20.10	10.99	0.43	31.52
2009	22.88	12.51	0.49	35.88

*Note: *This expenditure estimate is based on total expenditure*



FIGURE 9.10 : Category 5 Median Hospital Expenditure By Curative Care Services, 2009

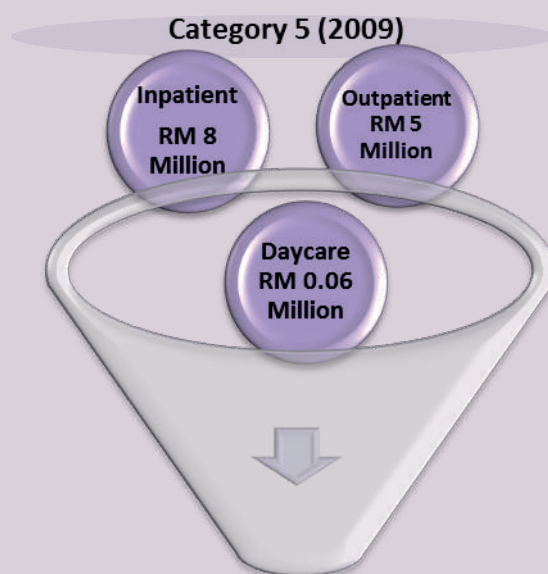


TABLE 9.10 : Median Curative care Expenditure in Category 5 Hospital, 1997-2009 (RM Million)*

Year	Inpatient	Outpatient	Daycare	Total
1997	3.10	1.91	0.02	5.03
1998	3.14	1.94	0.02	5.10
1999	3.36	2.08	0.03	5.46
2000	3.67	2.27	0.03	5.96
2001	4.01	2.48	0.03	6.52
2002	4.23	2.61	0.03	6.87
2003	4.97	3.07	0.04	8.08
2004	5.12	3.17	0.04	8.33
2005	5.36	3.31	0.04	8.71
2006	7.16	4.42	0.05	11.63
2007	7.23	4.47	0.05	11.75
2008	8.23	5.08	0.06	13.37
2009	8.43	5.21	0.06	13.71

Note: *This expenditure estimate is based on total expenditure

FIGURE 9.11 : Category 6 Median Hospital Expenditure By Curative Care Services, 2009

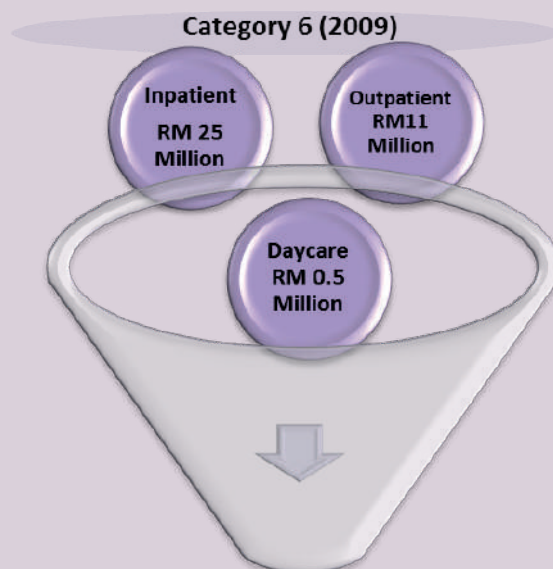


TABLE 9.11 : Median Curative care Expenditure in Category 6 Hospital, 1997-2009 (RM Million)*

Year	Inpatient	Outpatient	Daycare	Total
1997	10.87	4.71	0.23	15.81
1998	11.10	4.81	0.23	16.14
1999	12.45	5.40	0.26	18.11
2000	13.13	5.69	0.27	19.09
2001	14.18	6.15	0.30	20.63
2002	14.61	6.33	0.31	21.24
2003	17.33	7.51	0.36	25.20
2004	17.98	7.79	0.38	26.15
2005	16.06	6.96	0.34	23.35
2006	23.84	10.33	0.50	34.67
2007	23.64	10.25	0.50	34.38
2008	26.09	11.31	0.55	37.94
2009	24.83	10.76	0.52	36.11

Note: *This expenditure estimate is based on total expenditure



PUBLIC HEALTH EXPENDITURE

This expenditure captures the MOH expenditure for public health services including prevention and health promotion under the MNHA framework coded as MF6 (Public Health services, including prevention and health promotion). It is different from the expenditure under the Public Health Programme which captures mainly the public health administrative and management expenditure.

There are a total of six groups of expenditure which includes maternal and child health (MCH), school health services, prevention of communicable diseases (CD), prevention of non-communicable diseases (NCD), health promotion and health education, and food safety and drinking water quality control. Of these groups, the expenditure for MCH has been increasing at a much faster rate than any other public health function with a 9-fold increase in the absolute ringgit value from 1997 to 2009 (Figure 9.12 and Table 9.12). In 2009, out of the total public health expenditure of RM1,368 million, the MCH expenditure was RM784 million or 57% of the public health expenditure (Figure 9.13 and Table 9.13).

Similarly the expenditure for CD and NCD has also been increasing from RM85 million to RM244 million and from RM37 million to RM59 million over the same time period. However, the CD and NCD share of public health expenditure has decreased at 38% to 18% for CD and 16% to 4% for NCD mainly due to the higher share for MCH.

Expenditure for CD is disaggregated into that for HIV/AIDS, Vector Borne Diseases and other CD. Expenditure for Vector Borne Diseases has increased from RM46 million in 1997 to RM120 million in 2009 contributing to 49% of CD expenditure in 2009 (Figure 9.14 and Table 9.14). This expenditure is exclusive of that for health promotion and education in CD and NCD.

The expenditure for the other components of public health functions can also be tracked separately with all showing a steady increase over the time period (Figure 9.15 and Table 9.15)

FIGURE 9.12 : Expenditure For Public Health Services & Promotion, 1997-2009

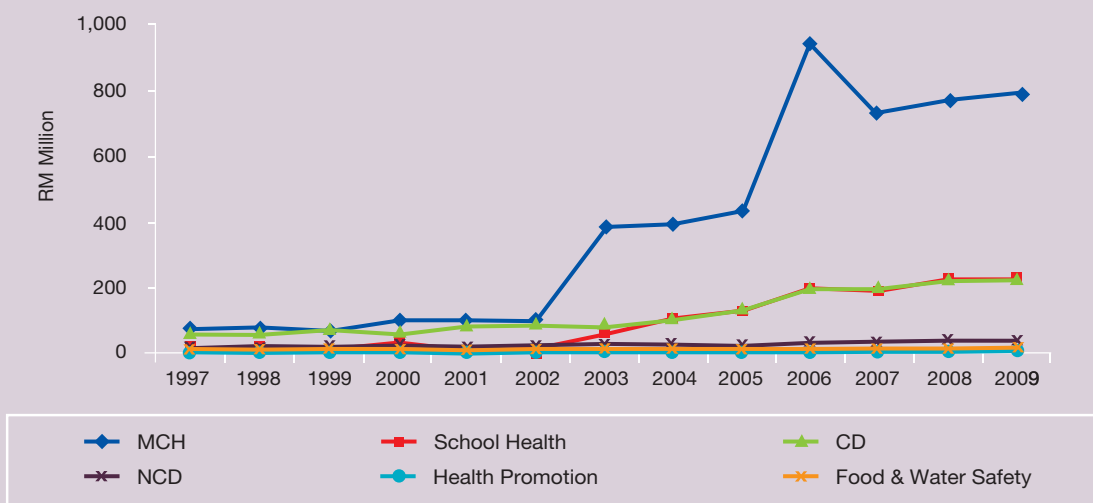


FIGURE 9.13 : Expenditure For Various components of Public Health Services & Promotion, 2009

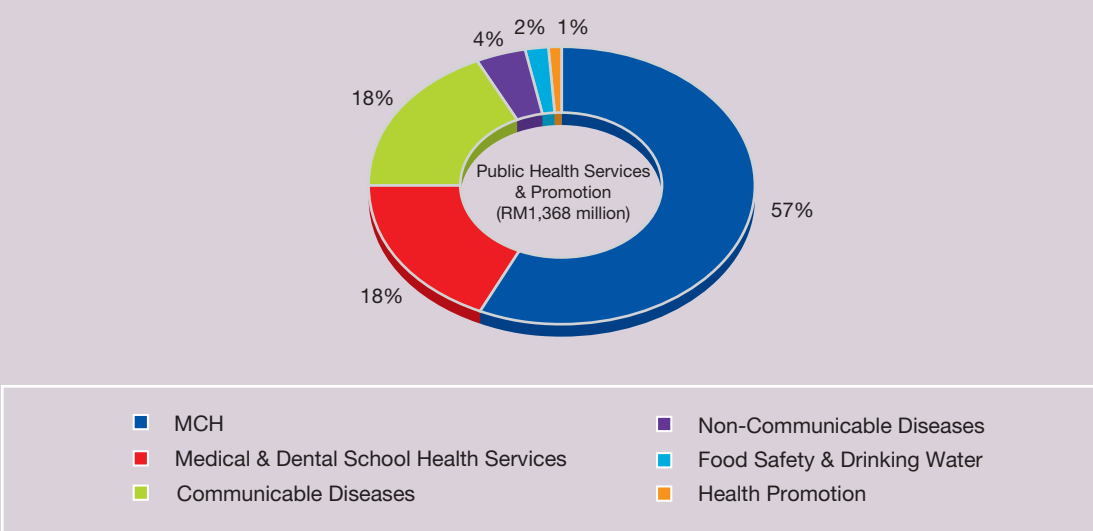




TABLE 9.12 : Expenditures for Public Health Services, 1997-2009 (RM Million)

Public Health Function	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MCH	86	90	104	144	135	139	374	388	435	942	721	770	784
Medical & Dental School Health Services	8	8	5	23	7	1	98	129	139	191	187	241	250
Communicable Diseases	85	83	105	100	122	125	124	126	139	181	191	228	244
Non-Communicable Diseases	37	34	36	37	40	43	47	47	43	58	55	63	59
Food Safety & Drinking water	9	10	8	9	11	12	14	14	15	22	22	22	24
Health Promotion	2	1	1	2	2	2	3	2	4	9	5	7	7
Total	227	224	259	315	317	323	661	707	775	1,403	1,180	1,331	1,368

TABLE 9.13 : Expenditures for Public Health Services, 1997-2009 (Per cent, %)

Public Health Function	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MCH	38%	40%	40%	46%	43%	43%	57%	55%	56%	67%	61%	58%	57%
Medical & Dental School Health Services	3%	3%	2%	7%	2%	0%	15%	18%	18%	14%	16%	18%	18%
Communicable Diseases	38%	37%	41%	32%	38%	39%	19%	18%	18%	13%	16%	17%	18%
Non-Communicable Diseases	16%	15%	14%	12%	13%	13%	7%	7%	6%	4%	5%	5%	4%
Food Safety & Drinking water	4%	4%	3%	3%	3%	4%	2%	2%	2%	2%	2%	2%	2%
Health Promotion	1%	0%	0%	1%	1%	1%	0%	0%	1%	1%	0%	1%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

FIGURE 9.14 : Expenditure For Various components of Communicable Disease, 2009

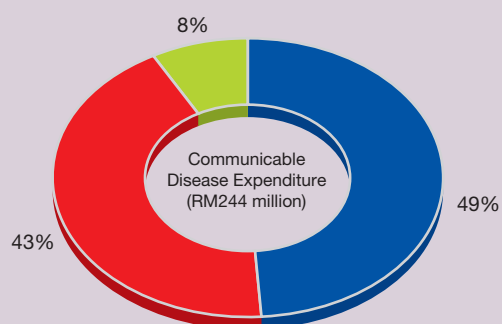


TABLE 9.14 : Expenditure for Components of Communicable Diseases, 1997-2009 (RM Million)

Year	HIV/AIDS	Vector Borne Diseases	Other Diseases	Total
1997	36	46	3	85
1998	35	45	3	83
1999	38	64	3	105
2000	45	52	3	100
2001	37	77	8	122
2002	22	52	51	125
2003	21	93	9	124
2004	21	84	21	126
2005	20	84	35	139
2006	17	103	62	181
2007	16	94	81	191
2008	19	112	97	228
2009	20	120	104	244



FIGURE 9.15 : Expenditure For Food Safety and Drinking water Quality, 1997-2009

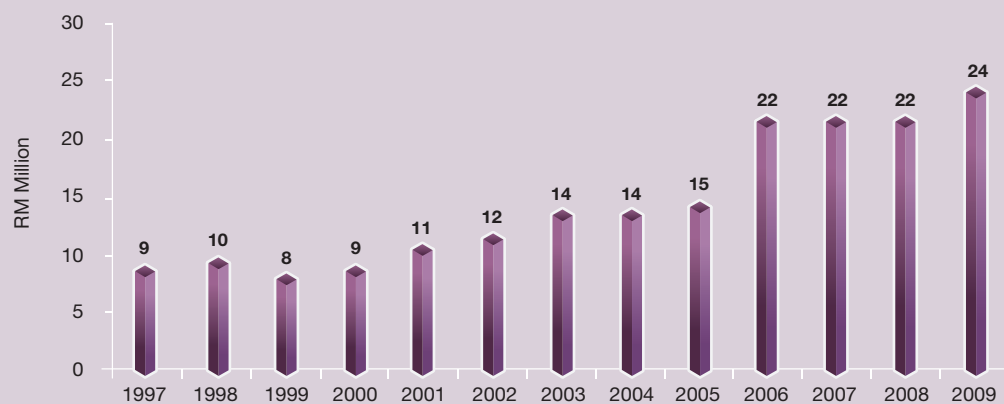


TABLE 9.15 : Expenditure for Other Components of Public Health Services, 1997-2009 (RM Million)

Year	Health Promotion & Education		School Health Services		Food & Water Safety	Total
	CD	NCD	Medical	Dental		
1997	1.08	0.72	3.24	4.42	9.09	18.55
1998	0.40	0.27	3.38	4.21	9.83	18.09
1999	0.44	0.30	0.00	4.65	8.39	13.78
2000	1.14	0.76	17.55	5.24	9.48	34.17
2001	1.44	0.96	0.85	6.00	11.06	20.30
2002	1.40	0.94	0.78	0.00	12.27	15.40
2003	1.77	1.18	0.45	97.94	14.13	115.48
2004	1.48	0.99	1.32	127.75	14.14	145.68
2005	2.53	1.69	1.40	137.42	15.45	158.49
2006	5.12	3.41	0.76	190.32	21.78	221.39
2007	2.88	1.92	0.99	186.18	21.77	213.73
2008	4.44	2.96	0.78	240.53	22.36	271.06
2009	3.97	2.65	2.53	247.34	24.37	280.85



Development Expenditure

Although the share of the development to the total health expenditure varies between 11% to 30% sometime policy makers require further detailed data on this expenditure (Figure 4.2).The MOH sub-account is able to produce this data based on the accounting code system of 11 categories of activities or development projects. There are no definite trends in the expenditure of these categories as it is dependent on policy decisions or urgent needs. So in some years there are no expenditures under one category and in other years the expenditures may be high. In 2009, several projects related to hospital facilities and new hospitals consumed a total of RM1,085 million or 43% of the development expenditure (Figure 10.1 and Table 10.1).

FIGURE 10.1 : Expenditure of Various Projects under Development Expenditure, 2009

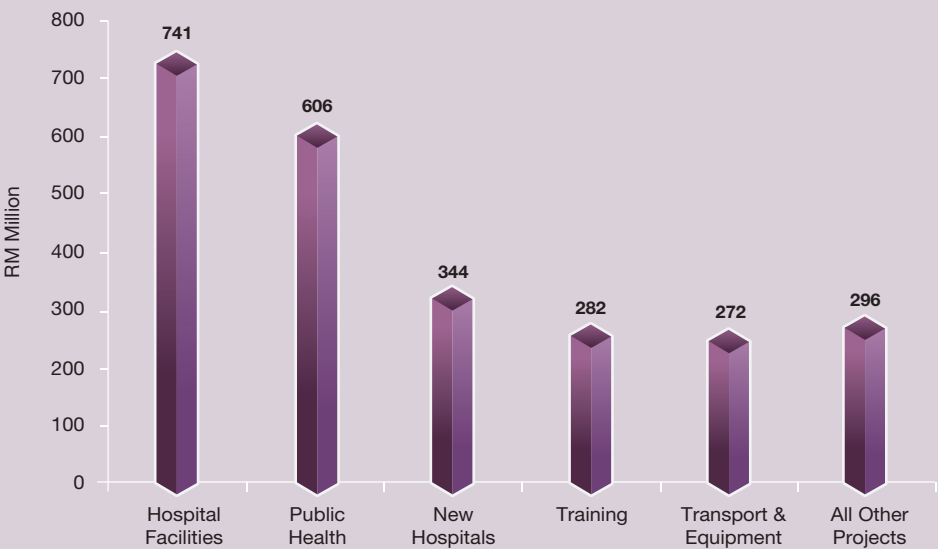




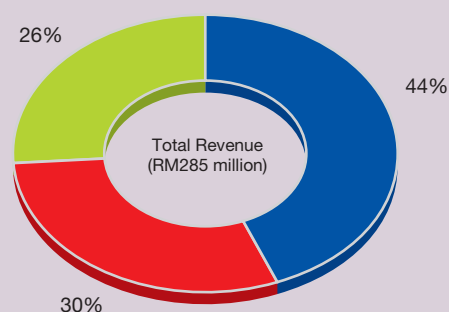
TABLE 10.1 : Expenditure for Projects under Development Expenditure, 1997-2009 (RM Million)

Projects	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Training	18	15	43	73	71	89	85	46	39	184	198	210	282
2 Public Health	107	121	203	372	419	228	330	222	216	106	94	249	606
3 Hospital Facilities	146	167	180	253	326	416	539	409	411	330	137	234	741
4 New Hospitals	178	319	307	487	689	744	1,705	1,516	430	437	158	250	344
5 R & D	0	0	0	0	0	2	2	5	12	42	39	37	33
6 Upgrades & Renovations	0	95	102	92	66	24	19	25	33	144	147	11	51
7 Land acquisition	0	0	0	0	0	10	10	8	52	58	166	76	6
8 ICT	0	0	0	0	0	0	0	0	0	0	215	124	84
9 HR Facilities	0	0	0	0	0	0	0	0	0	0	42	87	117
10 Health Promotion	0	0	0	0	0	0	0	0	0	0	9	0	6
11 Transport & Equipments	0	0	0	0	0	0	0	0	0	0	265	188	272
Total	449	716	835	1,276	1,570	1,514	2,690	2,231	1,194	1,300	1,471	1,467	2,540

Total MOH Revenue

The revenue collected under the MOH come from two sources, patients and non-patients. The revenue from patients are usually collected at hospitals or clinics and is either for inpatient or outpatient care. In 2009, the total revenue collected from patients was RM212 million or 74% of total MOH revenue (Figure 11.1 and Table 11.1). This was about 2% of the total MOH operating expenditure for the year. In general the total revenue collection is under 5% throughout the 1997 to 2009 time period.

FIGURE 11.1: Total MOH Revenue, 2009



■ Inpatient Revenue ■ Outpatient Revenue ■ Non-patient Revenue

TABLE 11.1 : MOH Patient and Non-patient Revenue , 1997-2009

Year	RM Million					Per cent
	Inpatient Revenue	Outpatient Revenue	Non-patient Revenue	Total Revenue	Operating Expenditure	Revenue % Operating Expenditure
1997	64	22	28	114	3,258	4%
1998	62	23	41	126	3,316	4%
1999	64	24	37	124	3,615	3%
2000	69	25	41	135	4,091	3%
2001	73	29	38	140	4,680	3%
2002	79	35	31	145	5,157	3%
2003	82	43	35	161	6,322	3%
2004	90	51	0	142	6,686	2%
2005	95	56	0	150	6,866	2%
2006	96	62	0	158	9,538	2%
2007	115	72	86	273	9,772	3%
2008	123	80	63	266	11,569	2%
2009	126	86	73	285	12,173	2%

Note: Data for 2003-2005 may be incomplete



APPENDIX

APPENDIX 1 : References

The following is a list of some of the important documents used in the production of this sub-account.

i.	MOH Programme/Activities & PTJ code from Accounts Department, MOH for time series
ii.	SODO Code from Treasury Circular, GOM
iii.	DOS state coding
iv.	Estimated proportions for hospital NHA functional disaggregation (inpatient, outpatient, daycare) by hospital categories
v.	Health budget allocation for MOH by time series from <i>Bahagian Belanjawan</i>
vi.	Health budget allocation by programmes from MOH Accounts Department for 1997-2009
vii.	Health budget allocation for Disease Control from Disease Control Division, available years
viii.	Health budget allocation for Family Health from Family Health Division, available years
ix.	Total national population from DOS for 1997-2009
x.	Population breakdown by states from DOS for 2009
xi.	MOH Hospital list from HIC, P&D Division, MOH for 2009
xii.	MOH Hospital category list for 1997-2009 (MNHA reference)



APPENDIX 2 : Mapping of Cost Responsibility Centre Code to MNHA Code		
CRCC 1	CRCC 2	MNHA Code
State / Responsibility centre (xx Digit)	Department/Agencies (xxxx Digit)	Agencies by MNHA Code (xxxxxx Digit)
Head Quarters (14 Departments under CRCC 2)	Management Services Division	Head Quarters
	Human Resources Division	Head Quarters
	Finance Division	Head Quarters
	Planning & Development Division	Head Quarters
	Pharmaceutical Services Division	Head Quarters
	Medical Development Division	Head Quarters
	Public Health Division	Head Quarters
	Engineering Services Division	Head Quarters
	Oral Health Division	Head Quarters
	Information Management Division	Head Quarters
	Traditional & complementary Medicine Division (TCM)	Head Quarters
	Competency Development Division	Head Quarters
	Nursing Division	Head Quarters
	Training Management Division:	Head Quarters
	General Administration Unit	Head Quarters
	Training Unit	Head Quarters
	Examination Unit	Head Quarters
	Nursing & Allied Health College	Nursing & Allied Health College
Kolej Latihan Pergigian Malaysia Pulau Pinang	Kolej Latihan Pergigian Malaysia Pulau Pinang	Nursing & Allied Health College
State (include JKN WPKL)	Deputy General Office:	
	Management	State Health Offices
	Farmasi	State Health Offices
	Pergigian (admin & training unit)	State Health Offices
	Vector Disease Control Division	Vector Disease Control Division
	District Dental Health Office	District Dental Health Office
	District Health Office	District Health Office
	Hospitals by State	Hospitals
Kuala Lumpur Hospital	Kuala Lumpur Hospital	Hospitals
PH Laboratories	PH Laboratories	PH Laboratories
PJ Pharmacy Division	PJ Pharmacy Division	PJ Pharmacy Division
Blood Bank	Blood Bank	Blood Bank
Institutions	Research Institutions (6 institutes under NIH)	Institutions

Note: CRCC has total of 6 digits with first 2 digits for CRCC 1, next 4 digits for CRCC 2 which are mapped to MNHA code with 6 digits



APPENDIX 3 : List of MOH Hospitals, 2009

Category	MOH Hospitals
Category 1	Hospital Kuala Lumpur
Category 2	Hospital Alor Setar
	Hospital Melaka
	Hospital Pakar Kuala Terengganu
	Hospital Pulau Pinang
	Hospital Queen Elizabeth , Sabah
	Hospital Raja Perempuan Zainab II
	Hospital Raja Permaisuri Bainun, Ipoh
	Hospital Sultanah Aminah, Johor
	Hospital Tg Ampuan Afzan Kuantan
	Hospital Tg Ampuan Rahimah Klang
	Hospital Tuanku Fauziah, Perlis
	Hospital Tuanku Jaafar
	Hospital Umum Sarawak
Category 3	Hospital Ampang
	Hospital Batu Pahat
	Hospital Duchess Of Kent, Sandakan
	Hospital Kajang
	Hospital Kuala Pilah
	Hospital Miri
	Hospital Pakar Sultanah Fatimah
	Hospital Putrajaya
	Hospital Seberang Jaya
	Hospital Selayang
	Hospital Serdang
	Hospital Sibu
	Hospital Sultan Abd.Halim
	Hospital Sultan Hj.Ahmad Shah / Mentakab / Temerloh
	Hospital Sultan Ismail/Pandan
	Hospital Sungai Buloh
	Hospital Taiping
	Hospital Teluk Intan
	<i>Institut Perubatan Respiratori</i>



APPENDIX 3 : List of MOH Hospitals, 2009 (Cont.)	
Category	MOH Hospitals
Category 4	Hospital Banting
	Hospital Bintulu
	Hospital Bukit Mertajam
	Hospital Kapit
	Hospital Kemaman
	Hospital Keningau
	Hospital Kepala Batas
	Hospital Kinabatangan
	Hospital Kluang
	Hospital Kuala Krai
	Hospital Kuala Lipis
	Hospital Kulim
	Hospital Labuan
	Hospital Lahad Datu
	Hospital Langkawi
	Hospital Pakar Likas
	Hospital Segamat
	Hospital Sri Manjung
	Hospital Tawau



APPENDIX 3 : List of MOH Hospitals, 2009 (Cont.)

Category	MOH Hospitals	
Category 5	Hospital Alor Gajah	Hospital Machang
	Hospital Balik Pulau	Hospital Mersing
	Hospital Baling	Hospital Muadzam Shah
	Hospital Baram/Marudi	Hospital Mukah
	Hospital Batu Gajah	Hospital Papar
	Hospital Bau	Hospital Parit Buntar
	Hospital Beaufort	Hospital Pasir Mas
	Hospital Beluran	Hospital Pekan
	Hospital Bentong	Hospital Pitas
	Hospital Besut	Hospital Pontian
	Hospital Betong	Hospital Port Dickson
	Hospital Bintagor/Dalat	Hospital Raja Charles Brooke
	Hospital Cameron Highlands	Hospital Ranau
	Hospital Changkat Melintang	Hospital Raub
	Hospital Daro	Hospital Saratok
	Hospital Dungun	Hospital Sarikei
	Hospital Grik	Hospital Selama
	Hospital Gua Musang	Hospital Semporna
	Hospital Hulu Terengganu	Hospital Serian
	Hospital Jasin	Hospital Setiu
	Hospital Jelebu	Hospital Sik
	Hospital Jeli	Hospital Simunjan
	Hospital Jempol	Hospital Sipitang
	Hospital Jengka	Hospital Slim River
	Hospital Jerantut	Hospital Sri Aman
	Hospital Jitra	Hospital Sungai Bakap
	Hospital Kampar	Hospital Sungai Siput
	Hospital Kanowit	Hospital Tambunan
	Hospital Kota Belud	Hospital Tampin
	Hospital Kota Marudu	Hospital Tanah Merah
	Hospital Kota Tinggi	Hospital Tangkak
	Hospital Kuala Kangsar	Hospital Tanjung Karang
	Hospital Kuala Kubu Bharu	Hospital Tapah
	Hospital Kuala Nerang	Hospital Temenggung Seri Maharaja Tun Ibrahim
	Hospital Kuala Penyu	Hospital Tengku Ampuan Jemaah
	Hospital Kudat	Hospital Tenom
	Hospital Kunak	Hospital Tg.Anis, Pasir Puteh
	Hospital Lawas	Hospital Tuaran
	Hospital Limbang	Hospital Tumpat
	Hospital Lundu	Hospital Yan
		<i>Pusat Kawalan Kusta Negara</i>
Category 6	Hospital Bahagia Ulu Kinta	
	Hospital Mesra Bukit Padang	
	Hospital Permai	
	Hospital Sentosa	



APENDIX 4 : List of MOH Facilities	
Facilities	Agenies/Unit
Headquarters	Management Services Division
	Human Resources Division
	Finance Division
	Planning & Development Division
	Pharmaceutical Services Division
	Medical Development Division
	Public Health Division
	Engineering Services Division
	Oral Health Division
	Information Management Division
	Traditional & complementary Medicine Division (TCM)
	Competency Development Division
	Nursing Division
	Training Management Division
State Health Offices	Johor State Health Office
	Kedah State Health Office
	Kelantan State Health Office
	Malacca State Health Office
	Negeri Sembilan State Health Office
	Pahang State Health Office
	Perak State Health Office
	Perlis State Health Office
	Pulau Pinang State Health Office
	Sabah State Health Office
	Sarawak State Health Office
	Selangor State Health Office
	Terengganu State Health Office
	W.P. Kuala Lumpur & Putrajaya State Health Office
	W.P. Labuan State Health Office
Petaling Jaya Pharmacy Division	Petaling Jaya Pharmacy Division
National Blood Bank	National Blood Bank
Public Health Laboratories	Ipoh Public Health Laboratory
	Johor Bharu Public Health Laboratory
	Kelang Sungai Buloh Public Health Laboratory
	Kota Kinabalu Public Health Laboratory



APPENDIX 4 : List of MOH Facilities (Cont.)	
Facilities	Agenies/Unit
Research Institutions	Clinical Research Centres
	Institute for Health Systems Research
	Institute for Public Health
	Institute for Health Behavioural Research
	Institute for Medical Research
	Institute for Health Management
Vector Disease Control Division	Kelantan Vector Disease Control Division
	Negeri Sembilan Vector Disease Control Division
	Perak Vector Disease Control Division
	Perlis Vector Disease Control Division
	Sarawak Vector Disease Control Division
	Terengganu Vector Disease Control Division
District Health Offices/ Clinics	
Johore	All District Health Office in Johore
Kedah	All District Health Office in Kedah
Kelantan	All District Health Office in Kelantan
Malacca	All District Health Office in Malacca
Pahang	All District Health Office in Pahang
Negeri Sembilan	All District Health Office in Negeri Sembilan
Perak	All District Health Office in Perak
Perlis	All District Health Office in Perlis
Pulau Pinang	All District Health Office in Pulau Pinang
Selangor	All District Health Office in Selangor
Terengganu	All District Health Office in Terengganu
Sabah	All District Health Office in Sabah
Sarawak	All District Health Office in Sarawak
W.P. Putrajaya	All District Health Office in Putrajaya
W.P. Labuan	All District Health Office in Labuan



APPENDIX 4 : List of MOH Facilities (Cont.)	
Facilities	Agenies/Unit
Nursing & Allied Health College	
Johor	Johor Bahru Nursing College
	Johor Bahru Radiography & Radiotherapy College
	Muar Nursing College
	Batu Pahat Community Nursing College
	Kluang Community Nursing College
	Segamat Community Nursing College
Kedah	Sungai Petani Nursing College
	Alor Setar Nursing College
	Alor Setar Medical Assistant College
	Kulim Community Nursing College
Kelantan	Pasir Mas Community Nursing College
	Kubang Kerian Nursing College
Melaka	Melaka Nursing College
Negeri Sembilan	Seremban Nursing College
	Port Dickson Community Nursing College
	Seremban Medical Assistant College
Pahang	Kuantan Nursing College
	Jerantut Community Nursing College
Pulau Pinang	Pulau Pinang Nursing College
	Bukit Mertajam Nursing College
	Dental Training College of Malaysia, Pulau Pinang
Perak	Ipoh Nursing College
	Taiping Nursing College
	Ulu Kinta Medical Assistant College
Selangor	College of Allied Health Sciences Sungai Buloh
	Klang Nursing College
Terengganu	Kuala Terengganu Nursing College
	Public Health College,Batu Rakit Terengganu
Sabah	Tawau Community Nursing College
	Sandakan Nursing College
	College of Allied Health Sciences Kota Kinabalu
Sarawak	Sibu Nursing College
	College of Allied Health Sciences Kuching
	Public Health College,Kuching
	Serian Community Nursing College
W.P. Kuala Lumpur	College of Medical Laboratory Technology



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