

MINISTRY OF HEALTH  
MALAYSIA

# MALAYSIA NATIONAL HEALTH ACCOUNTS Health Expenditure Report 1997-2016



# MNHA

**MALAYSIA  
NATIONAL HEALTH ACCOUNTS**

**Health Expenditure Report  
1997-2016**

MALAYSIA NATIONAL HEALTH ACCOUNTS SECTION  
PLANNING DIVISION  
MINISTRY OF HEALTH  
MALAYSIA  
2018

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**MESSAGE BY  
SECRETARY-GENERAL  
MINISTRY OF HEALTH, MALAYSIA**

I take pleasure to introduce this MNHA Health Expenditure Report 1997-2016 which is the latest information on our national health accounts. This annual report which currently contains 20-year time-series data is evidence that MNHA institutionalisation has enabled reliable and timely production of information regarding the country's health expenditure.

In this country MNHA Health Expenditure Report, which has macro-level data on health expenditure based on MNHA Framework classification, has been accepted as an important key to information-based decision making for health policy makers, as well as guidance for health system planners. In addition, MNHA report on health expenditure has also become an information source for some of the criteria for competitiveness index assessments at international level.

Endorsement of the latest time series MNHA health expenditure data by the MNHA Steering Committee is a pre-requisite to this publication. As such I would like to take this opportunity to express my sincere appreciation to all members of the MNHA Steering Committee, from public and private agencies for their commitment and continuous support for this work by Ministry of Health. Last but not least, special gratitude goes to the MNHA team of Planning Division of the Ministry of Health for their hard work, MNHA Technical Advisory Committee for their valuable advice and guidance on ensuring data quality, data suppliers for their co-operation and to all who have contributed towards producing MNHA data and reports throughout the years.

Thank you.

A handwritten signature in black ink, appearing to read 'Chen Chaw Min', written in a cursive style.

**Dato' Seri Dr. Chen Chaw Min**  
Secretary-General  
Ministry of Health, Malaysia



## **MESSAGE BY DIRECTOR-GENERAL OF HEALTH MALAYSIA**

The Ministry of Health's institutionalisation of the national health accounts since the year 2005 has been a commitment of this ministry. Since then, the annual MNHA Health Expenditure Reports by Planning Division of the Ministry of Health have been very instrumental in providing evidence for decision making by health policy makers. It also serves as inputs into monitoring and assessing health system performance. Furthermore, it is an important source of information for analysis and construct towards healthcare transformation.

As in previous reports, the MNHA Health Expenditure Report 1997-2016 contains macro-level health expenditure data estimated through a standardised and internationally acceptable methodology, according to classifications as detailed in the MNHA Framework. A move to future adaptation of the updated international standards called the System of Health Accounts (SHA) 2011 is on the way, but needs further feasibility study prior to full implementation. The SHA 2011 has more detailed tracking of the flow of funding and expenditure on health. This means that further improvements need to be made to health information system, data collection and reporting mechanisms to materialize more detailed health expenditure reporting. It is inevitable that the way of reporting health accounts in the future needs to run in tandem with the evolution of health care and health informatics systems.

For future continuation of our commitment, it is my greatest hope that the MNHA work will continue to garner support from all angles, from both public and private sector agencies. I definitely look forward to the next annual report which I am sure will continue to provide meaningful information for healthcare policy makers as well as health system planners, in pursuit of best possible health for the nation.

Thank you.

A handwritten signature in black ink, consisting of a stylized 'N' followed by a long horizontal stroke that tapers to the right.

**Datuk Dr. Noor Hisham bin Abdullah**  
Director-General of Health Malaysia



**FOREWORD BY  
DEPUTY DIRECTOR-GENERAL OF HEALTH  
(RESEARCH & TECHNICAL SUPPORT)  
MINISTRY OF HEALTH, MALAYSIA**

The country's move towards institutionalisation of Malaysia National Health Accounts (MNHA) has enabled regular publications on time-series national health expenditure data. The benefits in providing policy makers with information for evidence-based health policies development cannot be denied. Such information also serve as guide to efficient resources allocation as well as effective health system planning and management.

I would like to express my sincere appreciation to MNHA team of Planning Division, Ministry of Health for their tireless work and continuous effort in producing quality MNHA data and report. These achievements have materialized despite challenges to obtain timely and accurate data as well as refinement of methodology in some part of data analyses for this report of 1997-2016 national health expenditure.

The successful production of this report is also greatly dependent on other factors, including support from top management of the Ministry of Health, advice from MNHA Technical Advisory Committee, endorsement of data by the MNHA Steering Committee, and support and resourcefulness of all public sector and private sector data suppliers. Hence, I would like to take this opportunity to express my sincere gratitude to all who have been involved to facilitate the time series health expenditure analysis culminating in this publication.

It is also my sincere hope that the MNHA health expenditure reports will continue to serve as an important source of information for health policy makers, health system planners, stakeholders and all that could benefit from the reports.

Thank you.

**Datuk Dr. Shahnaz binti Murad**  
Deputy Director-General of Health  
(Research & Technical Support)  
Ministry of Health, Malaysia



**PREFACE BY  
DIRECTOR OF PLANNING DIVISION  
MINISTRY OF HEALTH, MALAYSIA**

First and foremost, it is my pleasure to inform that the Malaysia National Health Accounts (MNHA) team of the Planning Division, Ministry of Health of Malaysia has been successful in producing 20-year time-series data of national health expenditure as was planned. The MNHA Technical Advisory Committee, recently established in year 2017 under the advice of the MNHA Steering Committee has been an additional factor in the successful publication of this report.

I also take this opportunity to highlight to the readers and users of this report that there has been some methodology refinement in some parts of the analyses, such as the out-of-pocket expenditure which is explained in Chapter 3 of the report. Those familiar with NHA data is fully aware that presentation of available data is equally challenging as the analysis involved in the production of it. As such this 1997-2016 time-series report also contains further improvements in its reporting format, for example, a clearer distinction of public and private sector sources of financing report under different sections; and some adjustments in data presentation such as standardisation of 2016 cross-sectional data followed by time series tables for all sections under chapters 4 to 9. It is hoped that these refinements bring additional value to assist health policy makers obtain better evidence on the current situation of the country's health sector and in progressive studies towards healthcare transformation.

Lastly, it is my inspiration that the MNHA team of Planning Division of the Ministry of Health would continue efforts in ensuring MNHA Health Expenditure Reports are successfully produced every year. It is my sincere hope that MNHA reports will continue to be the source of meaningful information and contribute towards improvements in the health system and health outcome of the country.

Thank you.

A handwritten signature in black ink, appearing to read 'Rohaizat bin Hj. Yon'. The signature is fluid and cursive, with a horizontal line underneath it.

**Datuk Dr. Hj. Rohaizat bin Hj. Yon**  
Director of Planning Division  
Ministry of Health, Malaysia





## NOTES FROM MNHA OFFICE

The Malaysia National Health Accounts (MNHA) Unit was established in Sept 2005 under the Planning and Development Division, Ministry of Health Malaysia. Since then the division has become two separate divisions as the Planning Division under the Deputy Director-General of Health (Research & Technical Support) and the Development Division under Secretary-General Ministry of Health. Subsequently transformation and expansion of MNHA Unit led to the establishment of MNHA Section.

Over the last thirteen years MNHA Section has undergone extensive changes in terms of both organization and data production. The incremental improvements have been instrumental towards better national health expenditure data usage for policy reviews and decision making. This was possible even with continuous attrition of crucial staff due to promotions and other reasons. These achievements were mainly due to the catalytic attitude and motivation of existing MNHA team members who continued to rise above challenges and consistently strived towards constant annual improvements.

The data in this report is extracted from the national health expenditure database spanning over a twenty year period (1997-2016). At the time of this publication, which is nearly end of 2018, the next database (1997-2017) is also near completion in preparation for the next report and data release. Such commitment by MNHA team to produce timely T-1 data is useful for our stakeholders. The MNHA team also managed to migrate towards the new SHA 2011 framework by end of 2018 and successfully establish the first 2015-2017 SHA 2011 database. This will be shared in the next NHA report after the necessary data endorsement and clearance.

I have much to reminisce when my tenure as head of this wonderful MNHA team comes to an end after ten years working together through thick and thin as a family. As I retire from Ministry of Health this will be my last MNHA National Health Expenditure Time Series Report. I bid adieu and pray the MNHA team continue to be motivated and receive good support from the ministry and more so from various raw data suppliers without whom these achievements would not be possible.

Kudos and Best Wishes!

**Dr. Jameela Binti Zainuddin**  
Deputy Director of MNHA Section,  
Planning Division,  
Ministry of Health Malaysia, Malaysia



## ACKNOWLEDGEMENTS

The MNHA team would like to extend our heartfelt appreciation to YBhg. Datuk Dr. Hj. Rohaizat bin Hj. Yon, the Director of Planning Division and YBrs. Dr. Rozita Halina binti Tun Hussein, Senior Deputy-Director of Planning Division (Health Financing, Informatics and Accounts Planning Branch), for their valuable advice and tremendous support provided in making sure that the full analysis of this time series health expenditure data leading to this report is timely and successful.

Sincere gratitude goes to the members of the MNHA Technical Advisory Committee who contributed in providing insightful comments and recommendations for the improvement of MNHA reporting format and the contents. Special thanks also to all members of the MNHA Steering Committee chaired by the Director-General of Health Malaysia and Secretary-General, Ministry of Health for their guidance and endorsement of MNHA data for this report.

Last but not least, successful annual publication of MNHA reports has all this while been possible through continuous assistance and co-operation from both public sector and private sector data suppliers. The MNHA team would like to express our utmost appreciation to all our data providers, and we look forward to future communication and collaboration to further enhance the quality and contents of the MNHA reports.

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## ABBREVIATIONS

<b>AADK</b>	<i>Agensi Anti Dadah Kebangsaan</i> (National Anti-Drug Agency)
<b>AG</b>	Accountant General
<b>APM</b>	<i>Angkatan Pertahanan Awam Malaysia</i> (Malaysia Civil Defence Force)
<b>BNM</b>	<i>Bank Negara Malaysia</i> (Central Bank of Malaysia)
<b>CHE</b>	Current Health Expenditure
<b>CKAPS</b>	<i>Cawangan Kawalan Amalan Perubatan Swasta, Bahagian Amalan Perubatan</i> (Private Medical Practice Control Section, Medical Practice Division)
<b>COICOPS</b>	Classification of Individual Consumption by Purpose
<b>CORPS</b>	Corporations
<b>DC</b>	Day care
<b>DOSH</b>	Department of Occupational Safety and Health
<b>DOSM</b>	Department of Statistics Malaysia
<b>DSWM</b>	Department of Social Welfare Malaysia
<b>EPF</b>	Employees Provident Fund
<b>EPU</b>	Economic Planning Unit
<b>FOMCA</b>	Federation of Malaysia Consumers Association
<b>FOMEMA</b>	Foreign Worker's Medical Examination Monitoring Agency
<b>FT</b>	Federal Territories
<b>GDP</b>	Gross Domestic Product
<b>GGE</b>	General Government Expenditure
<b>GGHE</b>	General Government Health Expenditure / Public Sector Health Expenditure
<b>GHED</b>	Global Health Expenditure Database
<b>HC</b>	ICHA code for function of health services
<b>HC.R</b>	ICHA code for health-related services
<b>HES</b>	Household Expenditure Survey
<b>HIES</b>	Household Income and Expenditure Survey
<b>HF</b>	ICHA code for sources of funding for health services
<b>HH</b>	Household consumption
<b>HP</b>	ICHA code for providers of health services

<b>HQ</b>	Headquarters
<b>ICHA</b>	International Classification for Health Accounts
<b>IJN</b>	<i>Institut Jantung Negara</i> (National Heart Institute)
<b>IMF</b>	International Monetary Fund
<b>IMS</b>	IMS
<b>IP</b>	In-patient
<b>ISN</b>	<i>Institut Sukan Negara</i> (National Sports Institute)
<b>JBA</b>	<i>Jabatan Bekalan Air</i> (Water Supply Department)
<b>JAKOA</b>	<i>Jabatan Kemajuan Orang Asli</i> (Department of Orang Asli Development)
<b>JKM</b>	<i>Jabatan Kebajikan Masyarakat</i> (Social Welfare Department)
<b>JPA</b>	<i>Jabatan Perkhidmatan Awam</i> (Public Service Department)
<b>KL</b>	Kuala Lumpur
<b>KN</b>	<i>Kerajaan Negeri</i> (State Government)
<b>KPT</b>	<i>Kementerian Pengajian Tinggi</i> (Ministry of Higher Education)
<b>KWSP</b>	<i>Kumpulan Wang Simpanan Pekerja</i> (Employees Provident Fund)
<b>LA</b>	Local Authorities
<b>LPPKN</b>	<i>Lembaga Penduduk dan Pembangunan Keluarga Negara</i> (National Population and Family Development Board)
<b>LTH</b>	<i>Lembaga Tabung Haji</i> (Pilgrims Fund Board)
<b>MAIN</b>	<i>Majlis Agama Islam Negeri</i> (Zakat Collection Centre)
<b>MCO</b>	Managed Care Organization
<b>MF</b>	MNHA code for functions of health care
<b>MNHA</b>	Malaysia National Health Accounts
<b>MOD</b>	Ministry of Defence
<b>MOF</b>	Ministry of Finance
<b>MOH</b>	Ministry of Health
<b>MOHE</b>	Ministry of Higher Education
<b>MOSTI</b>	Ministry of Science Technology and Innovation

<b>MP</b>	MNHA code for providers of health care
<b>MR</b>	MNHA code for health-related functions
<b>MS</b>	MNHA code for sources of financing
<b>NCU</b>	National Currency Unit
<b>NGO</b>	Non-Government Organization
<b>NHA</b>	National Health Accounts
<b>NHMS</b>	National Health Morbidity Survey
<b>NIOSH</b>	National Institute of Occupational Safety and Health
<b>NRI</b>	Non-residual items
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>OFA</b>	Other Federal Agencies
<b>OOP</b>	Out-of-Pocket
<b>OP</b>	Out-patient
<b>OTC</b>	Over the counter
<b>PBT</b>	<i>Pihak Berkuasa Tempatan</i> (Local Authorities)
<b>PEMANDU</b>	Performance Management and Delivery Unit
<b>PNI</b>	Professional and Industrial Survey
<b>PPP</b>	Purchasing Power Parity
<b>PSD</b>	Public Service Department
<b>RI</b>	Residual items
<b>RM</b>	<i>Ringgit Malaysia</i> (Malaysia Currency)
<b>ROW</b>	Rest of the world
<b>SHA</b>	System of Health Accounts
<b>SHA 1.0</b>	A System of Health Accounts, Version 1.0 (published in 2000)
<b>SHA 2011</b>	A System of Health Accounts, 2011 Edition
<b>SOCSSO</b>	Social Security Organization
<b>SODO</b>	Specific object and detailed object code
<b>SSB</b>	State Statutory Body

<b>SSM</b>	<i>Suruhanjaya Syarikat Malaysia</i> (Company Commission of Malaysia)
<b>TCM</b>	Traditional and Complementary Medicine
<b>TEH</b>	Total Expenditure on Health
<b>UK</b>	United Kingdom
<b>UKAS</b>	<i>Unit Kerjasama Awam Swasta</i> (Public Private Partnership Unit)
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>USA</b>	United States of America
<b>USD</b>	US Dollar
<b>vs</b>	Versus
<b>WHO</b>	World Health Organization
<b>WB</b>	World Bank

## REPORT INFORMATION

This publication on the Malaysia National Health Accounts (MNHA) contains twenty years national health expenditure data from 1997 to 2016, estimated using standardised and internationally acceptable National Health Accounts (NHA) methodology.

The reporting format follows closely the MNHA Framework and is kept almost similar to previous reporting format with the addition of a few editorial improvements for ease of reading and new sections. The “Malaysia National Health Accounts: Health Expenditure Report 1997-2016” has a total of ten chapters.

Chapter 1 provides background to the report followed by Chapter 2 on the summary of the MNHA Framework and Chapter 3 on the methodology that is used. Under this chapter, new sections regarding MNHA constant values using MNHA derived Gross Domestic Product (GDP) deflators, and refinement of household out-of-pocket (OOP) expenditure estimation are added. Chapters 4 to 7 provide details of health expenditure based on the MNHA Framework. Chapter 8 shows MOH expenditure, Chapter 9 provides household out-of-pocket health expenditure and Chapter 10 contains some international comparisons.

Most of the data for 2016 are exhibited in diagrammatic or figures and table formats followed by tables on the 1997-2016 time series data. All data are in nominal values and reported in *Ringgit Malaysia* (RM) unless stated otherwise. However, it should be noted that the best method for annual comparisons is based on data that have been adjusted for inflation, preferably using GDP deflators. MNHA derived GDP deflators are used to estimate health expenditures in constant values that could be seen in some tables and figures in Chapters 4 and 5.

Chapter 4 contains the Total Expenditure on Health (TEH) trends from year 1997 to 2016, as percentage of Gross Domestic Products (GDP), the per capita health expenditures for the same period, and state disaggregation of health expenditure. Chapter 5 contains data on the major categories of the sources of financing, namely the public and private sectors. It also contains expenditures of the various agencies under these two sectors. Both sectors’ data are then separately cross-tabulated with the dimensions of providers and functions of health care. Every set of data is also accompanied by similar time-series data. The Public Sector Health Expenditure is equivalent to the General Government Health expenditure (GGHE) as the term internationally used, which include all public sector sources of financing as stipulated in the MNHA Framework under MS1 codes, and GGHE as percentage of General Government Expenditure (GGE) is under this chapter.

Chapter 6 and 7 provide data on the Total Expenditure on Health by providers and functions of health care. In addition, Chapter 6 also shows data on separate cross-tabulations between hospital and ambulatory care expenditure with sources of financing. Chapter 7 provides data on separate cross-tabulations of curative care function, expenditures for public health programmes (including health promotion and prevention), and expenditures for health education and training by sources of financing. Chapter 8 shows Ministry of Health (MOH)’s expenditure as share of TEH and the national GDP. It also contains data on separate cross-tabulations between MOH hospital expenditure with sources of financing and functions of health care.



Chapter 9 shows Out-of-Pocket (OOP) health expenditure, OOP share of total and private sector expenditure as per cent GDP, OOP as share of national GDP, as well as OOP by providers and functions of health care. Chapter 10 contains some international comparisons of MNHA data with NHA data from neighbouring and regional countries as well as some developed countries.

The appendix tables at the end of the report list the data sources from public and private sectors and tables related to Chapter 10.

It is important to note that the data shown in this report is based on the methodology stated under Chapter 3. Tables and figures are used to display the NHA 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.**

As is the case in all reported NHA data from any country, refinements in internationally accepted methodology and inputs from new additional data source may lead to annual changes in the figures. **Therefore, it is advisable to refer to the most recent MNHA data and publication for policy decisions and research purposes.**

# CHAPTER 1

## BACKGROUND

The Malaysia National Health Accounts (MNHA) data provides a wealth of useful macro-level health expenditure information for policy makers, researchers and other stakeholders. The importance of these data is elevated with the renewed need and interest in health financing reform for the country. Some knowledge on the background of this data will assist to better understand MNHA. MNHA started as a project by the Ministry of Health (MOH) with strong support from the Economic Planning Unit (EPU) of the Prime Minister's Department. This Malaysia National Health Accounts Project (2001-2005) was funded mainly by the United Nations Development Programme (UNDP) and resulted in the production of the *Malaysia National Health Accounts Project, Report on The MNHA Classification System (MNHA Framework)* and the first MNHA report, *Malaysia National Health Accounts Project, Health Expenditure Report (1997-2002)*. The outputs of this project were instrumental in the establishment of the Malaysia National Health Accounts (MNHA) Unit under the Planning & Development Division of MOH. Subsequently the MNHA Unit produced two other reports, *MNHA Health Expenditure Report (1997-2006)* and *MNHA Health Expenditure Report (2007 & 2008)*.

By 2009 the country had produced 3 different reports containing national health expenditure data spanning over a 12 year period (1997 to 2008). These data were produced in several cycles of MNHA estimations with some variations in data sources and methodology. However acceptable annual data comparison requires standardized methods of estimations for every year. This means ideally the method of analysis for 2008 should be applicable to 1997 analysis. This requirement resulted in the revision of previous MNHA estimations while proceeding to do the subsequent year analysis. After some challenging experiences and under close guidance from international consultant, the *MNHA Health Expenditure Report Revised Time Series (1997-2008)* and *MNHA Health Expenditure Report 2009* was produced. This contained comparable annual NHA data using internationally acceptable standardized method of analysis. Subsequently a second report under the application of the new standardized method was published as the *MNHA Health Expenditure Report (1997-2011)*. This report was later replaced by the *MNHA Health Expenditure Report 1997-2011 Revision* due to some error during the final analysis stage. Following this, the third time series report (1997-2012), fourth time-series report (1997-2013), fifth time-series report (1997-2014) and sixth time series report (1997-2015) were later published annually. The latest report *MNHA Health Expenditure Report 1997-2016* is also available on the Ministry of Health's website.

In 2017, MNHA has progressed to produce the seventh comparable annual time series data spanning over a 20-year period by using similar methodology and reporting format with further refinements. The chapters in this publication covers some general expenditure overviews followed by expenditure reports using the standard NHA framework, which are expenditures by sources of financing, expenditures by providers of health care, and expenditures by functions of health care. The health expenditure disaggregation by states was also carried out and reported in this publication. Tables and figures are used to display the NHA 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.** For those who require references to trends over

time periods, whenever possible, the revised 1997 to 2016 time series data is inserted between the detailed 2016 cross-sectional data. It is reminded that most of the data are in nominal *Ringgit Malaysia* (RM) values unless indicated otherwise.

**It is important to remind users of any NHA report that due to the methodology in which NHA data are produced, the data in the current most report replaces all annual data as stated in previous publications.**

## CHAPTER 2

### MALAYSIA NATIONAL HEALTH ACCOUNTS (MNHA):

#### SUMMARY OF FRAMEWORK

National Health Accounts are basically standard sets of tables containing comprehensive, consistent, comparable, compatible and timely national health expenditure over a specified period. "A System of Health Accounts, Version 1.0" (SHA 1.0) manual published by the Organization for Economic Co-operation and Development (OECD) in year 2000 has been adopted by the World Health Organization (WHO) as a basis for international data collection and comparison. It proposes an integrated system of comprehensive and international comparable accounts and provides a uniform framework basic accounting rules and a set of tables for reporting health expenditures data. It also provides a more complete picture of the performance of the nation's health system and the needs of government, private sector analysts and policy makers for health planning purposes.

The SHA 1.0 also proposes an International Classification for Health Accounts (ICHA) in three dimensions, namely health care sources of financing including public and private sectors, health care service providers and health care functions. The MNHA Framework is based on the SHA 1.0 classification with some modifications to meet local policy needs.

#### 2.1. TOTAL EXPENDITURE ON HEALTH

The SHA 1.0 defines the concept of total expenditure on health (TEH) as a standardized definition of which areas of health expenditure in a given year are to be measured and reported in national totals. In table 5 of the SHA 1.0 manual, TEH includes expenditures of 'health care services and goods by function' (core functions) and one component of 'health-related function' namely 'gross capital formation', but excludes expenditure of all other 'health-related functions'. Core function components in SHA are classified under the codes HC.1-HC.7 and 'health-related functions' under the codes HC.R.1-HC.R.7. The 'health-related functions' codes are for 'gross capital formation', 'education and training of health care personnel', 'research and development in health', 'food hygiene and drinking water control', 'environmental health', 'administration and provision of social services in kind to assist living with disease and impairment' and 'administration and provision of health-related cash benefits' expenditures. The expenditures under codes HC.R.2-HC.R.7 are excluded from TEH in SHA 1.0.

In the MNHA Framework, TEH comprises expenditures from both public and private sectors, which consist of both 'health expenditures' and all 'health-related expenditures' components. This is different from SHA 1.0 that excludes 'health-related expenditures' (codes HC.R.2-HC.R.7) from TEH. 'Health expenditures' as defined in the MNHA Framework, consists of all expenditures or outlays of medical care, prevention, promotion, rehabilitation, community health activities, health administration and regulation, and capital formation with the predominant objective of improving health, and these are reflected by core function classifications under the codes MF1-MF7. 'Health-related expenditures' classification under the codes MR1, 2, 3 and 9 include expenditures of 'capital formation of health care provider

institutions’, ‘education and training of health personnel’, ‘research and development in health’ and ‘all other health-related expenditures’. For easier understanding, components that make up TEH according to SHA 1.0 and MNHA are as illustrated in Figure 2.1.

<b>Figure 2.1: Comparison of Total Expenditure on Health in SHA 1.0 with MNHA Framework</b>		
<b>TEH according to SHA 1.0</b>		<b>SHA 1.0</b>
<b>Code</b>	<b>Core Functions</b>	<b>Total Expenditure on Health (TEH)</b>
HC.1	Services of curative care	
HC.2	Services of rehabilitative care	
HC.3	Services of long-term nursing care	
HC.4	Ancillary services to health care	
HC.5	Medical goods dispensed to out-patients	
HC.6	Prevention and public health services	
HC.7	Health administration and health insurance	
<b>Code</b>	<b>Health-Related Functions</b>	
HC.R.1	Gross capital formation	
HC.R.2	Education and training of health personnel	
HC.R.3	Research and development in health	
HC.R.4	Food hygiene and drinking water control	
HC.R.5	Environmental health	
HC.R.6	Administration and provision of social services in kind to assist living with diseases and impairment	
HC.R.7	Administration and provision of health related cash-benefits	
<b>TEH according to MNHA Framework</b>		<b>MNHA</b>
<b>Code</b>	<b>Core Functions</b>	<b>Total Expenditure on Health (TEH)</b>
MF1	Services of curative care	
MF2	Services of rehabilitative care	
MF3	Services of long-term nursing care	
MF4	Ancillary services to health care	
MF5	Medical goods dispensed to out-patients	
MF6	Prevention and public health services	
MF7	Health program administration and health insurance	
<b>Code</b>	<b>Health-Related Functions</b>	
MR1	Capital formation of health care provider institutions	
MR2	Education and training of health personnel	
MR3	Research and development in health	
MR9	All other health-related expenditures	

It should also be noted that from year 2017 onwards, both OECD and WHO countries use Current Health Expenditure (CHE) for international reporting and inter-country comparisons of national health expenditures.

## 2.2. THE MNHA CLASSIFICATION

The SHA 1.0 classifies all health system expenditure using a tri-axial-system, known as the International Classification for Health Accounts (ICHA), which categorizes health expenditure by:

- sources of financing (HF)
- providers of health care (HP)
- functions of health care (HC)

The MNHA Framework is based on the SHA 1.0 classifications with some minor modifications to suit local policy needs (Appendix Tables A2.1, A2.2, and A2.3). Similar to the SHA 1.0 classifications, the MNHA classifies all expenditures into three main entities:

- sources of financing (MS)
- providers of health care (MP)
- functions of health care (MF)

**Sources of financing** is defined as entities that directly incur the expenditure and hence control and finance the amount of such expenditure. It includes the public sector expenditure inclusive of the federal government, state government, local authorities, and social security funds, and the private sector consisting of private health insurance, managed care organizations, out-of-pocket expenditure, non-profit institutions and corporations.

**Providers of health care** is defined as entities that produce and provide health care goods and services. It is categorized as hospitals, nursing and residential care facility providers, ambulatory health care providers, retail sale and medical goods providers, public health programme providers and general health administration.

**Functions of health care** include core functions of health care (e.g. services of curative care, rehabilitative care, long term nursing care, ancillary services, out-patient medical goods, public health services, health administration and health insurance) and health-related functions (e.g. capital formation, education and training of health personnel, research and development in health).

## 2.3 THE SHA CLASSIFICATION

Although the MNHA classification is based on the SHA classification (SHA 1.0), there are some changes in the two sets. Chapter 10 on International NHA Data briefly explains the salient differences. However, the rest of the data in various chapters are based strictly on the MNHA Framework.

## CHAPTER 3

### METHODOLOGY OF DATA COLLECTION AND ANALYSIS

#### 3.1 GENERAL METHODOLOGY

A general understanding of the methodology in NHA estimation certainly provides better appreciation of the data. The previous report produced a set of MNHA data from 1997-2015 and this report contains data from 1997-2016. However, the data in this report over the same time period of 1997-2016 may show some variations compared to the previous report. This is mainly due to variations in responses from multiple data sources at each cycle of estimation. These variations are an acceptable phenomenon under NHA because estimations have to be carried out using standard NHA methodology for agencies that do not provide the requested data and therefore would otherwise have resulted in underestimation of health expenditure. Sometimes agencies are requested to provide their total spending for health-related activities and at other times their data are used to derive at the disaggregation of health expenditure by dimensions of provider or function of health care services and products. A complete list of the sources of data are documented at every cycle of analysis (Appendix Table A1.1, A1.2). Although it is difficult to obtain near 100 per cent response from all data sources, any improvements in data responses will minimize estimations for non-responders and better reflect true data.

#### 3.2 SUMMARY OF DATA COLLECTION AND ANALYSIS

The method of data collection and analysis used in this report conforms to the method used in the previous cycle whereby detailed definitions of what constitute health expenditure, institutional entities and types of disaggregation were drawn up based on inputs from several documents, committee meetings, and consultative advice from sources within and outside the MOH. The expertise gained through the previous international consultancy is extremely helpful in setting guidelines to ensure that estimation methods is acceptable and reliable under national health accounting methodology.

Both primary and secondary data were used in this analysis (Appendix Table A1.1 and A1.2). Several agencies both from the public and private sectors provide primary data in several formats. These data were obtained through multiple MNHA surveys and other surveys, data extraction during previous state visits, data extraction from other datasets and even through discussions. The secondary health expenditure data were retrieved through various data sources, reports, bulletins and other documents. All these data are analysed separately by each group of agency. The primary data were entered into various agency master dummy spreadsheets containing unprocessed data from 1997 onwards to the current year. The verification of primary data is important as this affects the several stages of analysis and the quality of final outputs. The main objective of NHA analysis is to conduct data classification and fill in any data gap. The sets of data from each source or agency were processed differently depending on the availability and completeness of data. Data classification for each agency is carried out based on the tri-axial MNHA entities of sources, providers and functions. The MNHA Framework enables health expenditure disaggregates to the lowest possible level under the three entities of sources, providers



and functions. Any data gaps in each of these disaggregated data from each agency were then subjected to imputation methods used by NHA experts to fill the data gaps. Even these imputation methods vary from agency to agency. As in the past, the final analysis data of each agency were dual coded according to the MNHA classification as well as the SHA 1.0 classification (Appendix Tables A2.1, A2.2, and A2.3). State codes were also assigned to every set of analysis. Data from each agency are then collated before producing the final NHA data. Some of the important data with potential policy implications are then extracted and cross-tabulated to produce various tables and figures that are easily understood by policy makers and other stakeholders. All of these stages of analyses are highly technical and involve several methods that differ under each agency.

Besides a good understanding of NHA framework, personnel involved in NHA production also need to acquire sound knowledge on the use of specific software. The processes of data entry and analysis were carried out using Microsoft Excel program and statistical software Stata (Version 12). The initial MNHA data preparation, analysis, and coding were done in Microsoft Excel spreadsheets and the final output data files of each agency were uploaded into a final database in Stata. After writing several Stata programs various tables and figures are produced.

As in the previous round of analysis, improvements in quality of NHA data was enhanced by reporting all expenditures incurred for laboratories & radiological investigations as one total for curative care expenditure whenever they are delivered as part of curative care service package. However if expenditures incurred for laboratories and radiological investigations are provided separately, then they are reported under another function code. This is strictly in-keeping to definitions of functions codes under MNHA Framework for curative care services and standalone ambulatory health care centers.

Some unique verification processes of final data outputs for various data sources were also implemented. This involves validation of total estimates for each data source or agency prior to merging for the production of final database. This database is then subjected to a couple more verification measures prior to NHA data extraction to populate various tables and figures.

This report only highlights some selected findings, which may be of use for health policy development and health planning for the country. Further detailed data extractions with cross-tabulations can produce much more data as requested by policy makers and stakeholders.

### 3.3 BRIEF ON VARIOUS AGENCY DATA PROCESSING

The methods used for data processing varied according to the availability, completion and source of data as follows:

#### 3.3.1 Public Sector

##### (i) Ministry of Health (MOH)

Health expenditure data of the MOH (1997-2016) were obtained from the Accountant-General's (AG) Department of Malaysia, under the Ministry of Finance (MOF). The AG raw database for the MOH is the primary source of data whereby expenditure data is entered as line item. All health expenditures are disaggregated into the tri-axial coding system under the dimensions of sources of financing, providers and functions of health care based on the MNHA Framework, omitting double counting. Some assumptions are made using budgetary allocations for respective years.

##### (ii) Ministry of Higher Education (MOHE)

The functions of the university hospitals under the MOHE include provision of health care services, health related training and research. Health expenditures of these institutions were mainly for curative care services. Other than these institutions, data (1997-2016) on the cost of training health professionals were obtained from various training colleges, Public Service Department (PSD) and other agencies.

##### (iii) Other Federal Agencies (including Statutory Bodies)

The agencies under "Other Federal Agencies" currently consists of sixteen public agencies inclusive of National Anti-Drug Agency, Prison Department, Malaysia Civil Defence Force, Pension Department of Public Service Department, National Heart Institute of Malaysia, Social Welfare Department of Malaysia, Department of Orang Asli Development, National Population and Family Development Board Malaysia, National Institute of Occupational Safety and Health Malaysia (NIOSH), Department of Occupational Safety and Health Malaysia (DOSH), National Sports Institute of Malaysia, Ministry of Science, Technology and Innovation (MOSTI), Federal Statutory Bodies, Institutes and Pilgrims Fund Board.

The expenditure on health of Other Federal Agencies (including Statutory Bodies) is captured from these sources through special MNHA surveys questionnaires which also assist to estimate the proportions of this expenditure for disaggregation to providers and functions of health care. Other Federal Agencies (including Statutory Bodies) expenditures are mainly for curative care services, retail sales and medical goods, and research.

#### **(iv) Local Authorities**

Local Authorities consist of health expenditure from 154 agencies of locals / municipal governments all over Malaysia. Most local authorities provide preventive care services such as disease control and food quality control. However, in addition to these, city councils such as Kuala Lumpur City Hall (*Dewan Bandaraya Kuala Lumpur*), Penang City Hall, Kuching City Hall and Ipoh City Council also provide curative care services.

#### **(v) (General) State Government**

This consists of health expenditure by all thirteen state governments. Three geographical areas of the country come under the Federal Territories include Kuala Lumpur, Putrajaya and Labuan. Most of the state expenditure is mainly for curative care services, ancillary services and environmental health, such as for water treatment.

#### **(vi) Ministry of Defence (MOD)**

The Ministry of Defence provides health services through its Army Hospitals and Armed Forces Medical and Dental Centres (*Rumah Sakit Angkatan Tentera dan Pusat Pergigian Angkatan Tentera*). The expenditure on health of this ministry (1997-2016) is captured from these sources, together with MNHA survey to estimate the proportions of this expenditure for disaggregation to providers and functions of health care. The MOD expenditure is mainly for curative care services.

#### **(vii) Social Security Funds**

There are two major organizations providing social security funds; the Employees Provident Fund (EPF) and the Social Security Organization (SOCSO), both of which are mandated by the government. In both, samplings of the medical bill claims were done to obtain health expenditures disaggregation by states to providers and functions and health care services.

#### **(viii) Other State Agencies (including statutory bodies)**

The other state agencies consist of health expenditure are statutory bodies and Zakat Collection Centre (MAIN). The data (1997-2016) on the number of employees and the health expenditure for state statutory bodies were collected from various sources. In addition, the MNHA Survey of state agencies including the statutory bodies provided data on per capita spending as well as expenditure disaggregation to provider and function of health care services.

### **3.3.2 Private Sector**

#### **(i) Household Out-of-Pocket (OOP) Health Expenditure**

The private household OOP expenditure estimation is complex and challenging. MNHA Framework uses the integrative approach of consumption, provision and financing perspectives with necessary adjustments to avoid double counting of expenditures. Expenditure data is summated from both production and consumption side sources, with deductions of the reimbursable and others already

included under other sources of funding. The approach includes the capture of the gross revenues from various sources such as user charges of MOH hospitals, university hospitals, National Heart Institute, revenues of private hospitals, private medical clinics, private dental clinics, sales of pharmaceuticals and other medical supplies, ancillary services, sales of traditional medicine and revenues of traditional treatment providers.

The summation of all these revenues is considered as the gross spending (OOP health expenditure and non-OOP health expenditure). In order to obtain the net OOP spending, all the refundable payments by insurance, private corporations, SOCSO, EPF, statutory bodies or other parties exclusive of direct OOP payment are subtracted. The balance is reported as the estimated private OOP health expenditure.

**(ii) Private Corporations / Private Companies**

More than 90% of the total labour force works in the private sector and gain medical benefits through the private employer medical benefit scheme. The average per capita health expenditure is calculated based on the survey conducted by Department of Statistic Malaysia (DOSM) on various types of industries. The proportions of providers and functions were estimated based on analysis and via MNHA questionnaires sent to the selected private companies. This expenditure excludes group insurance purchases by large companies for their employees for health purposes as this is captured under private health insurance expenditure.

**(iii) Private Health Insurance**

The health expenditure of private health insurance is calculated based on the Medical Health Insurance data from the Central Bank of Malaysia. The data includes individual and grouped insurances data. The proportions for providers and functions of health care are obtained via the MNHA survey of sampled insurance companies.

**(iv) Non-Government Organizations (NGOs)**

Besides social activities, the non-government organizations (NGOs) are also involved in health related activities. Health expenditure incurred by the NGOs is obtained through the MNHA survey of these organizations which enables the expenditure disaggregation to providers and functions of health care. The process of obtaining a full list of NGOs and achieving good response rate for this type of source of financing has always been a challenge.

**(v) Managed Care Organizations (MCO)**

Under the provisions of the existing law, only insurance companies are allowed to undertake 'health risk'. In Malaysia, most of the organizations considered as MCOs are third party payers. The data obtained from these third party payers were data mainly related to health administration of health insurance.

## 3.4 REFINEMENT OF METHODOLOGY

### 3.4.1 Refinement of Methodology: General

The production of high quality NHA involves complex techniques and vigilance in conforming to international NHA framework and acceptable methodologies. The final output have to be produced as useful data in formats that national stakeholders can comprehend. The production of NHA begins with extraction of raw health expenditure data from various accounting systems of agencies that assists in the estimation towards Total Expenditure on Health. These raw data then has to be processed and analysed to conform to international NHA reporting system and the locally adapted version, MNHA reporting system. The database is also equally complex hence varies and consists of data which can be extracted for local and international needs. Various templates have to be identified for extraction in preparation for this report. These necessary challenging processes is the motivation factor that drives the MNHA technical team to constantly review and refine methodologies to continually improve NHA estimations and reporting.

This section of the report attempts to simplify some of the intricacies in ensuring that data is of high quality. The previous report (Malaysia National Health Accounts, Health Expenditure Report 1997-2015) explained on two processes for data refinement which is further expended as follows:

- (i) Standardisation in reporting expenditure structure for healthcare services provided by hospitals under Ministry of Health hospitals (public MOH), Ministry of Higher Education, Ministry of Defence, National Heart Institute (public non-MOH) hospitals and private hospitals;
- (ii) Addressing double counting of expenditures; and
- (iii) Review of claims from agencies for healthcare services (new).

#### 3.4.1.1 Standardization of hospital expenditure reporting

Hospital care as defined in NHA, embodies all services provided by a hospital to patients. This means costs incurred for ancillary services such as pharmacy charges (drugs and non-durable products), surgical costs, laboratory tests, radiological investigations and rehabilitation services are included as part of curative care expenditure.

Older reports, under the functional classification, categorized expenditure provided by public MOH hospitals as inpatient, outpatient and day care; whereas services provided at public non-MOH hospitals (Ministry of Health, Ministry of Higher Education, Ministry of Defence, National Heart Institute) and private hospitals in addition to in-patient, out-patient and day care were also disaggregated to show ancillary services expenditure separately whenever available.

Under the refined analysis all public and private hospitals services were disaggregated only into three categories as in-patient, out-patient and day care. This reported curative care services expenditures for public and private hospitals include all ancillary charges as well. Thus, the refined estimates were slightly higher than previous values. This revision provides a more standardized estimation of curative care services spending by both public and private sector hospitals.

#### **3.4.1.2 Addressing double counting**

MNHA data sources have grown over the years. Explanation on various data sources and how the health expenditure data is obtained from these sources is briefly explained in the earlier sections of this chapter. Over the years there have been increases and changes in the healthcare benefits provided by public and private employers. In addition to providing private health insurance benefits, several employers also allow their employees to claim some of their medical expenses. These claims can be for services of curative care at public MOH and public non-MOH hospitals or clinics. There is literature to support that when estimating expenditure along a two-dimension matrix where one dimension are sources of funds and the other dimension are types of providers, the prevalence of such claims increased the likelihood of double counting the expenditure at public MOH and public non-MOH hospitals.

In the Malaysian context estimated health expenditure for all public hospitals are obtained from the respective data sources who are also providers of health care services (Ministry of Health – budget line data, MNHA yearly survey data from Ministry of Higher Education, Ministry of Defence and National Heart Institute). Data captured through the surveys and secondary budget data provided the total expenses for the services rendered at public MOH and non-MOH hospitals and clinics. This included expenses incurred for services provided to public and private employees. All patient revenues collected at these public facilities are channeled to a consolidated fund managed by the treasury. Some of these revenues are payments by employees which can be reimbursed by their employers. Surveys done on these employers also report spending at various public hospitals which in the previous analysis is also taken into consideration. This would have inflated the actual spending at the public hospitals.

The refined methodology is a downward revision to health care providers expenditures, resulting from removal of various agencies reimbursements when it involves claims for treatment received at public MOH and non-MOH hospitals and clinic.

Addressing this double counting is a major focus of the previous revision and accounted for some changes in the total expenditures. This approach in analysis to address double counting is carried out in this round of analysis which is similar to the previous last report.

#### **3.4.1.3 Review of claims from agencies for Health Care Services**

The data on claims refers to various financiers mainly government agencies which, based on their respective policy, allow their employee and eligible dependents to obtain services at public and private hospitals, clinics or standalone ancillary care centers which can sometimes be reimbursed back to the employee. As explained in paragraph 3.4.1.1, the previous NHA series addressed standardization of curative care services reporting at hospitals which includes review of the claims data collected from various agencies and ancillary care boundaries.

### **3.4.2 Refinement of Methodology: Household Out-of-Pocket Health Expenditure Estimation**

Internationally, there are several methods to estimate household out-of-pocket (OOP) health expenditure. MNHA uses Integrative approach to estimate OOP expenditure. The integrative approach involves examining expenditure flows from the perspective of all agents in the system. This approach comprises of several different health expenditure flows in the system from different perspectives: (i) from the source of financing or consumption (example: Household Expenditure Survey or Household Income and Expenditure Survey (HES/HIES) and (ii) from the provider side (example: private hospital and clinic survey). This combination approach is the best method and highly recommended by NHA international standards.

Although HES/HIES are conducted to collect data on all items of household expenditure, MNHA does not use their estimated OOP. This is because that value provides lower estimates of health spending than specialised health surveys, which focus only on healthcare use. Some of the limitations of HES/HIES survey are sampling error, biases arising from non-sampling errors and significant recall loss (inpatient: 12 months associated with 30-50% loss of recall and outpatient: > 2-3 days associated with 20% loss of recall).

#### **3.4.2.1 Integrative Approach**

In the integrative approach, the gross of direct spending from the consumption, provision and financing perspective is estimated after deduction of the third-party source of financing payer reimbursements. This deduction is done to avoid double counting and over estimation of the OOP expenditure. The integrative approach under the MNHA Framework uses the formula as follows to derive at the estimated OOP expenditure:



OOP Health Expenditure = (Gross OOP Health Expenditure - Third Party Payer Reimbursement) + OOP Expenditure for Health Education & Training

### 3.4.2.2 Data Source Compilation

#### (a) Gross OOP Expenditure

The gross OOP expenditure is the net reconciliation of various datasets using the consumption and provider approaches. It consists of 2 groups, namely Residual Items (RI) and Non Residual Items (NRI) which includes the following sources:

- (i) Non Residual Items (NRI)
  - Ministry of Health User Charges
  - University Hospitals User Charges
  - National Heart Institute User Charges
  - Private Hospitals Gross Revenues
  - Private Clinics Gross Revenues
  - Private Dentists Gross Revenues
  - Private Pharmacy Sales
  - Medical Supplies
- (ii) Residual Items (RI)
  - Medical durables / prosthesis / equipment
  - Medical Supplies
  - Ancillary Services
  - Traditional and Complementary Medicine (TCM)
  - Traditional Treatment Provider

#### (b) Third Party Payer Reimbursement

The third party payer re-imburements are the finances claimed from the various agencies by the OOP payee after the OOP payment is made and includes the following sources:

- Private Insurance Enterprises
- Private Corporations
- Employees Provident Fund (EPF)
- Social Security Organization (SOCSO)
- Federal and State Statutory agencies

Each item in the gross spending and third party payer data can be obtained from several data sources (Appendix Table A1.1 and A1.2).

### 3.4.2.3 Residual Items Estimation

Residual Items (RI) consists of gross direct spending for medical durables, medical supplies, ancillary services, traditional and complementary medicine (TCM) and traditional treatment provider. The RI data source is from Household Expenditure (HES) or Household Income and Expenditure Survey (HIES) reported by Department of Statistics Malaysia (DOSM). There are several steps in estimating of RI as follows:

**(a) Code and Grouping of HES/HIES**

The first step is to study similarities and differences in Classification of Individual Consumption by Purpose (COICOP) of group 5 or 6 items (health services and medical goods) codes for different 5 series HES/HIES surveys (1993/1994, 1997/1998, 2004/2005, 2009/2010 and 2014/2015). This step follows mapping every item of group 5 or 6 based on definitions used in DOSM survey for all HES/HIES survey series.

**(b) Additional Data or Surveys**

Additional data used for expenditure adjustment in analysis from MNHA surveys by other agencies (example: Accountant General (AG), IMS) and data from others agencies surveys (example: Gross Domestic Product (GDP), Household Consumption, National Health Morbidity Survey (NHMS)).

**(c) Analysis of RI Expenditure**

Re-group all items of group 5 or 6 items codes for different 5 series HES/HIES surveys based on COICOP with weighted expenditures in all series into 18 categories as the following list:

- (i) Pharmaceutical - Prescription
- (ii) Pharmaceutical - Over the counter (OTC)
- (iii) Pharmaceutical - Supplement
- (iv) Pharmaceutical - TCM
- (v) Other medical products - Medical supply
- (vi) Therapeutic appliances- Medical durable
- (vii) Medical OP - Government
- (viii) Medical OP - Private
- (ix) Medical OP - Government Corporation
- (x) Dental OP - Government
- (xi) Dental OP - Private
- (xii) Dental OP - Government Corporation
- (xiii) Ancillary Services
- (xiv) Ancillary Services-TCM
- (xv) Ancillary Services-TCM Provider
- (xvi) Hospital IP-Government

- (xvii) Hospital IP-Private
- (xviii) Hospital IP- Government Corporation

Compare IMS pharmaceutical items with COICOP residual items. Identify items in 3 categories (Pharmaceuticals, Supplies and TCM) which are captured in IMS data. Regroup the items as 'IMS Grouping'. Reassign 18 groups into 10 categories identified in Gross OOP Spending estimation list:

- (i) Government Facility User Charges
- (ii) Private Hospitals Gross Revenues
- (iii) Private Clinics Gross Revenues
- (iv) Private Dentists Gross Revenues
- (v) Pharmacy Purchases
- (vi) Medical durables / prosthesis / equipment
- (vii) Medical Supplies
- (viii) Ancillary Services
- (ix) Traditional and Complementary Medicine (TCM)
- (x) Traditional Treatment Provider

Next is the use of various analytical techniques (smoothing / straight line imputation / interpolation / extrapolation) to address data noise, fill data gaps, sampling issues and sampling errors, etc. This is followed by estimations to derive at various proportions for adjustment of HES/HIES data to multiple available studies (Professional and Industrial Survey (PNI) and Household Consumption (HH)).

A new spreadsheet with five series of HES/HIES expenditure is created based on above 10 categories by direct method of expenditure for all categories. This spreadsheet allows all categories expenditure analysis by indirect method using Household Consumption. This adjusted value is then estimated as a share of GDP to generate the 5 residual items expenditure. For non-survey years data gaps are filled using linear interpolation technique.

**(d) Coding of RI Expenditure to State, Provider and Function Codes**

The first step is selecting relevant COICOP codes from each HES/HIES which are RI (exclude NRI and IMS data). For each year of RI re-align/map codes in various HES/HIES surveys to have the same representation for all 5 series HES/HIES surveys. Assign MNHA MP, MF codes and state codes for each COICOP code. Finally, the individual COICOP code is grouped into 10 different combinations of MNHA MP and MF codes.

#### 3.4.2.4 Non-Residual Items Estimation

##### (a) Government Facility User Charges

Government facilities collect revenues from patients in the form of official user charges. Data sources of government user charges consist of:

- AG data - MOH user charges
- MNHA MOHE survey
- MNHA IJN survey

MOH user charges extracted from AG data by SODO Codes for OP, IP and DC are selected and assigned MNHA Provider (MP) and Function (MF) codes. Data from MOHE and IJN MNHA Survey are used to assign MP, MF and state codes.

##### (b) Private Facilities Gross Revenue

This consists of 3 facility revenue at private hospital, medical clinics and dental clinics. The data source is from Professional and Industrial Survey (PNI) produced by DOSM and MNHA Private Hospital Survey. PNI are rolling surveys which has data gaps and require processing using linear interpolation and GDP values. MNHA Survey data is used to assign MP, MF and state codes. This requires hospital grouping by bed numbers based on Medical Practice Division, MOH list.

##### (c) Private Pharmacy Purchases

Pharmaceutical data on pharmacy channel from IMS is used for OOP estimation which includes product groups as ethical/prescription, pharmacy and over the counter (OTC). Since IMS data is warehouse price, some estimation is done to get retail price. Each of the 3 product groups is assign MNHA MP and MF codes. Assignment of state coding is based on number of private stand-alone pharmacies in each state (data from MOH Pharmacy Division).

##### (d) Private Hemodialysis

Private Hemodialysis data source is from MNHA Private Hemodialysis Survey based on Medical Practice Division, MOH (CKAPS) list. Data from each respondent are assigned MNHA MP, MF & state codes. Currently reported MNHA value is an underestimation as the response rate can be further improved.

#### 3.4.2.5 Deduction of Third Party Payers

The summation of all gross revenues is considered as OOP and non-OOP health expenditure. The non-OOP health expenditure has to be deducted as the refundable payments (private insurance, private corporations,

SOCSO, EPF and statutory bodies) to estimate the net OOP expenditure. This deduction is done to avoid double counting and over estimation of the OOP expenditure. Also, under the MNHA Framework, unlike the SHA 1.0 framework, the OOP spending is inclusive of expenditure for health-related education and training.

#### 3.4.2.6 Training Expenditure Estimation

The training expenditure data source is from public and private institutes based on MOHE registration list. Data from each respondent are assigned MNHA MP, MF and state codes. Data gaps are filled up using linear interpolation.

### 3.5 MNHA ESTIMATION OF CONSTANT VALUE

Current or Nominal value of health expenditure refers to expenditures reported for a particular year, unadjusted for inflation. Constant value estimates indicate what expenditure would have been when anchored to a particular year value, such as 2016 values applied to all years. As a result, expenditures in different years can be compared on a *Ringgit-for-Ringgit* basis, using this as a measure of changes in the volume of health goods and services. Constant expenditure adjusts current or nominal values which aim to remove the effects of inflation. Hence, when making health expenditure comparisons over a time series it is more meaningful to use constant values rather than current or nominal values.

$$\text{GDP Deflator} = \frac{\text{GDP Current}}{\text{GDP Constant}} \times 100$$

In health expenditure estimations under NHA usually the constant value is estimated using GDP deflator. The GDP deflator is a measure of the level of prices of all new, domestically produced, final goods and services in an economy. It is a price index that measures price inflation or deflation. GDP deflator can be calculated using above formula for every series in different base year for GDP current and constant values. GDP current and GDP constant time series data is published every year by Department of Statistics Malaysia (DOSM).

The constant value estimation require a two-step method whereby the first step involves estimation of a set of GDP deflators. Based on advice from NHA experts the splicing method on series in different base year from 2000 to 2010 can be used to get a series of GDP deflator as shown in Table 3.5a. The second step involves application of this estimated GDP deflator to nominal values for estimation of constant values.

Year	2005	2006	2007	2008	2009	2010	2011
<b>Deflators Base Year 2005</b>	100	104	109	120	113	118	
<b>Deflators Base Year 2010</b>						100	105
<b>GDP Deflator Base Year 2010 (Splicing Method)</b>	<i>85</i>	<i>88</i>	<i>92</i>	<i>102</i>	<i>96</i>	<b>100</b>	<b>105</b>

Note: Derived values in italics

Example of splicing method using base year 2010 to derive at new GDP deflator for year 2009:

$$= (100/118) \times 113$$

$$= 96$$

For year 2008:

$$= (100/118) \times 120$$

$$= 102$$

Constant value estimates can be obtained by calculating GDP deflator base year 2016 from the derived values of GDP deflator base year 2010 which then can be applied to the nominal value of health expenditure. As a result, nominal value increases when expressed in constant value at a particular base year.

This estimation can be demonstrated using 2016 base year and a set of GDP deflator values as shown in Table 3.5b.

Year	2009	2010	2011	2012	2013	2014	2015	2016
<b>GDP Deflator Base Year 2010 (Splicing Method)</b>	96	100	105	106	107	108	109	111
<b>TEH Nominal (RM Million)</b>		32,000	35,000	39,000	41,000	46,000	49,000	51,000
<b>TEH Constant (RM Million)</b>		<b>35,520</b>	<b>37,000</b>	<b>40,840</b>	<b>42,533</b>	<b>47,278</b>	<b>49,899</b>	<b>51,000</b>

Monetary values expressed in current values can be converted to constant values base year 2016 using the formula:-

$$V_{cox} = V_{curx} * (D_i / D_x)$$

Where:-

- $V_{\text{cox}}$  is the value expressed in constant values for the year for which constant prices are to be calculated (Year x)
- $V_{\text{curx}}$  is the value expressed in the current values applying in Year x
- D refers to the GDP deflator applying in Years x and i, with i being the base year

For example, using the above formula to calculate TEH 2015 in constant value:-

- $V_{\text{curx}} = \text{RM}49,000$
- $D_i = 111$
- $D_x = 109$

Then:

$$\begin{aligned} V_{\text{cox}} &= \text{RM}49,000 \times (111/109) \\ &= \text{RM}49,899 \end{aligned}$$

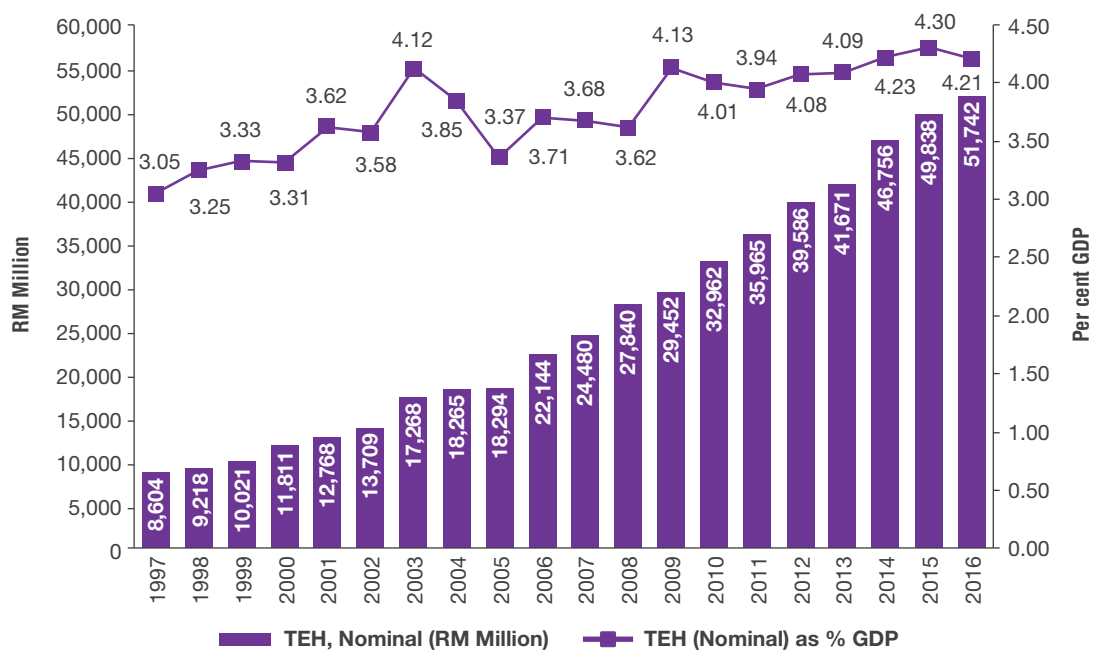
Thus the value to be used, expressed as constant values at the base year 2016, is RM49,899 rather than the current value of RM49,000.

# CHAPTER 4

## 4.1 TOTAL EXPENDITURE ON HEALTH

The Total Expenditure on Health (TEH) for Malaysia during 1997-2016 ranged from RM8,604 million in 1997 to RM51,742 million in 2016 (Figure 4.1 and Table 4.1). The TEH as a share of Gross Domestic Product (GDP) for the same period ranged from 3.05 per cent to 4.21 per cent of GDP.

**Figure 4.1: Trend for Total Expenditure on Health, 1997-2016 (RM Million & Per cent GDP)**





<b>Table 4.1: Total Expenditure on Health, 1997-2016 (RM Million &amp; Per cent GDP)</b>						
<b>Year</b>	<b>Expenditure</b>	<b>TEH, Nominal (RM Million)</b>	<b>TEH, Constant (RM Million)*</b>	<b>Total GDP, Nominal (RM Million)**</b>	<b>MNHA Derived GDP Deflator*</b>	<b>TEH (Nominal) as % GDP</b>
1997		8,604	14,902	281,795	64	3.05
1998		9,218	14,729	283,243	69	3.25
1999		10,021	16,012	300,764	69	3.33
2000		11,811	17,945	356,401	73	3.31
2001		12,768	19,795	352,579	72	3.62
2002		13,709	20,622	383,213	74	3.58
2003		17,268	24,987	418,769	77	4.12
2004		18,265	25,001	474,048	81	3.85
2005		18,294	23,962	543,578	85	3.37
2006		22,144	27,888	596,784	88	3.71
2007		24,480	29,416	665,340	92	3.68
2008		27,840	30,387	769,949	102	3.62
2009		29,452	34,138	712,857	96	4.13
2010		32,962	36,587	821,434	100	4.01
2011		35,965	37,871	911,733	105	3.94
2012		39,586	41,271	971,252	106	4.08
2013		41,671	43,369	1,018,614	107	4.09
2014		46,756	47,489	1,106,443	109	4.23
2015		49,838	50,811	1,157,723	109	4.30
2016		51,742	51,742	1,230,120	111	4.21

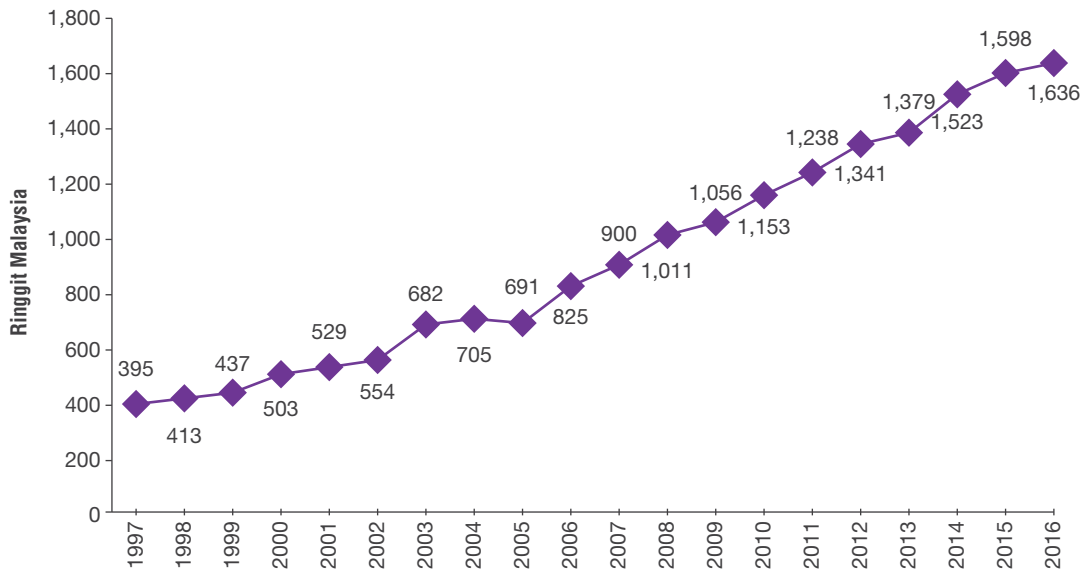
Note: \*Constant values estimated using MNHA derived GDP deflators (splicing method with 2010 base year)

Source: \*\*Department of Statistics Malaysia (DOSM), published in May 2017

## 4.2 PER CAPITA HEALTH EXPENDITURE

Overall, the per capita expenditure on health in nominal value ranged from RM395 in 1997 to RM1,636 in 2016. On constant values, per capita health expenditure ranged from RM685 in 1997 to RM1,636 in 2016 (Figure 4.2a, 4.2b and Table 4.2).

**Figure 4.2a: Per Capita Expenditure on Health, 1997-2016 (Nominal, RM)**



**Figure 4.2b: Per Capita Expenditure on Health, 1997-2016 (Constant, RM)**

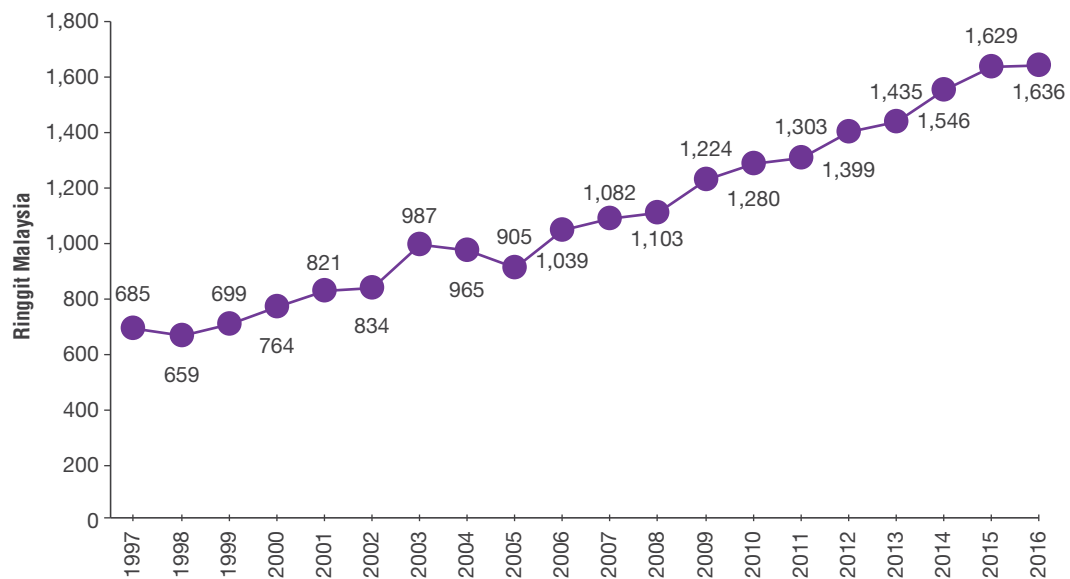


Table 4.2: Per Capita Expenditure on Health, 1997-2016 (Nominal & Constant, RM)						
Year	Expenditure / Population	TEH, Nominal (RM Million)	TEH, Constant* (RM Million)	Per Capita Expenditure on Health, Nominal (RM)	Per Capita Expenditure on Health, Constant* (RM)	Total Population**
1997		8,604	14,902	395	685	21,769,200
1998		9,218	14,729	413	659	22,333,500
1999		10,021	16,012	437	699	22,909,400
2000		11,811	17,945	503	764	23,494,900
2001		12,768	19,795	529	821	24,123,400
2002		13,709	20,622	554	834	24,727,100
2003		17,268	24,987	682	987	25,320,100
2004		18,265	25,001	705	965	25,905,100
2005		18,294	23,962	691	905	26,477,100
2006		22,144	27,888	825	1,039	26,831,400
2007		24,480	29,416	900	1,082	27,186,000
2008		27,840	30,387	1,011	1,103	27,540,300
2009		29,452	34,138	1,056	1,224	27,895,100
2010		32,962	36,587	1,153	1,280	28,588,800
2011		35,965	37,871	1,238	1,303	29,062,100
2012		39,586	41,271	1,341	1,399	29,509,900
2013		41,671	43,369	1,379	1,435	30,213,800
2014		46,756	47,489	1,523	1,546	30,708,600
2015		49,838	50,811	1,598	1,629	31,186,100
2016		51,742	51,742	1,636	1,636	31,633,400

Note: \*Constant values estimated using MNHA derived GDP deflators (splicing method with 2010 base year)

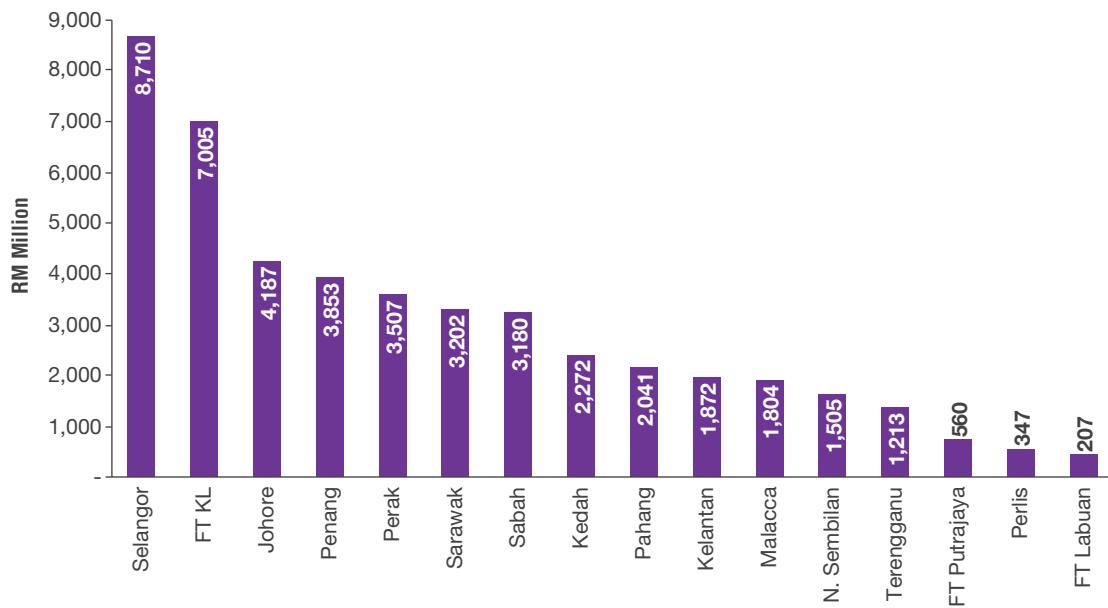
Source: \*\*Department of Statistics Malaysia (Population Quick Info. accessed on 7 December 2017)

### 4.3 HEALTH EXPENDITURE BY STATES

MNHA state disaggregation of health expenditure is still a new set of analysis and reporting under beneficiary group of MNHA classification. As far as possible the state allocation is assigned based on the facility where the financial resources were used to purchase the various types of health care services and products. Otherwise it is based on the location of the agency which represented as the source of financing. This state allocation is done for the smallest possible disaggregated source of financing and then rolled up to produce the total state health expenditure. Further improvement and refinement in the methodology are expected in the future. The arrangement of states in the figures and tables below are based on the state population size in the year 2016 as the reference year.

There are a total of thirteen states and three Federal Territories, namely Kuala Lumpur, Labuan and Putrajaya. The state population census is reported by the Department of Statistics Malaysia. In 2016, Selangor had both the largest population of about 6 million people and highest expenditure on health of RM8,710 million (Figure 4.3 and Table 4.3).

**Figure 4.3: Health Expenditure by States, 2016 (RM Million)**



<b>Table 4.3: State Population and Health Expenditure, 2016</b>		
<b>State</b>	<b>Population (Thousands)*</b>	<b>Expenditure (RM Million)</b>
Selangor	6,292	8,710
FT KL	1,790	7,005
Johore	3,652	4,187
Penang	1,718	3,853
Perak	2,482	3,507
Sarawak	2,739	3,202
Sabah	3,803	3,180
Kedah	2,120	2,272
Pahang	1,627	2,041
Kelantan	1,797	1,872
Malacca	901	1,804
N. Sembilan	1,099	1,505
Terengganu	1,183	1,213
FT Putrajaya	84	560
Perlis	251	347
FT Labuan	97	207
National**	-	6,278
<b>Total</b>	<b>31,633</b>	<b>51,742</b>

Source: \*Population Quick Info. of Department of Statistics Malaysia website, accessed 7 Dec 2017

Note: \*\*Unable to allocate by states

## CHAPTER 5

### HEALTH EXPENDITURE BY SOURCES OF FINANCING

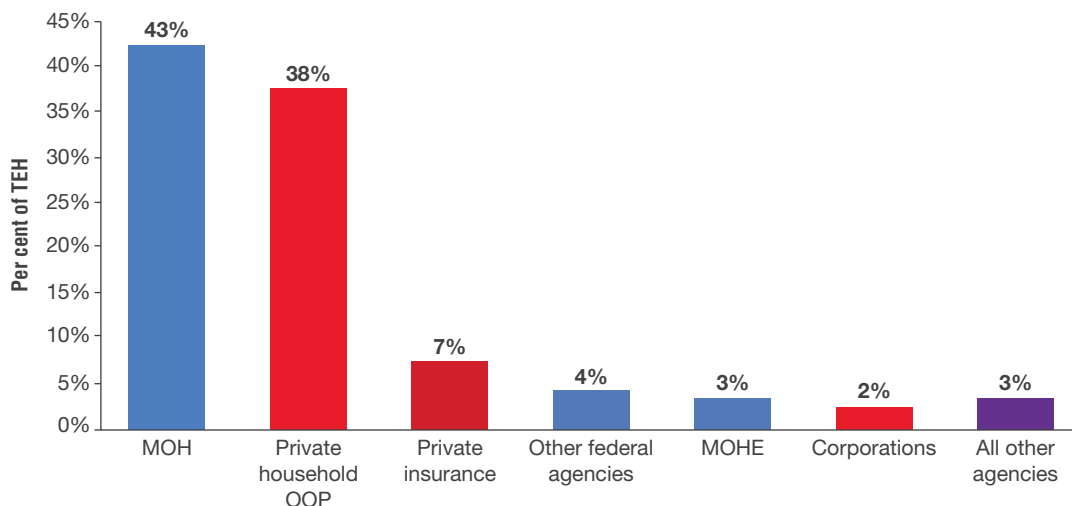
The various sources of financing for health care services and products include multiple public and private sector agencies. Among the public sector sources of financing are federal government, state government, local authorities and social security funds. The private sector sources of financing include private insurance enterprises, managed care organizations (MCO), private household OOP, non-profit institutions, private corporations and rest of the world (Appendix Table A2.1). The share of both sectors to the Total Expenditure on Health can be identified for each year in the time series. This chapter contains four sections, and specific public sector and private sector health expenditures are separated as section 5.3 and section 5.4 respectively.

#### 5.1 HEALTH EXPENDITURE BY ALL SOURCES OF FINANCING

In 2016, among the various sources of financing, the Ministry of Health (MOH) has the highest expenditure amounting to RM22,287 million or 43 per cent share of Total Expenditure on Health (Figure 5.1 and Table 5.1a). This is followed by private household out-of-pocket (OOP) spending of RM19,570 million or 38 per cent share of Total Expenditure on Health. After MOH and OOP health expenditures, the next highest spending is by private insurance at RM3,811 million or 7 per cent and other federal agencies including federal statutory bodies spent at RM2,032 million or 4 per cent. The Ministry of Higher Education (MOHE) spent RM1,379 million or 3 per cent, whereas all corporations (other than health insurance) spent RM1,173 million contributing to about 2 per cent of the share of Total Expenditure on Health. The remaining sources of financing altogether spent RM1,491 million or 3 per cent of the Total Expenditure on Health.

The 1997 to 2016 time series expenditure of all sources of financing shows MOH as the highest financier followed by OOP (Table 5.1b and Table 5.1c). The time series data trend also shows that prior to 2003, the third highest source of financing is all corporations (other than health insurance). This trend changed from 2003 onwards, with private insurance expenditure replacing all corporations (other than health insurance) as the third highest source of financing and remained so until 2016. In 2003, all corporations (other than health insurance) was the fourth highest source of financing but replaced by other federal agencies (including statutory bodies) from 2004 onwards.

**Figure 5.1: Total Expenditure on Health by Sources of Financing, 2016**



**Table 5.1a: Total Expenditure on Health by Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS1.1.1.1	Ministry of Health (MOH)	22,287	43.07
MS2.4	Private household out-of-pocket expenditures (OOP)	19,570	37.82
MS2.2	Private insurance enterprises (other than social insurance)	3,811	7.37
MS1.1.1.9	Other federal agencies (including statutory bodies)	2,032	3.93
MS1.1.1.2	Ministry of Higher Education (MOHE)	1,379	2.66
MS2.6	All corporations (other than health insurance)	1,173	2.27
MS2.3	Private MCOs and other similar entities	437	0.84
MS1.2.2	Social Security Organization (SOCSCO)	310	0.60
MS1.1.2.2	Other state agencies (including statutory bodies)	209	0.40
MS1.1.3	Local authorities (LA)	126	0.24
MS1.1.1.3	Ministry of Defence (MOD)	164	0.32
MS2.5	Non-profit institutions serving households (NGO)	87	0.17
MS1.1.2.1	(General) State government	98	0.19
MS1.2.1	Employees Provident Fund (EPF)	56	0.11
MS9	Rest of the world (ROW)	4	0.01
<b>Total</b>		<b>51,742</b>	<b>100.00</b>

Table 5.1b: Total Expenditure on Health by Sources of Financing, 1997-2016 (RM Million)																					
MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	3,616	3,944	4,358	5,267	6,142	6,546	8,877	8,762	7,894	10,656	11,037	12,815	14,432	15,946	16,497	18,240	19,040	21,786	22,677	22,287
MS1.1.1.2	Ministry of Higher Education (MOHE)	381	392	439	480	572	630	665	711	731	790	922	1,078	1,123	1,325	1,266	1,359	1,370	1,382	1,361	1,379
MS1.1.1.3	Ministry of Defence (MOD)	42	46	48	54	62	68	79	74	81	96	109	136	133	127	140	172	175	186	169	164
MS1.1.1.9	Other federal agencies (including statutory bodies)	241	278	297	337	425	473	567	755	737	818	1,048	1,403	1,540	1,535	1,810	1,756	1,583	1,885	1,899	2,032
MS1.1.2.1	(General) State government	36	41	41	42	41	46	68	90	67	77	90	96	86	93	94	110	80	88	93	98
MS1.1.2.2	Other state agencies (including statutory bodies)	25	27	28	32	33	36	42	47	57	60	63	72	77	96	113	119	172	195	196	209
MS1.1.3	Local authorities (LA)	15	16	17	18	19	22	27	35	45	42	419	113	238	108	142	150	188	164	178	126
MS1.2.1	Employees Provident Fund (EPF)	7	15	20	24	32	36	43	56	61	46	51	49	38	34	39	38	42	46	52	56
MS1.2.2	Social Security Organization (SOCSO)	50	50	53	60	63	67	74	83	96	105	117	88	102	136	157	176	219	264	261	310
MS2.2	Private insurance enterprises (other than social insurance)	295	365	421	516	599	718	964	1,062	1,084	1,246	1,413	1,709	1,991	2,277	2,626	2,774	2,916	3,203	3,623	3,811
MS2.3	Private MCOs and other similar entities	50	68	73	78	84	92	106	113	123	138	151	167	179	201	243	302	287	333	386	437
MS2.4	Private household out-of-pocket expenditures (OOP)	3,166	3,266	3,497	4,175	3,882	4,127	4,944	5,664	6,382	7,145	7,921	9,084	8,478	9,914	11,661	13,018	14,494	16,138	17,718	19,570
MS2.5	Non-profit institutions serving households (NGO)	64	70	71	87	93	104	118	131	148	160	186	214	234	269	312	363	78	40	69	87
MS2.6	All corporations (other than health insurance)	616	642	658	637	722	744	695	680	787	765	951	816	801	899	863	1,006	1,024	1,044	1,151	1,173
MS9	Rest of the world (ROW)	-	-	-	5	-	-	-	-	-	-	1	1	2	1	3	2	3	4	5	4
<b>Total</b>		<b>8,604</b>	<b>9,218</b>	<b>10,021</b>	<b>11,811</b>	<b>12,768</b>	<b>13,709</b>	<b>17,268</b>	<b>18,265</b>	<b>18,294</b>	<b>22,144</b>	<b>24,480</b>	<b>27,840</b>	<b>29,452</b>	<b>32,962</b>	<b>35,965</b>	<b>39,686</b>	<b>41,671</b>	<b>46,756</b>	<b>49,838</b>	<b>51,742</b>

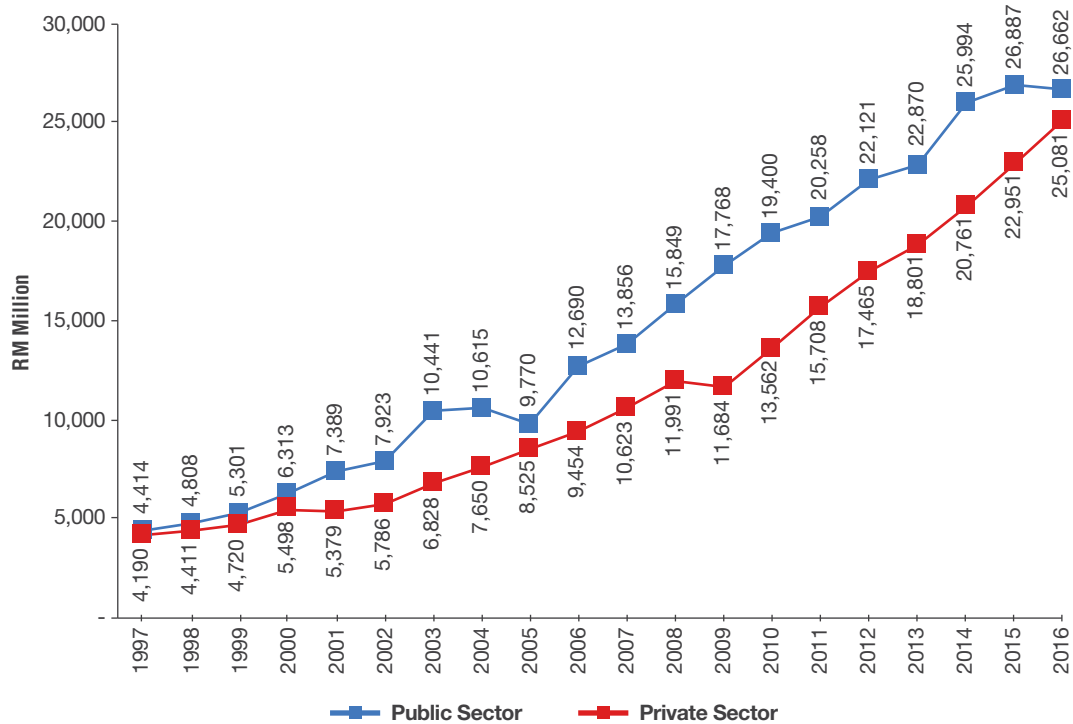


Table 5.1c: Total Expenditure on Health by Sources of Financing, 1997-2016 (Per cent, %)																					
MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	42.03	42.78	43.49	44.60	48.11	47.75	51.40	47.97	43.15	48.12	45.09	46.03	49.00	48.38	45.87	46.08	45.69	46.59	45.50	43.07
MS1.1.1.2	Ministry of Higher Education (MOHE)	4.43	4.25	4.38	4.06	4.48	4.59	3.85	3.89	4.00	5.57	3.77	3.87	3.81	4.02	3.52	3.43	3.29	2.96	2.73	2.66
MS1.1.1.3	Ministry of Defence (MOD)	0.49	0.50	0.48	0.46	0.48	0.50	0.45	0.41	0.44	0.43	0.44	0.49	0.45	0.39	0.39	0.43	0.42	0.40	0.34	0.32
MS1.1.1.9	Other federal agencies (including statutory bodies)	2.80	3.02	2.97	2.85	3.33	3.45	3.28	4.13	4.03	3.69	4.28	5.04	5.23	4.66	5.03	4.44	3.80	4.03	3.81	3.93
MS1.1.2.1	(General) State government	0.42	0.44	0.41	0.35	0.32	0.33	0.40	0.49	0.37	0.35	0.37	0.34	0.29	0.28	0.26	0.28	0.19	0.19	0.19	0.19
MS1.1.2.2	Other state agencies (including statutory bodies)	0.29	0.29	0.28	0.27	0.26	0.26	0.24	0.26	0.31	0.27	0.26	0.26	0.26	0.26	0.29	0.31	0.41	0.42	0.39	0.40
MS1.1.3	Local authorities (LA)	0.18	0.17	0.17	0.15	0.15	0.16	0.16	0.19	0.25	0.19	1.71	0.41	0.81	0.33	0.39	0.38	0.45	0.35	0.36	0.24
MS1.2.1	Employees Provident Fund (EPF)	0.08	0.16	0.20	0.20	0.25	0.27	0.25	0.31	0.33	0.21	0.21	0.17	0.13	0.10	0.11	0.10	0.10	0.10	0.10	0.10
MS1.2.2	Social Security Organization (SOCSO)	0.58	0.54	0.53	0.51	0.49	0.49	0.43	0.46	0.52	0.47	0.48	0.32	0.35	0.41	0.44	0.44	0.52	0.56	0.52	0.60
MS2.2	Private insurance enterprises (other than social insurance)	3.42	3.96	4.20	4.37	4.69	5.24	5.58	5.82	5.93	5.63	5.77	6.14	6.76	6.91	7.30	7.01	7.00	6.85	7.27	7.37
MS2.3	Private MCOs and other similar entities	0.56	0.74	0.73	0.66	0.66	0.67	0.62	0.62	0.67	0.62	0.62	0.60	0.61	0.61	0.68	0.76	0.69	0.71	0.77	0.84
MS2.4	Private household out-of-pocket expenditures (OOP)	36.79	35.42	34.90	35.35	30.40	30.10	28.63	31.01	34.89	32.27	32.36	32.63	28.78	30.08	32.42	32.89	34.78	34.52	35.55	37.82
MS2.5	Non-profit institutions serving households (NGO)	0.75	0.76	0.71	0.74	0.73	0.76	0.69	0.71	0.81	0.72	0.76	0.77	0.79	0.81	0.87	0.91	0.19	0.08	0.14	0.17
MS2.6	All corporations (other than health insurance)	7.16	6.97	6.56	5.39	5.65	5.43	4.02	3.73	4.30	3.45	3.88	2.93	2.72	2.73	2.40	2.54	2.46	2.23	2.31	2.27
MS9	Rest of the world (ROW)	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01
<b>Total</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## 5.2 HEALTH EXPENDITURE BY PUBLIC AND PRIVATE SECTOR SOURCES OF FINANCING

This section compares health expenditure of the public and private sectors. In 2016, the public and private sectors health expenditure are RM26,662 million and RM25,081 million respectively (Figure 5.2 and Table 5.2). This translates to a public and private sectors share of 52:48. A similar pattern is noted throughout the time series from 1997 to 2016 with the public sector share of health expenditure remained higher than the private sector share. Both public and private sectors spending generally show an upward trend throughout the time-series. Although public sector expenditure appears to plateau between 2014 and 2016, it is expected to continue showing an upward trend after 2016.

**Figure 5.2: Total Expenditure on Health by Sources of Financing (Public vs. Private), 1997-2016**



**Table 5.2: Total Expenditure on Health by Public and Private Sectors Sources of Financing, 1997-2016**

Year	Public Sector			Private Sector			TEH (Nominal, RM Million)
	Health Expenditure (Nominal, RM Million)	Health Expenditure (Constant*, RM Million)	Health Expenditure as Percentage of TEH (%)	Health Expenditure (Nominal, RM Million)	Health Expenditure (Constant*, RM Million)	Health Expenditure as Percentage of TEH (%)	
1997	4,414	7,645	51.30	4,190	7,257	48.70	8,604
1998	4,808	7,682	52.15	4,411	7,047	47.85	9,218
1999	5,301	8,470	52.90	4,720	7,541	47.10	10,021
2000	6,313	9,592	53.45	5,498	8,353	46.55	11,811
2001	7,389	11,456	57.87	5,379	8,339	42.13	12,768
2002	7,923	11,919	57.80	5,786	8,703	42.20	13,709
2003	10,441	15,108	60.46	6,828	9,880	39.54	17,268
2004	10,615	14,529	58.12	7,650	10,471	41.88	18,265
2005	9,770	12,796	53.40	8,525	11,165	46.60	18,294
2006	12,690	15,981	57.31	9,454	11,906	42.69	22,144
2007	13,856	16,650	56.60	10,623	12,766	43.40	24,480
2008	15,849	17,299	56.93	11,991	13,088	43.07	27,840
2009	17,768	20,595	60.33	11,684	13,543	39.67	29,452
2010	19,400	21,534	58.86	13,562	15,053	41.14	32,962
2011	20,258	21,331	56.33	15,708	16,540	43.67	35,965
2012	22,121	23,063	55.88	17,465	18,208	44.12	39,586
2013	22,870	23,802	54.88	18,801	19,567	45.12	41,671
2014	25,994	26,402	55.60	20,761	21,087	44.40	46,756
2015	26,887	27,412	53.95	22,951	23,399	46.05	49,838
2016	26,662	26,662	51.53	25,081	25,081	48.47	51,742

Note: \*Constant values estimated using MNHA derived GDP deflators (splicing method with 2010 base year)

### 5.3 HEALTH EXPENDITURE BY PUBLIC SECTOR SOURCES OF FINANCING

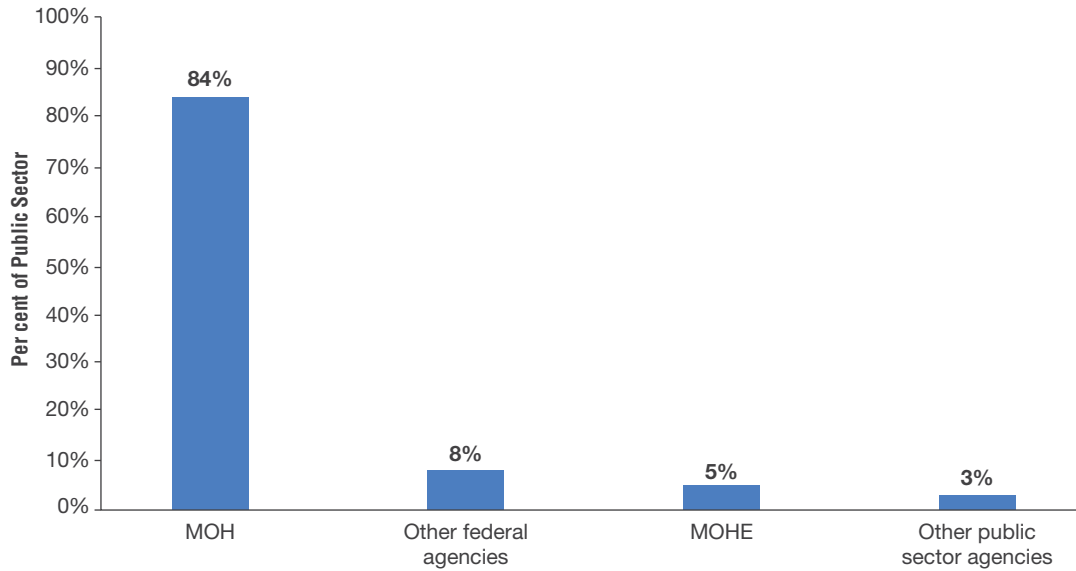
This section describes health expenditure by public sector sources of financing, first by describing public sector health expenditure according to MNHA classification of sources of financing for year 2016, followed by times series data of 1997-2016 in RM Million and percentage.

#### 5.3.1 Health Expenditure by All Public Sector Sources of Financing

In 2016, analysis of the public sector sources of financing shows that the MOH spent RM22,287 million (84 per cent), making it the largest financier in this sector. This is followed by other federal agencies (including statutory bodies) RM2,032 million (8 per cent), MOHE RM1,379 million (5 per cent), SOCSO RM310 million (1 per cent), other state agencies (including statutory bodies) RM209 million (1 per cent), and other public sector agencies with each agency spending less than RM170 million but in total amounting to RM444 million (2 per cent) (Figure 5.3.1 and Table 5.3.1a).

The 1997-2016 public sector time series expenditure data shows an upward trend, whereby MOH that is the largest financier in public sector progressively increase its spending from RM3,616 million in 1997 to RM22,287 million in 2016 (Table 5.3.1b). This MOH expenditure amounts to between 81 to 85 per cent share of public sector expenditure throughout the years (Table 5.3.1c). MOH expenditure is followed by MOHE in 1997-2003 as the second highest public sector source of financing. In the remaining years, MOH expenditure is followed by other federal agencies (including statutory bodies) occupying a share of 7 to 9 per cent, followed by MOHE occupying a share of 5 to 7 per cent of public sector expenditure. The remaining public sector agencies inclusive of SOCSO, other state agencies (including state statutory bodies), MOD, local authorities, state government, and EPF each spent less than RM450 million per year. These sources of financing altogether contributed to a share of less than 6 per cent of the total public sector expenditure per year. The time series expenditure by local authorities prior to 2007 has several limitations which has resulted in under estimation of local authorities' expenditure prior to 2007.

**Figure 5.3.1: Health Expenditure by Public Sector Sources of Financing, 2016**



**Table 5.3.1a: Health Expenditure by Public Sector Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS1.1.1.1	Ministry of Health (MOH)	22,287	83.60
MS1.1.1.9	Other federal agencies (including statutory bodies)	2,032	7.62
MS1.1.1.2	Ministry of Higher Education (MOHE)	1,379	5.17
MS1.2.2	Social Security Organization (SOCSO)	310	1.16
MS1.1.2.2	Other state agencies (including statutory bodies)	209	0.79
MS1.1.1.3	Ministry of Defence (MOD)	164	0.61
MS1.1.3	Local authorities (LA)	126	0.47
MS1.1.2.1	(General) State government	98	0.37
MS1.2.1	Employees Provident Fund (EPF)	56	0.21
<b>Total</b>		<b>26,662</b>	<b>100.00</b>

**Table 5.3.1b: Health Expenditure by Public Sector Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	3,616	3,944	4,358	5,267	6,142	6,546	8,877	8,762	7,894	10,656	11,037	12,815	14,432	15,946	16,497	18,240	19,040	21,786	22,677	22,287
MS1.1.1.2	Ministry of Higher Education (MOHE)	381	392	439	480	572	630	665	711	731	790	922	1,078	1,123	1,325	1,266	1,359	1,370	1,382	1,361	1,379
MS1.1.1.3	Ministry of Defence (MOD)	42	46	48	54	62	68	79	74	81	96	109	136	133	127	140	172	175	186	169	164
MS1.1.1.9	Other federal agencies (including statutory bodies)	241	278	297	337	425	473	567	755	737	818	1,048	1,403	1,540	1,535	1,810	1,756	1,583	1,885	1,899	2,032
MS1.1.2.1	(General) State government	36	41	41	42	41	46	68	90	67	77	90	96	86	93	94	110	80	88	93	98
MS1.1.2.2	Other state agencies (including statutory bodies)	25	27	28	32	33	36	42	47	57	60	63	72	77	96	113	119	172	195	196	209
MS1.1.3	Local authorities (LA)	15	16	17	18	19	22	27	35	45	42	419	113	238	108	142	150	188	164	178	126
MS1.2.1	Employee Provident Funds (EPF)	7	15	20	24	32	36	43	56	61	46	51	49	38	34	39	38	42	46	52	56
MS1.2.2	Social Security Organization (SOCOSO)	50	50	53	60	63	67	74	83	96	105	117	88	102	136	157	176	219	264	261	310
<b>Total</b>		<b>4,414</b>	<b>4,808</b>	<b>5,301</b>	<b>6,313</b>	<b>7,389</b>	<b>7,923</b>	<b>10,441</b>	<b>10,615</b>	<b>9,770</b>	<b>12,690</b>	<b>13,856</b>	<b>15,849</b>	<b>17,768</b>	<b>19,400</b>	<b>20,258</b>	<b>22,121</b>	<b>22,870</b>	<b>25,994</b>	<b>26,887</b>	<b>26,682</b>

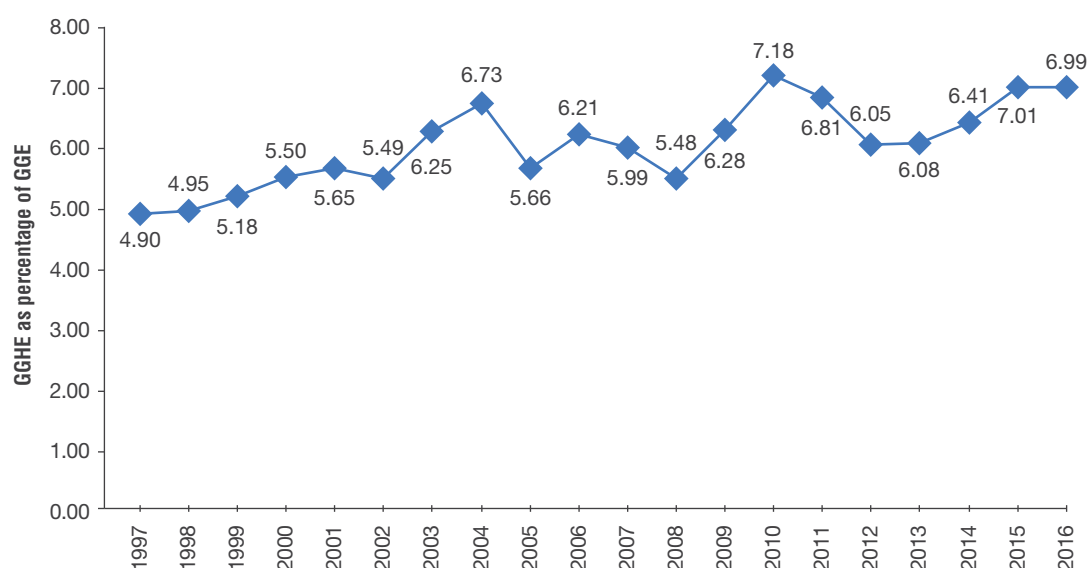
**Table 5.3.1c: Health Expenditure by Public Sector Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	81.93	82.03	82.21	83.43	83.13	82.62	85.02	82.55	80.81	83.97	79.65	80.85	81.23	82.20	81.44	82.46	83.25	83.81	84.34	83.60
MS1.1.1.2	Ministry of Higher Education (MOHE)	8.64	8.15	8.28	7.60	7.74	7.95	6.37	6.70	7.48	6.23	6.66	6.80	6.32	6.83	6.25	6.14	5.99	5.32	5.06	5.17
MS1.1.1.3	Ministry of Defence (MOD)	0.96	0.95	0.91	0.86	0.83	0.86	0.75	0.70	0.83	0.76	0.79	0.86	0.75	0.65	0.69	0.78	0.77	0.71	0.63	0.61
MS1.1.1.9	Other federal agencies (including statutory bodies)	5.46	5.78	5.61	5.34	5.75	5.96	5.43	7.11	7.55	6.44	7.56	8.85	8.66	7.91	8.93	7.94	6.92	7.25	7.06	7.62
MS1.1.2.1	(General) State government	0.81	0.85	0.78	0.66	0.56	0.58	0.66	0.85	0.69	0.60	0.65	0.61	0.48	0.48	0.46	0.50	0.35	0.34	0.35	0.37
MS1.1.2.2	Other state agencies (including statutory bodies)	0.57	0.55	0.52	0.50	0.44	0.45	0.40	0.44	0.58	0.48	0.46	0.45	0.43	0.50	0.56	0.54	0.75	0.75	0.73	0.79
MS1.1.3	Local authorities (LA)	0.35	0.33	0.32	0.28	0.26	0.28	0.26	0.33	0.46	0.33	3.02	0.71	1.34	0.56	0.70	0.68	0.82	0.63	0.66	0.47
MS1.2.1	Employee Provident Funds (EPF)	0.16	0.32	0.37	0.37	0.43	0.46	0.41	0.53	0.62	0.36	0.37	0.31	0.21	0.17	0.19	0.17	0.18	0.17	0.19	0.21
MS1.2.2	Social Security Organization (SOCOSO)	1.12	1.04	1.00	0.96	0.85	0.85	0.70	0.79	0.98	0.83	0.84	0.56	0.58	0.70	0.78	0.80	0.96	1.02	0.97	1.16
<b>Total</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

### 5.3.2 Public Sector Health Expenditure as Percentage of General Government Expenditure

Public Sector Health Expenditure refers to General Government Health Expenditure (GGHE) as the term internationally used. This includes expenditure by all public sector sources of financing namely federal government, state government, local authorities and social security funds. The Public Sector Health Expenditure (GGHE) as percentage of General Government Expenditure (GGE), has increased from RM4,414 million in 1997 to RM26,662 million in 2016 which is equivalent to an increase from 4.90 per cent to 6.99 per cent over the 20-year time period (Figure 5.3.2 and Table 5.3.2).

**Figure 5.3.2: Trend for Public Sector Health Expenditure (GGHE) as Percentage of General Government Expenditure (GGE), 1997-2016**



**Table 5.3.2: Trend for Public Sector Health Expenditure (GGHE), 1997-2016 (RM Million, Per cent GGE)**

Year	Public Sector Health Expenditure (GGHE) (RM Million)	General Government Expenditure (GGE)* (RM Million)	GGHE as % GGE
1997	4,414	90,131	4.90
1998	4,808	97,040	4.95
1999	5,301	102,320	5.18
2000	6,313	114,884	5.50
2001	7,389	130,690	5.65
2002	7,923	144,278	5.49
2003	10,441	166,948	6.25
2004	10,615	157,742	6.73
2005	9,770	172,681	5.66
2006	12,690	204,255	6.21
2007	13,856	231,359	5.99
2008	15,849	289,394	5.48
2009	17,768	282,794	6.28
2010	19,400	270,171	7.18
2011	20,258	297,382	6.81
2012	22,121	365,600	6.05
2013	22,870	376,374	6.08
2014	25,994	405,788	6.41
2015	26,887	383,727	7.01
2016	26,662	381,366	6.99

Source: \*Treasury Malaysia website Economy Report 2016/2017 dated 6 November 2017



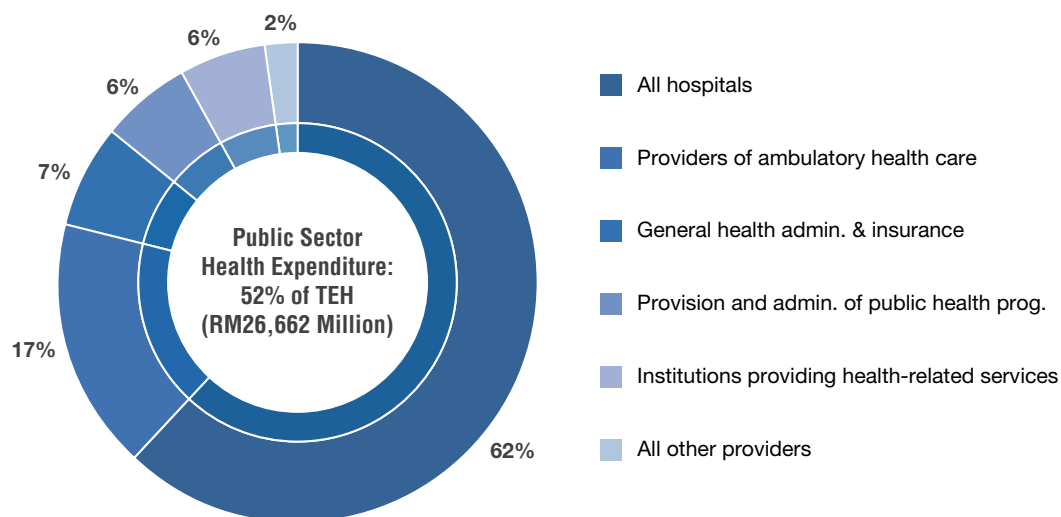
### 5.3.3 Health Expenditure by Public Sector Sources of Financing to Providers

Cross-tabulations of public sector sources of financing and providers of health care services and products respond to the question as to where this public source of fund is spent or who provides the services and products.

In 2016, all hospitals (inclusive of hospitals (general), psychiatric hospitals and specialty hospitals) consumed RM16,657 million or 62 per cent, followed by providers of ambulatory health care at RM4,430 million or 17 per cent, general health administration and insurance at RM1,915 million or 7 per cent, provision and administration of public health programmes at RM1,688 million or 6 per cent, institutions providing health-related services at RM1,465 million or 6 per cent, and the remaining providers at RM506 million or 2 per cent (Figure 5.3.3 and Table 5.3.3a). A significant share of expenditure for provision and administration of public health programmes is contributed by MOH expenditure.

The 1997 to 2016 time series shows a similar pattern in the share of various providers that consumed public sector source of financing. All providers showed steady rise in expenditure over the time period (Table 5.3.3b and Table 5.3.3c). However, over the last seventeen years (2000-2016), expenditure by three categories of providers which were among the higher spending groups, exhibited steeper increase in spending compared to other providers. These include all hospitals, providers of ambulatory health care and general health administration and insurance.

**Figure 5.3.3: Public Sector Health Expenditure to Providers of Health Care, 2016**



**Table 5.3.3a: Public Sector Health Expenditure to Providers of Health Care, 2016**

MNHA Code	Providers of Health Care	RM Million	Per cent
MP1	All hospitals	16,657	62.48
MP3	Providers of ambulatory health care	4,430	16.61
MP6	General health administration and insurance	1,915	7.18
MP5	Provision and administration of public health programmes	1,688	6.33
MP8	Institutions providing health-related services	1,465	5.50
MP4	Retail sale and other providers of medical goods	346	1.30
MP7	Other industries (rest of the Malaysian economy)	158	0.59
MP9	Rest of the world (ROW)	2	0.01
MP2	Nursing and residential care facilities	1	0.00
<b>Total</b>		<b>26,662</b>	<b>100.00</b>

**Table 5.3.b: Public Sector Health Expenditure to Providers of Health Care, 1997-2016 (RM Million)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MP1	2,705	2,849	3,097	3,439	3,939	4,126	4,872	5,320	5,557	7,266	7,787	9,092	9,353	10,384	11,376	13,374	13,822	15,780	16,434	16,657
MP2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1
MP3	415	449	518	613	734	828	1,092	1,216	1,319	1,793	1,898	2,178	2,154	2,470	2,731	3,256	3,503	4,094	4,209	4,430
MP4	27	30	33	32	39	45	52	56	59	70	86	93	128	134	135	159	239	331	307	346
MP5	384	359	395	433	525	624	588	598	592	762	1,163	946	1,221	1,001	1,149	1,502	1,222	1,527	1,523	1,688
MP6	663	880	973	1,473	1,713	1,797	3,200	2,694	1,539	1,928	1,907	2,287	3,419	3,965	3,184	2,303	2,886	2,622	2,825	1,915
MP7	41	46	46	48	47	52	79	102	84	94	105	105	105	123	119	140	174	196	145	158
MP8	178	194	238	273	389	449	556	626	615	776	908	1,143	1,384	1,322	1,561	1,384	1,222	1,443	1,438	1,465
MP9	1	1	1	1	1	1	1	1	1	1	1	4	3	1	1	1	1	1	4	2
<b>Total</b>	<b>4,415</b>	<b>4,809</b>	<b>5,302</b>	<b>6,313</b>	<b>7,388</b>	<b>7,923</b>	<b>10,441</b>	<b>10,614</b>	<b>9,767</b>	<b>12,691</b>	<b>13,856</b>	<b>15,849</b>	<b>17,768</b>	<b>19,402</b>	<b>20,258</b>	<b>22,121</b>	<b>22,870</b>	<b>25,995</b>	<b>26,886</b>	<b>26,662</b>

**Table 5.3.c: Public Sector Health Expenditure to Providers of Health Care, 1997-2016 (Per cent, %)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MP1	61.27	59.24	58.41	54.47	53.31	52.08	46.66	50.12	56.90	57.25	56.20	57.37	52.64	53.52	56.16	60.46	60.44	60.70	61.13	62.48
MP2	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
MP3	9.40	9.34	9.77	9.71	9.94	10.45	10.46	11.46	13.50	14.13	13.70	13.74	12.12	12.73	13.48	14.72	15.32	15.75	15.66	16.62
MP4	0.61	0.62	0.62	0.51	0.53	0.57	0.50	0.53	0.60	0.55	0.62	0.59	0.72	0.69	0.67	0.72	1.05	1.27	1.14	1.30
MP5	8.70	7.47	7.45	6.86	7.11	7.88	5.63	5.63	6.06	6.00	8.39	5.97	6.87	5.16	5.67	6.79	5.34	5.87	5.66	6.33
MP6	15.02	18.30	18.35	23.33	23.19	22.68	30.65	25.38	15.76	15.19	13.76	14.43	19.24	20.44	15.72	10.41	11.75	10.09	10.51	7.18
MP7	0.93	0.96	0.87	0.76	0.64	0.65	0.76	0.96	0.86	0.74	0.76	0.66	0.59	0.63	0.59	0.63	0.76	0.75	0.54	0.59
MP8	4.03	4.03	4.49	4.32	5.26	5.67	5.32	5.90	6.30	6.12	6.55	7.21	7.79	6.81	7.71	6.26	5.34	5.55	5.35	5.49
MP9	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

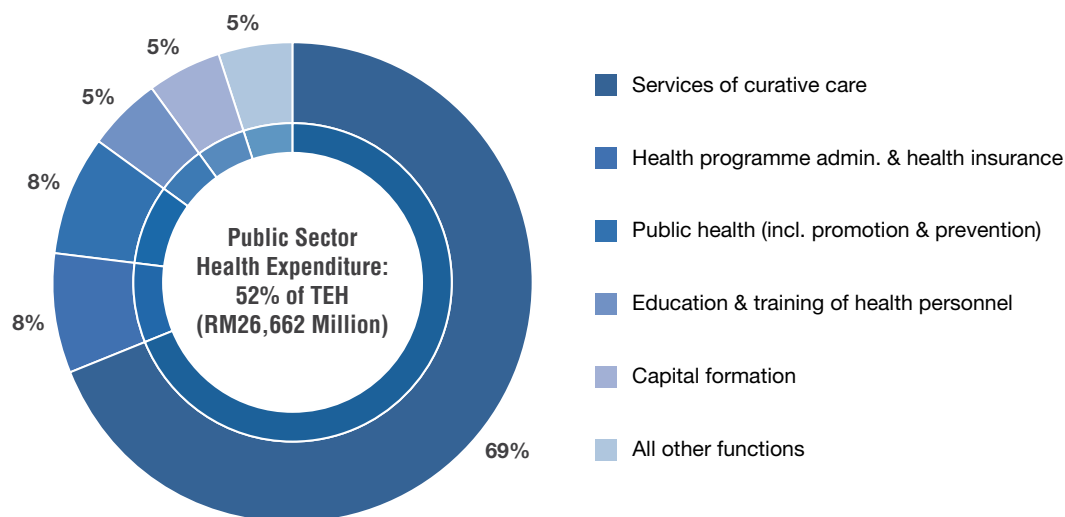
#### 5.3.4 Health Expenditure by Public Sector Sources of Financing by Functions

Cross-tabulations of public sector sources of financing and functions of health care services and products respond to the question as to what is purchased or the type of services and products consumed with this source of financing.

In 2016, the public sector source of financing spent the most for services of curative care, consuming RM18,283 million or 69 per cent, followed by health programme administration and health insurance consuming RM2,139 million or 8 per cent and RM2,054 million or 8 per cent for public health services (including prevention and health promotion). In the same year, this sector spent RM1,459 million or 5 per cent for education and training of health personnel, and RM1,389 million or 5 per cent for capital formation. The expenditure for all other functions of health care services and products altogether is RM1,337 or 5 per cent (Figure 5.3.4 and Table 5.3.4a).

The 1997-2016 time series shows services of curative care, and health programme administration and health insurance occupying the top two highest share of public sector expenditure by function, whereas the third highest share of public sector expenditure by function was capital formation in 1997-2012, but then overtaken by public health services (including health promotion and prevention) from year 2013 onwards. The service showing the highest growth in expenditure using public sector funding is ancillary services to health care, increasing from RM1 million in 1997 to RM229 million in 2016, an increase by 200-fold over the same time period. However, it remains to occupy only about 1 per cent share of the public sector health expenditure over the last 10 years. The expenditure for education and training of health personnel increased by about 12-fold over the same time period, but continued to consistently occupy less than 8 per cent share of the public sector expenditure (Table 5.3.4b and Table 5.3.4c).

**Figure 5.3.4: Public Sector Health Expenditure by Functions of Health Care, 2016**



**Table 5.3.4a: Public Sector Health Expenditure by Functions of Health Care, 2016**

MNHA Code	Functions of Health Care	RM Million	Per cent
MF1	Services of curative care	18,283	68.57
MF7	Health programme administration and health insurance	2,139	8.02
MF6	Public health services (including health promotion and prevention)	2,054	7.70
MR2	Education and training of health personnel	1,459	5.47
MR1	Capital formation of health care provider institutions	1,389	5.21
MF5	Medical goods dispensed to out-patients	1,054	3.95
MF4	Ancillary services to health care	229	0.86
MR3	Research and development in health	53	0.20
MF3	Services of long-term nursing care	1	<0.01
<b>Total</b>		<b>26,662</b>	<b>100.00</b>

**Table 5.3.4b: Public Sector Health Expenditure by Functions of Health Care, 1997-2016 (RM Million)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	2,957	3,072	3,338	3,764	4,256	4,591	5,426	5,969	6,199	8,289	8,805	10,376	10,634	11,116	12,983	15,190	15,099	17,154	17,885	18,283
MF3	Services of long-term nursing care	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	1
MF4	Ancillary services to health care	1	1	1	8	39	47	71	98	95	164	139	191	192	206	224	204	222	238	246	229
MF5	Medical goods dispensed to out-patients	23	24	26	29	33	35	40	47	51	58	71	80	98	114	112	128	206	851	979	1,054
MF6	Public health services (including health promotion and prevention)	194	197	226	230	263	276	414	481	495	635	919	803	905	877	999	1,205	1,963	1,841	1,939	2,054
MF7	Health programme administration and health insurance	556	533	559	657	741	913	1,176	1,166	1,141	1,536	1,588	1,789	1,927	1,904	2,165	1,940	2,231	2,965	2,935	2,139
MR1	Capital formation of health care provider institutions	495	778	908	1,350	1,665	1,610	2,765	2,274	1,212	1,307	1,510	1,560	2,699	3,813	2,149	1,985	1,789	1,454	1,414	1,389
MR2	Education and training of health personnel	127	149	195	238	317	374	474	519	555	657	771	998	1,264	1,326	1,578	1,410	1,290	1,432	1,432	1,459
MR3	Research and development in health	61	53	48	38	74	78	74	61	21	34	53	52	49	44	46	56	67	58	59	53
	<b>Total</b>	<b>4,414</b>	<b>4,808</b>	<b>5,301</b>	<b>6,313</b>	<b>7,389</b>	<b>7,923</b>	<b>10,441</b>	<b>10,615</b>	<b>9,770</b>	<b>12,690</b>	<b>13,856</b>	<b>15,849</b>	<b>17,768</b>	<b>19,400</b>	<b>20,258</b>	<b>22,121</b>	<b>22,870</b>	<b>25,994</b>	<b>26,887</b>	<b>26,662</b>

**TABLE 5.3.4c: Public Sector Health Expenditure by Functions of Health Care, 1997-2016 (Per Cent, %)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	66.98	63.90	62.96	59.62	57.60	57.94	51.97	56.24	63.45	65.40	63.55	65.47	59.85	57.30	64.09	68.67	66.02	65.99	66.52	68.57
MF3	Services of long-term nursing care	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
MF4	Ancillary services to health care	0.03	0.03	0.03	0.12	0.53	0.59	0.68	0.92	0.97	1.29	1.00	1.20	1.08	1.06	1.11	0.92	0.97	0.92	0.92	0.86
MF5	Medical goods dispensed to out-patients	0.53	0.50	0.48	0.45	0.44	0.44	0.38	0.44	0.52	0.45	0.51	0.50	0.55	0.59	0.55	0.58	0.90	3.27	3.64	3.95
MF6	Public health services (including health promotion and prevention)	4.40	4.10	4.26	3.65	3.56	3.48	3.97	4.53	5.07	5.01	6.63	5.07	5.09	4.52	4.93	5.45	8.58	7.08	7.21	7.70
MF7	Health programme administration and health insurance	12.58	11.08	10.55	10.41	10.03	11.52	11.26	10.98	11.68	12.10	11.46	11.29	10.85	9.82	10.69	8.77	9.76	11.41	10.91	8.02
MR1	Capital formation of health care provider institutions	11.22	16.18	17.12	21.38	22.53	20.32	26.49	21.42	12.41	10.30	10.89	9.85	15.19	19.66	10.61	8.98	7.82	5.59	5.26	5.21
MR2	Education and training of health personnel	2.87	3.10	3.69	3.77	4.30	4.72	4.54	4.89	5.68	5.17	5.57	6.30	7.11	6.83	7.79	6.38	5.64	5.51	5.32	5.47
MR3	Research and development in health	1.38	1.10	0.90	0.60	1.01	0.98	0.71	0.58	0.22	0.27	0.38	0.33	0.28	0.23	0.23	0.25	0.29	0.23	0.22	0.20
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## 5.4 HEALTH EXPENDITURE BY PRIVATE SECTOR SOURCES OF FINANCING

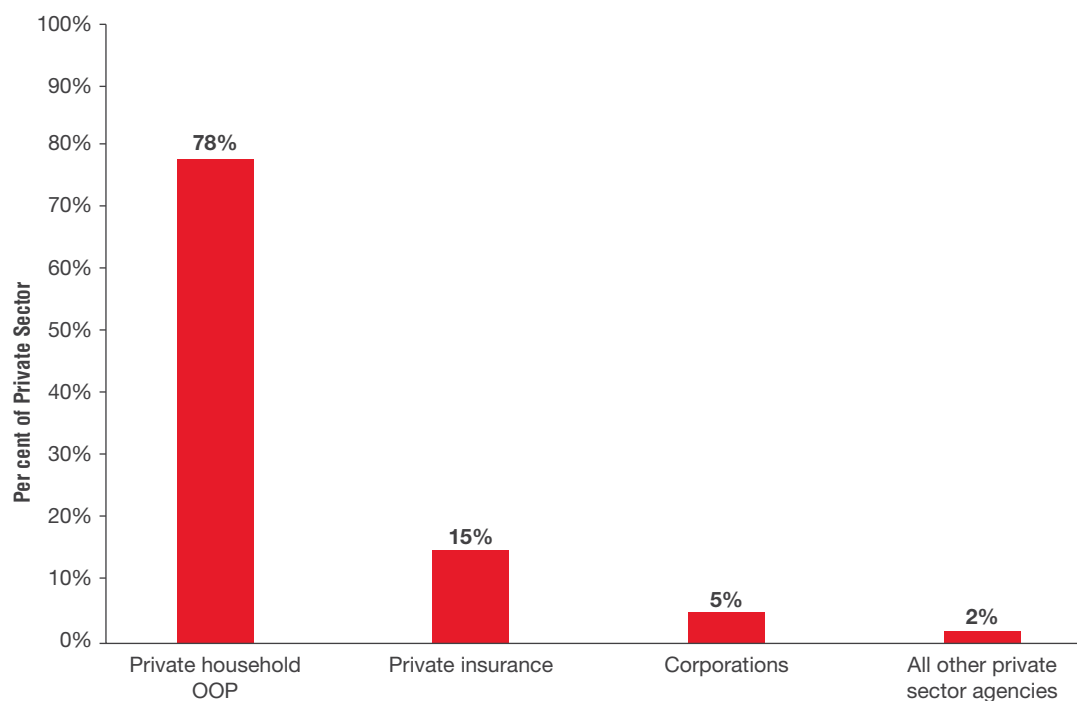
This section describes health expenditure by private sector sources of financing, starting with description of private sector health expenditure according to MNHA classification of sources of financing for year 2016, followed by times series data of 1997-2016 in RM Million and percentage.

### 5.4.1 Health Expenditure by All Private Sector Sources of Financing

In 2016, analysis of health expenditure data shows that the highest source of financing in the private sector is private household OOP expenditure amounting to RM19,570 million or 78 per cent of this sector's health expenditure (Figure 5.4.1 and Table 5.4.1a). The private household OOP expenditure reported here excludes purchases of individual health insurances as explained in Chapter 3, Section 3.4.2. The next highest spending is by private insurance enterprises which is inclusive of personal, family and company insurance policies at RM3,811 million or 15 per cent of private sector health expenditure. In the same year, all corporations contributed to RM1,173 million or 5 per cent of private sector health expenditure. This expenditure by all corporations is exclusive of group or company purchases of employee insurances which are reported under private insurance enterprises expenditure. Other agencies under private sector namely managed care organizations (MCO), non-profit institutions serving households (NGO) and rest of the world (ROW) or international agencies in total contributed to RM527 million or 2 per cent of health expenditure in this sector.

The private sector expenditure data for 1997-2016 time series shows private household OOP expenditure gradually increased from RM3,166 million in 1997 to RM19,570 million in 2016 and throughout the time period remained the largest, between 71 and 78 per cent share of private sector health expenditure (Table 5.4.1b and Table 5.4.1c). During this time period, expenditure by private insurance enterprises also increased from 7 to 17 per cent share of private sector health expenditure. However, all corporations' share of the private sector health expenditure decreased from 15 per cent (1997) to 5 per cent (2016). In terms of RM value, the expenditure on health by all corporations increased just under double-fold whereas private insurance enterprises expenditure increased by thirteen-fold over the twenty years period (1997-2016).

**Figure 5.4.1: Health Expenditure by Private Sector Sources of Financing, 2016**



**Table 5.4.1a: Health Expenditure by Private Sector Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS2.4	Private household out-of-pocket expenditure (OOP)	19,570	78.03
MS2.2	Private insurance enterprises (other than social insurance)	3,811	15.19
MS2.6	All corporations (other than health insurance)	1,173	4.67
MS2.3	Private MCOs and other similar entities	436	1.74
MS2.5	Non-profit institutions serving households (NGO)	87	0.35
MS9	Rest of the world (ROW)	4	0.02
<b>Total</b>		<b>25,081</b>	<b>100.00</b>



**Table 5.4.1b: Health Expenditure by Private Sector Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS2.2 Private insurance enterprises (other than social insurance)	295	365	421	516	599	718	964	1,062	1,084	1,246	1,413	1,709	1,991	2,277	2,626	2,774	2,916	3,203	3,623	3,811
MS2.3 Private MCOs and other similar entities	50	68	73	78	84	92	106	113	123	138	151	167	179	201	243	302	287	333	386	436
MS2.4 Private household out-of-pocket expenditure (OOP)	3,166	3,266	3,497	4,175	3,882	4,127	4,944	5,664	6,382	7,145	7,921	9,084	8,478	9,914	11,661	13,018	14,494	16,138	17,718	19,570
MS2.5 Non-profit institutions serving households (NGO)	64	70	71	87	93	104	118	131	148	160	186	214	234	269	312	363	78	40	69	87
MS2.6 All corporations (other than health insurance)	616	642	658	637	722	744	695	680	787	765	951	816	801	899	863	1,006	1,024	1,044	1,151	1,173
MS9 Rest of the world (ROW)	0	0	0	5	0	0	0	0	0	0	1	1	2	1	3	2	3	4	5	4
<b>Total</b>	<b>4,190</b>	<b>4,411</b>	<b>4,720</b>	<b>5,498</b>	<b>5,379</b>	<b>5,786</b>	<b>6,828</b>	<b>7,650</b>	<b>8,525</b>	<b>9,454</b>	<b>10,623</b>	<b>11,991</b>	<b>11,684</b>	<b>13,562</b>	<b>15,708</b>	<b>17,465</b>	<b>18,801</b>	<b>20,761</b>	<b>22,951</b>	<b>25,081</b>

**Table 5.4.1c: Health Expenditure by Private Sector Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS2.2 Private insurance enterprises (other than social insurance)	7.03	8.27	8.92	9.38	11.13	12.42	14.12	13.89	12.72	13.18	13.30	14.25	17.04	16.79	16.72	15.88	15.51	15.43	15.79	15.19
MS2.3 Private MCOs and other similar entities	1.19	1.55	1.54	1.42	1.57	1.59	1.56	1.48	1.44	1.46	1.42	1.39	1.53	1.48	1.55	1.73	1.53	1.60	1.68	1.74
MS2.4 Private household out-of-pocket expenditure (OOP)	75.55	74.04	74.10	75.94	72.16	71.33	72.41	74.04	74.87	75.58	74.56	75.76	72.56	73.11	74.24	74.54	77.09	77.73	77.20	78.03
MS2.5 Non-profit institutions serving households (NGO)	1.53	1.58	1.51	1.59	1.73	1.81	1.73	1.71	1.74	1.69	1.76	1.78	2.00	1.98	1.99	2.08	0.41	0.19	0.30	0.35
MS2.6 All corporations (other than health insurance)	14.70	14.56	13.93	11.58	13.41	12.85	10.18	8.89	9.23	8.09	8.95	6.80	6.85	6.63	5.49	5.76	5.44	5.03	5.01	4.67
MS9 Rest of the world (ROW)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

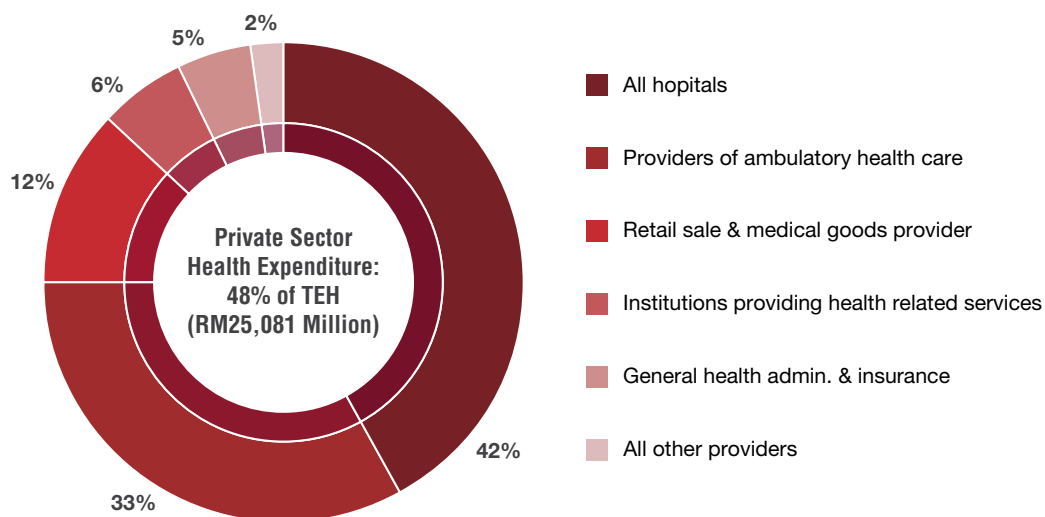
#### 5.4.2 Health Expenditure by Private Sector Sources of Financing to Providers

Just as in the public sector, the cross-tabulations of private sector sources of financing with providers of health care services and products, respond to the question as to where the private source of fund is spent or who provides services and products.

In 2016, all hospitals consumed RM10,509 million or 42 per cent of the private sources of funds, followed by providers of ambulatory health care at RM8,376 million or 33 per cent. The providers of retail sales and other providers of medical goods consumed RM3,102 million or 12 per cent whereas the providers of institutions providing health-related services spent RM1,479 million or 6 per cent and general health administration and insurance consumed RM1,148 million or 5 per cent (Figure 5.4.2 and Table 5.4.2a). The remaining private sector source of financing amounting to a total of 467 million or 2 per cent was spent at non-resident or ROW providers, provision and administrators of public health programmes providers, and at providers of nursing and residential care facilities.

The 1997 to 2016 time series data shows that throughout this period, the average of 73 per cent of the private sector source of financing has been at all hospitals and providers of ambulatory health care (Table 5.4.2b and Table 5.4.2c). All hospital's expenditure increased from RM1,486 million in 1997 to RM10,509 million in 2016 whereas expenditure at providers of ambulatory health care increased from RM1,696 million in 1997 to RM8,376 million in 2016. The data also shows that health expenditure at institutions providing health-related services which mainly comprises of teaching and training institutions in relation to health, remained below 9 per cent of private sector health expenditure throughout the years. However, in terms of RM value this expenditure has increased by 18-fold from RM81 million in 1997 to RM1,478 million in 2016.

**Figure 5.4.2: Private Sector Health Expenditure to Providers of Health Care, 2016**



**Table 5.4.2a: Private Sector Health Expenditure to Providers of Health Care, 2016**

MNHA Code	Providers of Health Care	RM Million	Per cent
MP1	All hospitals	10,509	41.90
MP3	Providers of ambulatory health care	8,376	33.40
MP4	Retail sale and other providers of medical goods	3,102	12.37
MP8	Institutions providing health-related services	1,479	5.89
MP6	General health administration and insurance	1,148	4.58
MP7	Other industries (rest of the Malaysian economy)	424	1.69
MP5	Provision and administration of public health programmes	30	0.12
MP9	Rest of the world (ROW)	9	0.04
MP2	Nursing and residential care facilities	4	0.01
<b>Total</b>		<b>25,081</b>	<b>100.00</b>

**Table 5.4.2b: Private Sector Health Expenditure to Providers of Health Care, 1997-2016 (RM Million)**

MNHA Code	Providers of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MP1	All hospitals	1,486	1,556	1,715	2,068	2,097	2,328	2,841	3,191	3,561	4,014	4,512	5,725	5,864	6,571	7,313	7,753	8,278	9,040	9,783	10,509
MP2	Nursing and residential care facilities	1	1	2	2	3	5	9	10	11	11	14	4	5	12	14	18	1	1	1	4
MP3	Providers of ambulatory health care	1,696	1,704	1,747	1,971	1,833	1,885	2,068	2,369	2,831	3,148	3,514	3,453	2,583	3,128	3,890	4,558	5,225	6,172	7,116	8,376
MP4	Retail sale and other providers of medical goods	490	544	586	661	625	660	741	888	916	985	1,143	1,255	1,374	1,486	1,773	1,960	2,172	2,702	2,969	3,102
MP5	Provision and administration of public health programmes	5	6	5	5	6	6	6	6	9	7	12	17	7	8	11	17	3	3	3	30
MP6	General health administration and insurance	363	427	452	527	542	580	760	787	799	852	909	1,011	1,088	1,257	1,455	1,600	1,297	1,141	1,203	1,148
MP7	Other industries (rest of the Malaysian economy)	63	64	76	76	82	84	95	102	105	110	148	157	170	203	289	293	335	358	394	424
MP8	Institutions providing health-related services	81	106	133	179	186	229	297	286	281	313	353	361	590	822	880	1,183	1,487	1,336	1,451	1,479
MP9	Rest of the world (ROW)	4	3	5	6	6	9	9	11	12	15	19	8	4	75	102	84	5	8	11	9
	<b>Total</b>	<b>4,190</b>	<b>4,411</b>	<b>4,720</b>	<b>5,498</b>	<b>5,379</b>	<b>5,786</b>	<b>6,828</b>	<b>7,650</b>	<b>8,525</b>	<b>9,454</b>	<b>10,623</b>	<b>11,991</b>	<b>11,684</b>	<b>13,562</b>	<b>15,708</b>	<b>17,465</b>	<b>18,801</b>	<b>20,761</b>	<b>22,951</b>	<b>25,081</b>

**Table 5.4.2c: Private Sector Health Expenditure to Providers of Health Care, 1997-2016 (Per Cent, %)**

MNHA Code	Providers of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MP1	All hospitals	35.47	35.28	36.33	37.62	38.99	40.24	41.61	41.71	41.77	42.45	42.47	47.75	50.19	48.45	46.56	44.39	44.03	43.54	42.63	41.90
MP2	Nursing and residential care facilities	0.03	0.03	0.04	0.04	0.05	0.09	0.14	0.13	0.13	0.12	0.13	0.04	0.04	0.09	0.09	0.10	0.00	0.00	0.00	0.01
MP3	Providers of ambulatory health care	40.48	38.64	37.00	35.86	34.08	32.57	30.29	30.96	33.21	33.30	33.08	28.79	22.10	23.07	24.77	26.10	27.79	29.73	31.00	33.40
MP4	Retail sale and other providers of medical goods	11.70	12.34	12.42	12.03	11.62	11.41	10.85	11.61	10.75	10.41	10.76	10.47	11.76	10.95	11.29	11.22	11.55	13.02	12.94	12.37
MP5	Provision and administration of public health programmes	0.13	0.13	0.11	0.10	0.11	0.10	0.09	0.08	0.10	0.08	0.11	0.14	0.06	0.06	0.07	0.10	0.01	0.01	0.10	0.12
MP6	General health administration and insurance	8.67	9.67	9.57	9.59	10.07	10.02	11.13	10.29	9.37	9.01	8.55	8.43	9.31	9.27	9.26	9.16	6.90	5.50	5.24	4.58
MP7	Other industries (rest of the Malaysian economy)	1.50	1.45	1.60	1.38	1.52	1.46	1.40	1.33	1.23	1.16	1.39	1.31	1.46	1.50	1.71	1.68	1.78	1.72	1.72	1.69
MP8	Institutions providing health-related services	1.93	2.39	2.81	3.26	3.45	3.96	4.36	3.74	3.30	3.31	3.32	3.01	5.05	6.06	5.60	6.77	7.91	6.44	6.32	5.89
MP9	Rest of the world (ROW)	0.09	0.08	0.12	0.11	0.11	0.15	0.14	0.15	0.14	0.16	0.18	0.07	0.03	0.55	0.65	0.48	0.03	0.04	0.05	0.04
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

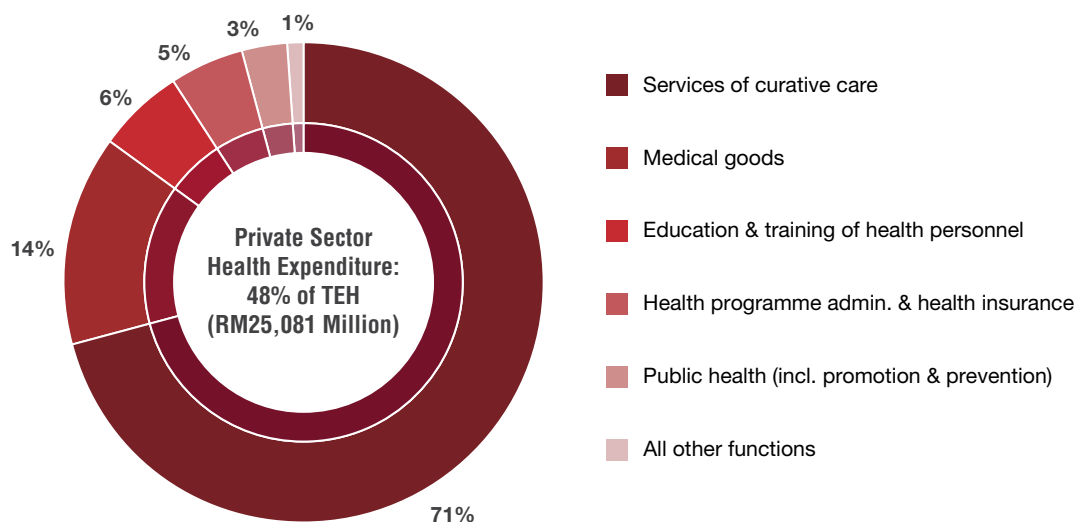
### 5.4.3 Health Expenditure by Private Sector Sources of Financing by Functions

Cross-tabulations of private sector sources of financing and functions of health care respond to the question as to what is purchased or the type of services and products consumed with this source of financing.

In 2016, the private sector source of financing spent the most for services of curative care, consuming RM17,755 million or 71 per cent, followed by medical goods dispensed to out-patients at RM3,546 million or 14 per cent. In the same year, health programme administration and health insurance consume RM1,489 million or 6 per cent and RM1,147 million or 5 per cent of this sector's expenditure is spent for education and training of health personnel. The remaining functions of health care altogether constitute only 1 per cent of health expenditure by private sector sources of financing (Figure 5.4.3 and Table 5.4.3a).

The time series 1997-2016 data shows a similar pattern with expenditures for services of curative care and medical goods dispensed to out-patient totalling 80 to 85 per cent of the private sector health expenditure (Table 5.4.3b and Table 5.4.3c). As noted in the earlier section, although expenditure for education and training over this time period has remained below 9 per cent share of this spending, it has increased by 19-fold from RM79 million in 1997 to RM1,489 million in 2016.

**Figure 5.4.3: Private Sector Health Expenditure by Functions of Health Care, 2016**



MNHA Code	Functions of Health Care	RM Million	Per cent
MF1	Services of curative care	17,755	70.79
MF5	Medical goods dispensed to out-patients	3,546	14.14
MR2	Education and training of health personnel	1,489	5.94
MF7	Health programme administration and health insurance	1,147	4.58
MF6	Public health services (including health promotion and prevention)	761	3.04
MR3	Research and development in health	210	0.84
MF4	Ancillary services to health care	151	0.60
MR1	Capital formation of health care provider institutions	17	0.07
MF3	Services of long-term nursing care	4	0.01
MR9	All other health-related expenditures	1	0.00
<b>Total</b>		<b>25,081</b>	<b>100.00</b>

**Table 5.4.3b: Private Sector Health Expenditure by Functions of Health Care, 1997-2016 (RM Million)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	2,578	2,637	2,853	3,429	3,348	3,661	4,420	5,124	5,870	6,624	7,403	8,539	7,843	9,085	10,617	11,609	12,533	14,210	15,834	17,755
MF2	Services of rehabilitative care	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
MF3	Services of long-term nursing care	1	1	2	2	3	5	9	10	11	11	14	4	5	12	14	18	1	1	1	4
MF4	Ancillary services to health care	101	110	100	98	78	63	47	29	33	37	41	47	43	58	72	86	97	115	130	151
MF5	Medical goods dispensed to out-patients	773	826	853	939	861	875	929	1,050	1,111	1,201	1,387	1,556	1,666	1,817	2,135	2,338	2,561	3,117	3,395	3,546
MF6	Public health services (including health promotion and prevention)	288	299	322	316	355	364	357	355	410	404	501	453	424	485	508	593	629	627	714	761
MF7	Health programme administration and health insurance	363	427	452	527	542	580	760	787	799	852	909	1,011	1,088	1,257	1,455	1,600	1,297	1,141	1,203	1,147
MR1	Capital formation of health care provider institutions	6	6	7	7	5	7	8	9	9	10	11	13	15	18	20	23	17	17	17	17
MR2	Education and training of health personnel	79	104	131	174	187	229	296	284	280	312	355	364	598	827	884	1,181	1,491	1,344	1,459	1,489
MR3	Research and development in health	1	1	1	6	1	1	1	1	1	2	2	3	2	2	2	17	174	188	197	210
MR9	All other health-related expenditures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	<b>Total</b>	<b>4,190</b>	<b>4,411</b>	<b>4,720</b>	<b>5,498</b>	<b>5,379</b>	<b>5,786</b>	<b>6,828</b>	<b>7,650</b>	<b>8,525</b>	<b>9,454</b>	<b>10,623</b>	<b>11,991</b>	<b>11,684</b>	<b>13,562</b>	<b>15,708</b>	<b>17,465</b>	<b>18,801</b>	<b>20,761</b>	<b>22,951</b>	<b>25,081</b>

**Table 5.4.3c: Private Sector Health Expenditure by Functions of Health Care, 1997-2016 (Per Cent, %)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	61.51	59.78	60.44	62.37	62.25	63.27	64.74	66.97	68.86	70.07	69.69	71.21	67.13	66.99	67.59	66.47	66.66	68.45	68.99	70.79
MF2	Services of rehabilitative care	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
MF3	Services of long-term nursing care	0.03	0.03	0.04	0.04	0.05	0.09	0.14	0.13	0.13	0.12	0.13	0.04	0.04	0.09	0.09	0.10	0.00	0.00	0.00	0.01
MF4	Ancillary services to health care	2.41	2.50	2.11	1.79	1.44	1.09	0.69	0.37	0.39	0.39	0.39	0.40	0.37	0.42	0.46	0.49	0.52	0.55	0.57	0.60
MF5	Medical goods dispensed to out-patients	18.45	18.73	18.08	17.08	16.01	15.13	13.61	13.73	13.03	12.70	13.05	12.97	14.25	13.40	13.59	13.39	13.62	15.01	14.79	14.14
MF6	Public health services (including health promotion and prevention)	6.88	6.77	6.83	5.74	6.59	6.29	5.23	4.65	4.81	4.28	4.72	3.78	3.63	3.58	3.24	3.39	3.35	3.02	3.11	3.04
MF7	Health programme administration and health insurance	8.67	9.67	9.57	9.59	10.07	10.02	11.13	10.29	9.37	9.01	8.56	8.43	9.31	9.27	9.26	9.16	6.90	5.50	5.24	4.58
MR1	Capital formation of health care provider institutions	0.14	0.14	0.15	0.13	0.09	0.12	0.12	0.12	0.11	0.10	0.11	0.11	0.11	0.13	0.13	0.13	0.09	0.08	0.08	0.07
MR2	Education and training of health personnel	1.89	2.35	2.77	3.16	3.48	3.96	4.33	3.71	3.29	3.31	3.34	3.04	5.12	6.10	5.63	6.76	7.93	6.48	6.36	5.94
MR3	Research and development in health	0.03	0.02	0.02	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.10	0.93	0.91	0.86	0.84
MR9	All other health-related expenditures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## CHAPTER 6

### HEALTH EXPENDITURE TO PROVIDERS OF HEALTH CARE

The providers of health care services and products include all hospitals (i.e. health care facilities under MP1 code of MNHA Framework which include hospitals (general), psychiatric hospitals and speciality hospitals), nursing and residential care facility providers, providers of ambulatory health care, retail sale and other providers of medical goods, and provision and administration of public health programme providers (Appendix Table A2.2).

This chapter contains three sections. Section 6.1 describes health expenditure to all providers of health care as classified in MNHA Framework. Further cross-tabulations of the two largest providers, namely all hospitals and providers of ambulatory care services are reported in the following sections (6.2 and 6.3 respectively).

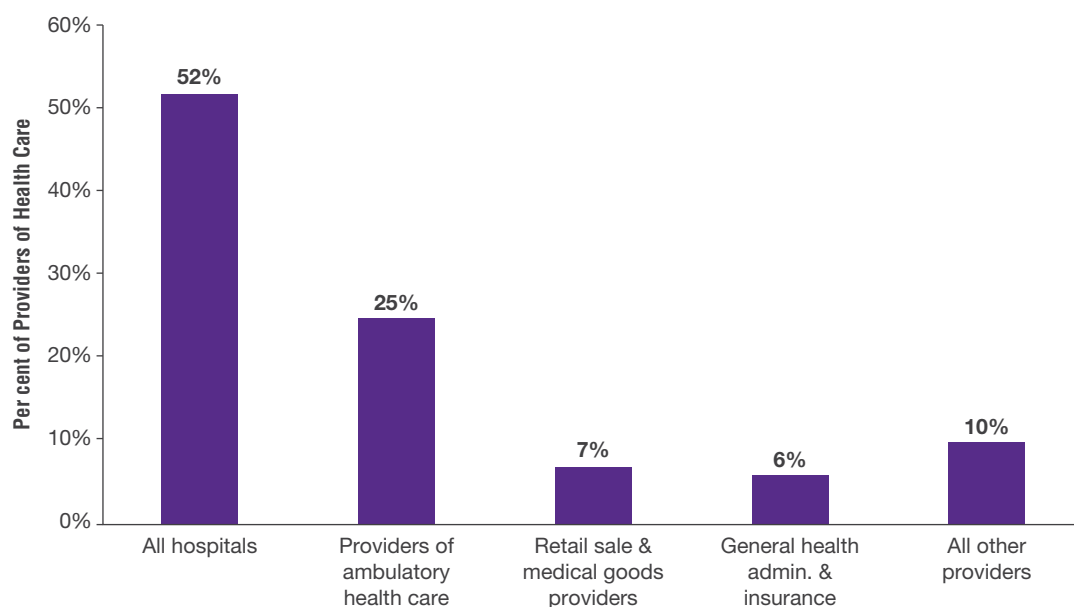
#### 6.1 HEALTH EXPENDITURE TO ALL PROVIDERS OF HEALTH CARE

In 2016, analysis of providers of health care shows that all hospitals consumed RM27,166 million or 52 per cent of Total Expenditure on Health (Figure 6.1 and Table 6.1a). This is followed by providers of ambulatory health care at RM12,806 million or 25 per cent, retail sale and other providers of medical goods at RM3,448 million or 7 per cent, and general health administration and insurance providers at RM3,062 million or 6 per cent. All other remaining providers of health care services and products consumed RM5,260 million or 10 per cent of the Total Expenditure on Health.

The 1997 to 2016 time series data also shows a similar pattern with the same top two providers (all hospitals and providers of ambulatory health care) contributing to an average of 71 per cent share of Total Expenditure on Health throughout the time period. Third highest expenditure from 1997 to 2015 was contributed by expenditure to general health administration and insurance providers, but in 2016 third highest expenditure was to retail sale and other providers of medical goods (Table 6.1b and Table 6.1c). The expenditures of the top two providers increased in absolute *Ringgit Malaysia* (RM) value by 6-fold over the same time period, whereas spending at retail sale and other providers of medical goods showed increase in absolute RM value by 7-fold and providers of institutions providing health-related services showed even a higher increase which is by 11-fold throughout the 20 years duration.



**Figure 6.1: Total Expenditure on Health to Providers of Health Care, 2016**



**Table 6.1a: Total Expenditure on Health to Providers of Health Care, 2016**

MNHA Code	Providers of Health Care	RM Million	Per cent
MP1	All hospitals	27,166	52.50
MP3	Providers of ambulatory health care	12,806	24.75
MP4	Retail sale and other providers of medical goods	3,448	6.67
MP6	General health administration and insurance	3,062	5.92
MP8	Institutions providing health-related services	2,944	5.69
MP5	Provision and administration of public health programmes	1,718	3.32
MP7	Other industries (rest of the Malaysian economy)	582	1.12
MP9	Rest of the world (ROW)	11	0.02
MP2	Nursing and residential care facilities	5	0.01
<b>Total</b>		<b>51,742</b>	<b>100.00</b>

**Table 6.1b: Total Expenditure on Health to Providers of Health Care, 1997-2016 (RM Million)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Providers of Health Care</b>																				
MP1 All hospitals	4,192	4,405	4,812	5,508	6,037	6,454	7,713	8,511	9,118	11,279	12,299	14,817	15,217	16,955	18,689	21,127	22,099	24,820	26,217	27,166
MP2 Nursing and residential care facilities	2	2	2	3	3	6	10	11	12	12	15	6	6	13	16	20	2	2	1	5
MP3 Providers of ambulatory health care	2,112	2,153	2,265	2,585	2,567	2,712	3,160	3,584	4,151	4,940	5,412	5,630	4,737	5,599	6,622	7,813	8,728	10,266	11,325	12,806
MP4 Retail sale and other providers of medical goods	517	574	619	693	664	705	792	944	975	1,054	1,229	1,348	1,502	1,619	1,908	2,119	2,411	3,033	3,276	3,448
MP5 Provision and administration of public health programmes	389	365	400	439	531	630	594	604	601	769	1,175	963	1,228	1,009	1,160	1,519	1,225	1,529	1,547	1,718
MP6 General health administration and insurance	1,026	1,306	1,425	2,000	2,255	2,376	3,960	3,481	2,338	2,780	2,816	3,297	4,507	5,222	4,638	3,903	3,983	3,764	4,029	3,062
MP7 Other industries (rest of the Malaysian economy)	104	110	122	124	129	136	175	205	189	203	253	262	275	326	389	433	509	554	539	582
MP8 Institutions providing health-related services	259	300	370	453	575	678	854	913	897	1,089	1,261	1,504	1,974	2,144	2,441	2,566	2,709	2,779	2,888	2,944
MP9 Rest of the world (ROW)	4	4	6	7	7	10	11	13	14	17	20	12	6	75	102	85	6	9	15	11
<b>Total</b>	<b>8,604</b>	<b>9,218</b>	<b>10,021</b>	<b>11,811</b>	<b>12,768</b>	<b>13,709</b>	<b>17,268</b>	<b>18,265</b>	<b>18,294</b>	<b>22,144</b>	<b>24,480</b>	<b>27,840</b>	<b>29,452</b>	<b>32,962</b>	<b>35,965</b>	<b>39,586</b>	<b>41,671</b>	<b>46,756</b>	<b>49,838</b>	<b>51,742</b>

**Table 6.1c: Total Expenditure on Health to Providers of Health Care, 1997-2016 (Per cent, %)**

MNHA Code	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Providers of Health Care</b>																				
MP1 All hospitals	48.72	47.78	48.02	46.63	47.28	47.08	44.66	46.60	49.84	50.94	50.24	53.22	51.67	51.44	51.96	53.37	53.03	53.08	52.60	52.50
MP2 Nursing and residential care facilities	0.02	0.02	0.02	0.03	0.03	0.04	0.06	0.06	0.07	0.06	0.06	0.02	0.02	0.04	0.04	0.05	-	-	-	0.01
MP3 Providers of ambulatory health care	24.54	23.35	22.60	21.88	20.10	19.78	18.30	19.62	22.69	22.31	22.11	20.22	16.08	16.99	18.41	19.74	20.95	21.96	22.72	24.75
MP4 Retail sale and other providers of medical goods	6.01	6.23	6.18	5.87	5.20	5.14	4.59	5.17	5.33	4.76	5.02	4.84	5.10	4.91	5.30	5.35	5.78	6.49	6.57	6.67
MP5 Provision and administration of public health programmes	4.52	3.96	4.00	3.72	4.16	4.60	3.44	3.31	3.28	3.47	4.80	3.46	4.17	3.06	3.22	3.84	2.94	3.27	3.10	3.32
MP6 General health administration and insurance	11.93	14.17	14.22	16.93	17.66	17.34	22.93	19.06	12.78	12.55	11.50	11.84	15.30	15.84	12.90	9.86	9.56	8.05	8.08	5.92
MP7 Other industries (rest of the Malaysian economy)	1.20	1.19	1.21	1.05	1.01	0.99	1.01	1.12	1.03	0.92	1.03	0.94	0.93	0.99	1.08	1.09	1.22	1.19	1.08	1.12
MP8 Institutions providing health-related services	3.01	3.25	3.69	3.83	4.50	4.95	4.94	5.00	4.90	4.92	5.15	5.40	6.70	6.50	6.79	6.48	6.50	5.94	5.80	5.69
MP9 Rest of the world (ROW)	0.05	0.04	0.06	0.06	0.06	0.07	0.06	0.07	0.07	0.08	0.08	0.04	0.02	0.23	0.28	0.21	0.01	0.02	0.03	0.02
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

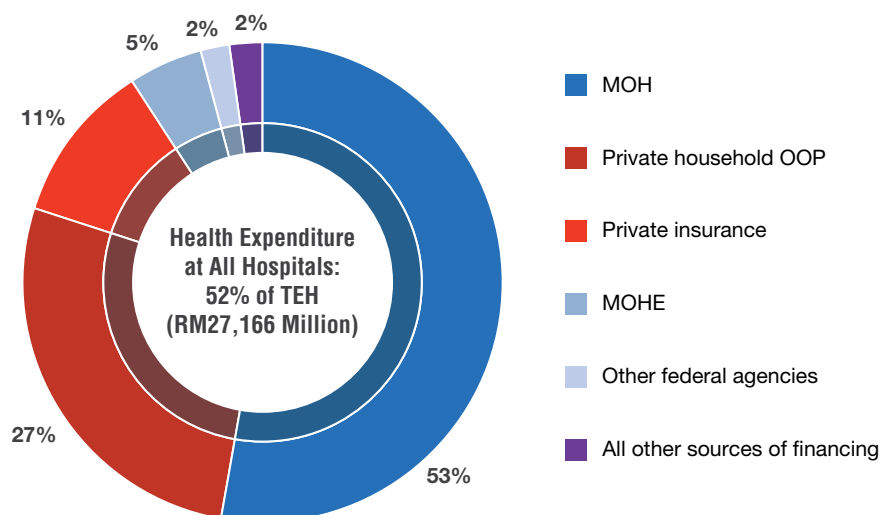
## 6.2 HEALTH EXPENDITURE TO PROVIDERS OF HEALTH CARE - HOSPITALS

The cross-tabulations of expenditure at all hospitals and sources of financing responds to the question as to who or which agencies finance for health care services provided at all hospitals in the country.

In 2016, of the RM27,166 million spent at all hospitals, the highest spending is incurred by MOH at RM14,335 million or 53 per cent followed by private household OOP at RM7,313 million or 27 per cent, private insurance enterprises (other than social insurance) at RM3,023 million or 11 per cent, Ministry of Higher Education (MOHE) at RM1,379 million or 5 per cent and other federal agencies (including statutory bodies) at RM592 million or 2 per cent (Figure 6.2 and Table 6.2a). The remaining expenditure at all hospitals amount to RM524 million or 2 per cent came from multiple other sources of financing, each spent below RM160 million.

The 1997 to 2016 time-series expenditure by the top two sources of financing at all hospitals, that are MOH and private household OOP amounted to an average of 80 per cent (Table 6.2b and Table 6.2c). In same time series, an average of 20 per cent spent by the remaining sources of financing of total expenditure at all hospitals.

**Figure 6.2: Health Expenditure at All Hospitals by Sources of Financing, 2016**



MNHA Code	Sources of Financing	RM Million	Per cent
MS1.1.1.1	Ministry of Health (MOH)	14,335	52.77
MS2.4	Private household out-of-pocket expenditures (OOP)	7,313	26.92
MS2.2	Private insurance enterprises (other than social insurance)	3,023	11.13
MS1.1.1.2	Ministry of Higher Education (MOHE)	1,379	5.08
MS1.1.1.9	Other federal agencies (including statutory bodies)	592	2.18
MS2.6	All corporations (other than health insurance)	157	0.58
MS1.1.1.3	Ministry of Defence (MOD)	117	0.43
MS1.2.2	Social Security Organization (SOCSO)	117	0.43
MS1.2.1	Employees Provident Fund (EPF)	47	0.17
MS1.1.2.2	Other state agencies (including statutory bodies)	34	0.12
MS1.1.3	Local authorities (LA)	18	0.07
MS1.1.2.1	(General) State government	18	0.06
MS2.5	Non-profit institutions serving households (NGO)	15	0.06
<b>Total</b>		<b>27,166</b>	<b>100.00</b>

**Table 6.2b: Health Expenditure at All Hospitals by Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
MS1.1.1	Ministry of Health (MOH)	2,167	2,282	2,470	2,741	3,121	3,214	3,876	4,174	4,402	6,029	6,359	7,345	7,666	8,442	9,437	11,282	11,670	13,595	14,190	14,335	
MS1.1.2	Ministry of Higher Education (MOHE)	381	392	439	480	572	630	665	711	731	790	922	1,078	1,123	1,325	1,266	1,359	1,370	1,382	1,361	1,379	
MS1.1.1.3	Ministry of Defence (MOD)	22	24	25	28	32	35	41	39	42	50	57	71	79	76	83	102	105	110	110	115	117
MS1.1.1.9	Other federal agencies (including statutory bodies)	99	107	113	133	149	175	198	300	275	287	337	499	363	394	420	449	481	507	555	592	
MS1.1.2.1	(General) State government	5	5	6	6	7	7	8	8	9	10	13	12	12	13	15	19	18	21	17	18	
MS1.1.2.2	Other state agencies (including statutory bodies)	2	3	3	3	3	4	4	3	4	4	6	6	7	9	9	12	10	8	32	34	
MS1.1.3	Local authorities (LA)	0	0	0	0	0	1	1	1	2	3	5	6	15	19	20	16	13	21	20	18	
MS1.2.1	Employees Provident Fund (EPF)	6	13	16	19	26	30	35	46	50	38	42	40	31	28	32	31	35	38	43	47	
MS1.2.2	Social Security Organization (SOCOSO)	23	23	24	28	29	31	43	37	42	54	46	35	57	79	93	104	120	98	100	117	
MS2.2	Private insurance enterprises (other than social insurance)	64	92	127	164	247	333	409	492	529	657	800	996	1,228	1,324	1,480	1,583	1,878	2,373	2,761	3,023	
MS2.4	Private household out-of-pocket expenditures (OOP)	1,295	1,310	1,415	1,731	1,635	1,766	2,288	2,565	2,865	3,195	3,522	4,578	4,481	5,083	5,690	5,998	6,209	6,518	6,856	7,313	
MS2.5	Non-profit institutions serving households (NGO)	1	1	1	1	1	8	6	6	7	8	9	19	39	27	29	31	44	12	13	15	
MS2.6	All corporations (other than health insurance)	126	154	173	172	214	221	138	128	160	154	180	132	117	138	114	141	147	136	153	157	
	<b>Total</b>	<b>4,192</b>	<b>4,405</b>	<b>4,812</b>	<b>5,508</b>	<b>6,037</b>	<b>6,454</b>	<b>7,713</b>	<b>8,511</b>	<b>9,118</b>	<b>11,279</b>	<b>12,299</b>	<b>14,817</b>	<b>15,217</b>	<b>16,955</b>	<b>18,689</b>	<b>21,127</b>	<b>22,099</b>	<b>24,820</b>	<b>26,217</b>	<b>27,166</b>	

**Table 6.2c: Health Expenditure at All Hospitals by Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1	Ministry of Health (MOH)	51.69	51.82	51.34	49.77	51.70	49.80	50.26	49.04	48.28	53.46	51.70	49.57	50.38	49.79	50.49	53.40	52.81	54.78	54.12	52.77
MS1.1.1.2	Ministry of Higher Education (MOHE)	9.10	8.89	9.13	8.71	9.48	9.76	8.62	8.36	8.02	7.01	7.50	7.27	7.38	7.82	6.77	6.43	6.20	5.57	5.19	5.08
MS1.1.1.3	Ministry of Defence (MOD)	0.52	0.54	0.52	0.51	0.53	0.55	0.53	0.45	0.46	0.44	0.46	0.48	0.52	0.45	0.45	0.48	0.48	0.44	0.44	0.43
MS1.1.1.9	Other federal agencies (including statutory bodies)	2.37	2.44	2.36	2.42	2.46	2.71	2.57	3.53	3.01	2.54	2.74	3.37	2.38	2.32	2.25	2.12	2.18	2.04	2.12	2.18
MS1.1.2.1	(General) State government	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.09	0.09	0.09	0.11	0.08	0.08	0.07	0.08	0.09	0.08	0.08	0.08	0.06
MS1.1.2.2	Other state agencies (including statutory bodies)	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.05	0.05	0.06	0.04	0.03	0.12	0.12
MS1.1.3	Local authorities (LA)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.10	0.11	0.11	0.08	0.06	0.09	0.08	0.07
MS1.2.1	Employees Provident Fund (EPF)	0.13	0.28	0.34	0.35	0.44	0.46	0.46	0.54	0.55	0.33	0.35	0.27	0.20	0.17	0.17	0.15	0.16	0.15	0.16	0.17
MS1.2.2	Social Security Organization (SOCOSO)	0.54	0.52	0.50	0.50	0.47	0.47	0.56	0.44	0.46	0.48	0.37	0.24	0.37	0.46	0.50	0.49	0.54	0.40	0.38	0.43
MS2.2	Private insurance enterprises (other than social insurance)	1.53	2.08	2.63	2.98	4.09	5.16	5.31	5.78	5.80	5.82	6.50	6.72	8.07	7.81	7.92	7.49	8.50	9.56	10.53	11.13
MS2.4	Private household out-of-pocket expenditures (OOP)	30.89	29.74	29.40	31.43	27.08	27.36	29.67	30.14	31.42	28.32	28.64	30.90	29.44	29.98	30.45	28.39	28.09	26.26	26.15	26.92
MS2.5	Non-profit institutions serving households (NGO)	0.03	0.01	0.01	0.02	0.02	0.12	0.07	0.07	0.08	0.07	0.07	0.13	0.26	0.16	0.15	0.15	0.20	0.05	0.05	0.06
MS2.6	All corporations (other than health insurance)	3.02	3.50	3.59	3.13	3.55	3.43	1.79	1.50	1.75	1.37	1.47	0.89	0.77	0.81	0.61	0.67	0.66	0.55	0.58	0.58
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

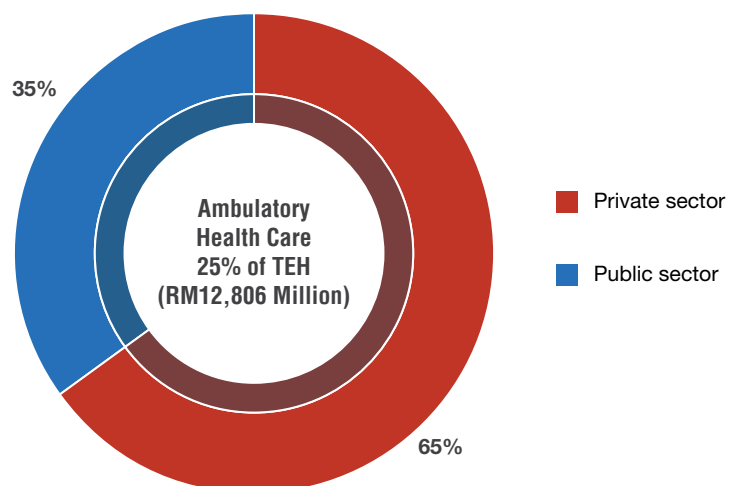
### 6.3 HEALTH EXPENDITURE TO PROVIDERS OF HEALTH CARE - PROVIDERS OF AMBULATORY HEALTH CARE

After all hospitals, the next largest provider of health care are the providers of ambulatory health care services. The MNHA Framework adopts the SHA 1.0 framework definition of providers of ambulatory health care and often this terminology differs in meaning when used in other context. It has a wide range of providers and includes providers of medical clinics, dental clinics, family planning centres, substance abuse centres, dialysis centres, medical and diagnostic centres, ambulance providers and many other outpatient providers who do provide inpatient services. In addition, both MNHA Framework and SHA 1.0 include providers of Traditional and Complementary Medicine under this category.

In 2016, providers of ambulatory health care consumed RM12,806 million or 25 per cent of total expenditure on health. Of this amount, RM8,376 million or 65 per cent is funded by private sector source of financing and the remaining RM4,430 million or 35 per cent by public sector source of financing (Figure 6.3 and Table 6.3a).

The 1997 to 2016 time-series data shows that the expenditure in absolute *Ringgit Malaysia* (RM) value for ambulatory care services has increased by 5-fold in private sector and 11-fold in public sector (Table 6.3b and Table 6.3c). Furthermore, in addition to the private sector spending being higher than public sector spending over the full time period, the rate of increase in private sector spending in absolute RM value from 2010 onwards shows steeper rise compared to public sector expenditure. One of the possible contributory factors for this finding is that in addition to increased demand for services delivered by standalone private providers of ambulatory health care, many of these services in the public sector are delivered as part of public hospital services often at subsidised cost.

**Figure 6.3: Health Expenditure to Providers of Ambulatory Health Care (non-hospital setting) by Sources of Financing, 2016**



**Table 6.3a: Health Expenditure to Providers of Ambulatory Health Care by Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS2	Private sector	8,376	65.41
MS1	Public sector	4,430	34.59
<b>Total</b>		<b>12,806</b>	<b>100.00</b>

**Table 6.3b: Health Expenditure to Providers of Ambulatory Health Care by Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1	Public sector	415	449	518	613	734	828	1,092	1,216	1,319	1,793	1,898	2,178	2,154	2,470	2,731	3,256	3,503	4,094	4,209	4,430
MS2	Private sector	1,696	1,704	1,747	1,971	1,833	1,885	2,068	2,369	2,831	3,148	3,514	3,453	2,583	3,128	3,890	4,558	5,225	6,172	7,116	8,376
	<b>Total</b>	<b>2,112</b>	<b>2,153</b>	<b>2,265</b>	<b>2,585</b>	<b>2,567</b>	<b>2,712</b>	<b>3,160</b>	<b>3,584</b>	<b>4,151</b>	<b>4,940</b>	<b>5,412</b>	<b>5,630</b>	<b>4,737</b>	<b>5,599</b>	<b>6,922</b>	<b>7,813</b>	<b>8,728</b>	<b>10,266</b>	<b>11,325</b>	<b>12,806</b>

**Table 6.3c: Health Expenditure to Providers of Ambulatory Health Care by Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1	Public sector	19.67	20.85	22.87	23.73	28.60	30.51	34.55	33.92	31.79	36.28	35.06	38.68	45.47	44.12	41.25	41.67	40.13	39.88	37.17	34.59
MS2	Private sector	80.33	79.15	77.13	76.27	71.40	69.49	65.45	66.08	68.21	63.72	64.94	61.32	54.53	55.88	58.75	58.33	59.87	60.12	62.83	65.41
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



## CHAPTER 7

### HEALTH EXPENDITURE BY FUNCTIONS OF HEALTH CARE

This dimension of health expenditure responds to the question on the type of services purchased with the financial resources. As mentioned in Chapter 2, health expenditure by functions of health care is categorised into two categories, namely the 'core functions of health care' and 'health-related functions' which can be identified in the tables by the codes starting with 'MF' and 'MR' respectively.

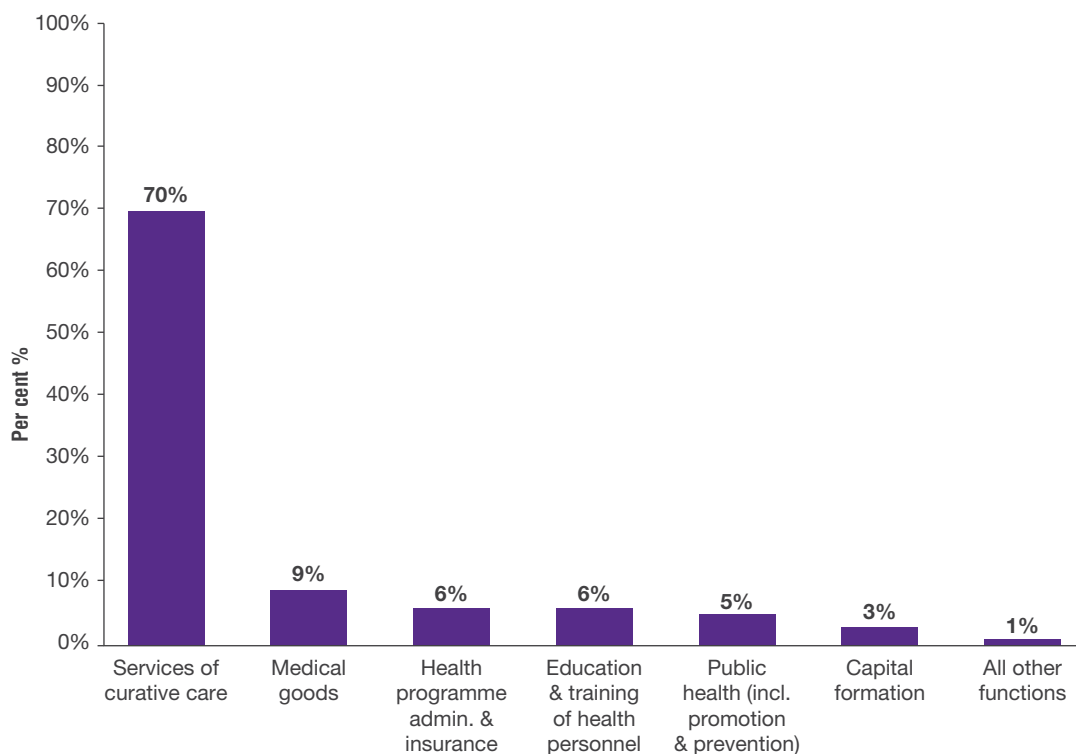
This chapter has four sections, starting with section 7.1 that describes health expenditure according to MNHA classification of all functions of health care for year 2016, followed by time series data of 1997-2016 in RM Million and percentage. Section 7.2 explains about services of curative care expenditure, section 7.3 is regarding public health services (including health promotion and prevention) expenditure and section 7.4 describes expenditure for health education and training.

#### 7.1 HEALTH EXPENDITURE BY ALL FUNCTIONS OF HEALTH CARE

In 2016, the expenditure for services of curative care amounted to RM36,038 million or 70 per cent of Total Expenditure on Health (Figure 7.1 and Table 7.1a). This is followed by expenditure of RM4,600 million or 9 per cent for medical goods dispensed to out-patient, RM3,287 million or 6 per cent for health programme administration and health insurance, RM2,948 million or 6 per cent for education and training of health personnel, RM2,816 million or 5 per cent for public health services (including health promotion and prevention) RM1,406 million or 3 per cent for capital formation of healthcare provider institutions. The remaining RM647 million or 1 per cent of expenditure is spent on all remaining functions including ancillary services to health care and all other functions.

The 1997 to 2016 time series data (Table 7.1b and Table 7.1c) shows that an average of 90 per cent of the total expenditure was spent for the top four functions. Between 1997 and 2009, the top four functions were services of curative care, medical goods dispensed to outpatients, health programme administration and health insurance and capital formation. A change in pattern started in year 2010 and from 2011 onwards, education and training of health personnel took over the place of capital formation in the top four health expenditure by functions. It is important to also note that, as a share of the Total Expenditure on Health, services of curative care expenditure trend shows increasing pattern throughout time series from 1997-2016.

**Figure 7.1: Total Expenditure on Health by Functions of Health Care, 2016**



**Table 7.1a: Total Expenditure on Health by Functions of Health Care, 2016**

MNHA Code	Functions of Health Care	RM Million	Per cent
MF1	Services of curative care	36,038	69.65
MF5	Medical goods dispensed to out-patients	4,600	8.89
MF7	Health programme administration and health insurance	3,287	6.35
MR2	Education and training of health personnel	2,948	5.70
MF6	Public health services (including health promotion and prevention)	2,816	5.44
MR1	Capital formation of health care provider institutions	1,406	2.72
MF4	Ancillary services to health care	380	0.73
MR3	Research and development in health	263	0.51
MF3	Services of long-term nursing care	4	0.01
MR9	All other health-related expenditures	1	0.00
<b>Total</b>		<b>51,742</b>	<b>100.00</b>

**Table 7.1b: Total Expenditure on Health by Functions of Health Care, 1997-2016 (RM Million)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	5,534	5,709	6,190	7,193	7,605	8,252	9,847	11,093	12,069	14,923	16,209	18,915	18,477	20,201	23,599	26,799	27,632	31,365	33,719	36,038
MF2	Services of rehabilitative care	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
MF3	Services of long-term nursing care	1	2	2	3	3	6	10	10	11	12	14	5	5	12	15	19	1	2	1	4
MF4	Ancillary services to health care	102	111	101	106	117	110	118	126	128	201	180	238	235	264	296	290	319	353	377	380
MF5	Medical goods dispensed to out-patients	796	850	879	968	894	910	969	1,097	1,162	1,258	1,458	1,635	1,764	1,931	2,247	2,467	2,767	3,968	4,373	4,600
MF6	Public health services (including health promotion and prevention)	483	496	548	546	618	640	771	836	905	1,040	1,420	1,256	1,328	1,362	1,508	1,798	2,593	2,468	2,653	2,816
MF7	Health programme administration and health insurance	919	959	1,011	1,184	1,283	1,492	1,936	1,953	1,940	2,388	2,497	2,800	3,015	3,162	3,619	3,539	3,528	4,107	4,138	3,287
MR1	Capital formation of health care provider institutions	501	784	915	1,357	1,669	1,617	2,773	2,284	1,221	1,317	1,521	1,574	2,714	3,832	2,169	2,009	1,807	1,470	1,431	1,406
MR2	Education and training of health personnel	206	253	326	412	504	604	770	803	835	969	1,126	1,362	1,862	2,153	2,462	2,592	2,781	2,776	2,891	2,948
MR3	Research and development in health	62	54	49	43	75	79	75	62	22	36	55	55	51	46	48	73	241	247	256	263
MR9	All other health-related expenditures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
<b>Total</b>		<b>8,604</b>	<b>9,218</b>	<b>10,021</b>	<b>11,811</b>	<b>12,768</b>	<b>13,709</b>	<b>17,268</b>	<b>18,265</b>	<b>18,294</b>	<b>22,144</b>	<b>24,480</b>	<b>27,840</b>	<b>29,452</b>	<b>32,962</b>	<b>35,985</b>	<b>39,586</b>	<b>41,671</b>	<b>46,756</b>	<b>49,838</b>	<b>51,742</b>

**Table 7.1c: Total Expenditure on Health by Functions of Health Care, 1997-2016 (Per cent, %)**

MNHA Code	Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MF1	Services of curative care	64.32	61.93	61.77	60.90	59.56	60.19	57.02	60.73	65.97	67.39	66.21	67.94	62.74	61.29	65.62	67.70	66.31	67.08	67.66	69.65
MF2	Services of rehabilitative care	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MF3	Services of long-term nursing care	0.01	0.02	0.02	0.02	0.02	0.04	0.06	0.06	0.06	0.05	0.06	0.02	0.02	0.04	0.04	0.05	0.00	0.00	0.00	0.01
MF4	Ancillary services to health care	1.19	1.21	1.01	0.90	0.91	0.80	0.68	0.69	0.70	0.91	0.74	0.86	0.80	0.80	0.82	0.73	0.77	0.76	0.76	0.73
MF5	Medical goods dispensed to out-patients	9.25	9.22	8.77	8.19	7.00	6.64	5.61	6.00	6.35	5.68	5.96	5.87	5.99	5.86	6.25	6.23	6.64	8.49	8.78	8.89
MF6	Public health services (including health promotion and prevention)	5.61	5.38	5.47	4.62	4.84	4.67	4.47	4.58	4.95	4.70	5.80	4.51	4.51	4.13	4.19	4.54	6.22	5.28	5.32	5.44
MF7	Health programme administration and health insurance	10.68	10.41	10.09	10.03	10.05	10.89	11.21	10.70	10.60	10.78	10.20	10.06	10.24	9.59	10.06	8.94	8.47	8.78	8.30	6.35
MR1	Capital formation of health care provider institutions	5.83	8.51	9.13	11.49	13.08	11.80	16.06	12.50	6.68	5.95	6.21	5.65	9.21	11.62	6.03	5.07	4.34	3.14	2.87	2.72
MR2	Education and training of health personnel	2.39	2.74	3.25	3.48	3.95	4.40	4.46	4.40	4.57	4.38	4.60	4.89	6.32	6.53	6.85	6.55	6.67	5.94	5.80	5.70
MR3	Research and development in health	0.72	0.58	0.48	0.37	0.59	0.57	0.43	0.34	0.12	0.16	0.22	0.20	0.17	0.14	0.13	0.19	0.58	0.53	0.51	0.51
MR9	All other health-related expenditures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## 7.2 HEALTH EXPENDITURE BY FUNCTIONS OF HEALTH CARE - CURATIVE CARE BY SOURCES OF FINANCING

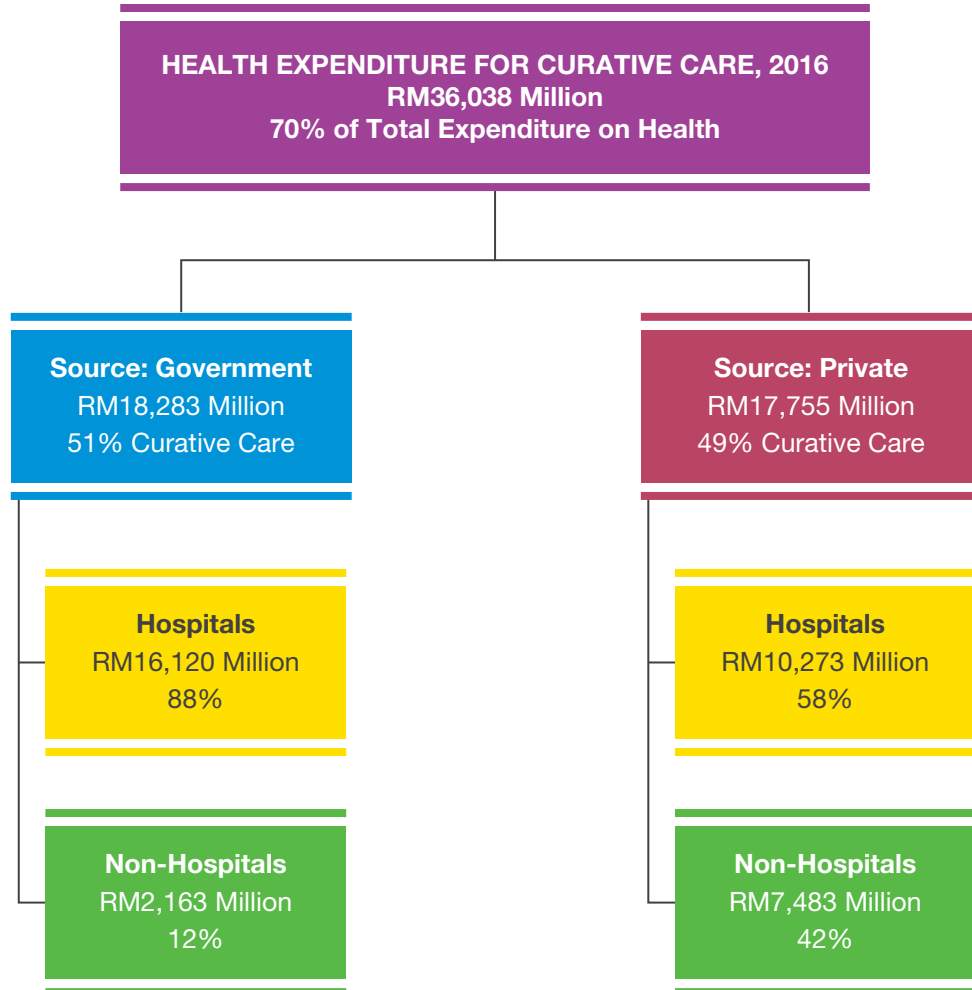
Services of curative care include medical, paramedical and allied health services which could be either allopathic or Traditional and Complementary Medicine (TCM) services and is inclusive of dental care services. It could be rendered either in hospital or non-hospital setting. The non-hospital setting includes medical or dental clinics but excludes other standalone allied health or rehabilitative facilities, standalone pharmacies or radiological service facilities, and many other non-hospital facilities.

In 2016, a total of RM36,038 million or 70 per cent of Total Expenditure on Health is for services of curative care (Figure 7.2 and Table 7.2a). The source of financing for services of curative care is RM18,283 million or 51 per cent from the public sector and the remaining RM17,755 million or 49 per cent from the private sector. In the public sector 88 per cent and in the private sector 58 per cent of the services of curative care expenditure is spent at hospitals and the remaining in both sectors are spent at non-hospital services of curative care providers.

The 1997 to 2016 time-series data shows a similar pattern in absolute *Ringgit Malaysia* (RM) value and percentage (Table 7.2b and 7.2c). As a share of public sector to private sector sources of financing for services of curative care, the public sector share is higher than the private sector source of financing over the time period.

Source	Provider	RM Million	Per cent
Public Sector	Hospital	16,120	44.73
	Non-Hospital	2,163	6.00
	<b>Sub-Total</b>	<b>18,283</b>	<b>50.73</b>
Private Sector	Hospital	10,273	28.50
	Non-Hospital	7,483	20.76
	<b>Sub-Total</b>	<b>17,755</b>	<b>49.27</b>
<b>Total</b>		<b>36,038</b>	<b>100.00</b>

Figure 7.2: Health Expenditure for Curative Care by Sources of Financing, 2016



**Table 7.2b: Health Expenditure for Curative Care by Sources of Financing, 1997-2016 (RM Million)**

Source	Provider	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Public sector	Hospital	2,616	2,722	2,935	3,295	3,706	3,949	4,668	5,110	5,281	7,058	7,506	8,864	9,025	9,341	10,924	12,729	13,157	15,295	15,907	16,120
	Non-Hospital	341	351	402	469	550	642	759	860	919	1,241	1,299	1,512	1,609	1,775	2,059	2,461	1,942	1,860	1,977	2,163
	<b>Sub-Total</b>	<b>2,957</b>	<b>3,072</b>	<b>3,338</b>	<b>3,764</b>	<b>4,256</b>	<b>4,591</b>	<b>5,426</b>	<b>5,969</b>	<b>6,199</b>	<b>8,299</b>	<b>8,805</b>	<b>10,376</b>	<b>10,634</b>	<b>11,116</b>	<b>12,983</b>	<b>15,190</b>	<b>15,099</b>	<b>17,154</b>	<b>17,885</b>	<b>18,283</b>
Private Sector	Hospital	1,481	1,551	1,709	2,061	2,090	2,320	2,833	3,182	3,551	4,003	4,497	5,706	5,839	6,546	7,288	7,715	8,082	8,828	9,561	10,273
	Non-Hospital	1,096	1,086	1,144	1,368	1,258	1,341	1,587	1,941	2,319	2,621	2,907	2,833	2,004	2,539	3,329	3,894	4,451	5,383	6,273	7,483
	<b>Sub-Total</b>	<b>2,578</b>	<b>2,637</b>	<b>2,853</b>	<b>3,429</b>	<b>3,348</b>	<b>3,661</b>	<b>4,420</b>	<b>5,124</b>	<b>5,870</b>	<b>6,624</b>	<b>7,403</b>	<b>8,539</b>	<b>7,843</b>	<b>9,085</b>	<b>10,617</b>	<b>11,609</b>	<b>12,533</b>	<b>14,210</b>	<b>15,834</b>	<b>17,755</b>
<b>Total</b>		<b>5,534</b>	<b>5,709</b>	<b>6,190</b>	<b>7,193</b>	<b>7,605</b>	<b>8,252</b>	<b>9,847</b>	<b>11,093</b>	<b>12,069</b>	<b>14,923</b>	<b>16,209</b>	<b>18,915</b>	<b>18,477</b>	<b>20,201</b>	<b>23,599</b>	<b>26,799</b>	<b>27,692</b>	<b>31,365</b>	<b>33,719</b>	<b>36,038</b>

**Table 7.2c: Health Expenditure for Curative Care by Sources of Financing, 1997-2016 (Per cent, %)**

Source	Provider	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Public sector	Hospital	47.27	47.67	47.42	45.81	48.74	47.86	47.40	46.06	43.75	47.30	46.31	46.86	48.84	46.24	46.29	47.50	47.62	48.76	47.18	44.73
	Non-Hospital	6.15	6.14	6.50	6.52	7.23	7.78	7.71	7.75	7.61	8.31	8.02	7.99	8.71	8.79	8.72	9.18	7.03	5.93	5.86	6.00
	<b>Sub-Total</b>	<b>53.43</b>	<b>53.81</b>	<b>53.92</b>	<b>52.33</b>	<b>55.97</b>	<b>55.63</b>	<b>55.11</b>	<b>53.81</b>	<b>51.36</b>	<b>55.61</b>	<b>54.32</b>	<b>54.86</b>	<b>57.55</b>	<b>55.03</b>	<b>55.01</b>	<b>56.68</b>	<b>54.64</b>	<b>54.69</b>	<b>53.04</b>	<b>50.73</b>
Private Sector	Hospital	26.76	27.16	27.60	28.66	27.48	28.12	28.78	28.69	29.42	26.82	27.74	30.17	30.17	31.60	30.88	28.79	29.25	28.14	28.35	28.50
	Non-Hospital	19.81	19.03	18.48	19.01	16.55	16.25	16.11	17.50	19.21	17.57	17.93	14.98	10.85	12.57	14.10	14.53	16.11	17.16	18.60	20.76
	<b>Sub-Total</b>	<b>46.57</b>	<b>46.19</b>	<b>46.08</b>	<b>47.67</b>	<b>44.03</b>	<b>44.37</b>	<b>44.89</b>	<b>46.19</b>	<b>48.64</b>	<b>44.39</b>	<b>45.68</b>	<b>45.14</b>	<b>42.45</b>	<b>44.97</b>	<b>44.99</b>	<b>43.32</b>	<b>45.36</b>	<b>45.31</b>	<b>46.96</b>	<b>49.27</b>
<b>Total</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

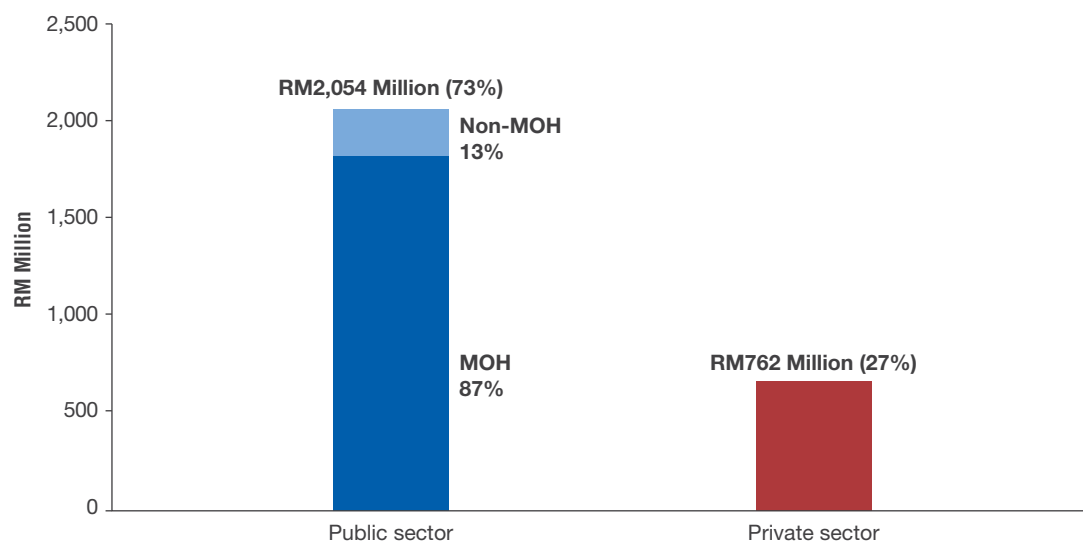
### 7.3 HEALTH EXPENDITURE BY FUNCTIONS OF HEALTH CARE - PUBLIC HEALTH SERVICES (INCLUDING HEALTH PROMOTION AND PREVENTION) BY SOURCES OF FINANCING

This section refers to expenditure for services designed to enhance the health status of the population, usually in the form of structured public health services including promotive and preventive programmes, and excludes the expenditure of similar services delivered on individual basis which is captured as part of services of curative care.

In 2016, a total of RM2,816 million or 5 per cent of Total Expenditure on Health is spent on public health programmes including health promotion and prevention services. From this, RM2,054 million or 73 per cent of expenditure is by the public sector sources of financing. MOH is the highest financier of public health services (including health promotion and prevention) that spent RM1,777 million or 63 per cent of the total expenditure on public health services. As percentage of the public sector, MOH contributed to 87% per cent of public sector expenditure on public health services (Figure 7.3 and Table 7.3a). The second highest financier for public health services (including health promotion and prevention) is all corporations (other than health insurance) that spent RM715 million or 25 per cent, while the third highest is other federal agencies (including statutory bodies) spending RM150 million or 5 per cent of the total expenditure on public health services.

The 1997 to 2016 time series data also shows MOH as the largest source of financing for this function of health care service with a 12-fold increase in absolute *Ringgit Malaysia* (RM) value over the time period. However, other state agencies (including statutory bodies) show an even higher increase in absolute RM value of 19-fold over the same time period (Table 7.3b and 7.3c).

**Figure 7.3: Health Expenditure for Public Health Services (Including Health Promotion and Prevention) by Sources of Financing, 2016**



**Table 7.3a: Health Expenditure for Public Health Services (Including Health Promotion and Prevention) by Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS1.1.1.1	Ministry of Health (MOH)	1,777	63.08
MS2.6	All corporations (other than health insurance)	715	25.39
MS1.1.1.9	Other federal agencies (including statutory bodies)	150	5.31
MS1.1.2.2	Other state agencies (including statutory bodies)	54	1.92
MS1.1.2.1	(General) State government	39	1.40
MS2.5	Non-profit institutions serving households (NGO)	29	1.03
MS1.1.3	Local authorities (LA)	23	0.83
MS2.4	Private household out-of-pocket expenditures (OOP)	18	0.63
MS1.2.2	Social Security Organization (SOCSCO)	11	0.40
MS9	Rest of the world (ROW)	-	0.00
<b>Total</b>		<b>2,816</b>	<b>100.00</b>



**Table 7.3b: Health Expenditure for Public Health Services (including Health Promotion and Prevention) by Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	146	139	166	167	197	201	307	341	364	496	495	603	628	673	752	898	1,634	1,541	1,653	1,777
MS1.1.1.9	Other federal agencies (including statutory bodies)	13	17	19	22	25	28	32	37	42	48	55	56	67	74	94	118	128	121	138	150
MS1.1.2.1	(General) State government	24	29	29	28	27	30	52	73	49	56	67	71	58	63	57	68	27	33	34	39
MS1.1.2.2	Other state agencies (including statutory bodies)	3	3	3	3	3	3	7	6	10	9	6	6	13	26	30	34	66	78	52	54
MS1.1.3	Local authorities (LA)	6	6	7	7	8	10	13	19	26	21	291	65	138	40	62	83	73	45	53	23
MS1.2.2	Social Security Organization (SOCOSO)	2	2	2	3	3	3	3	4	4	5	5	1	1	2	4	5	35	23	9	11
MS2.4	Private household out-of-pocket expenditures (OOP)	12	12	12	12	12	12	12	15	20	25	23	22	18	20	18	23	22	17	14	18
MS2.5	Non-profit institutions serving households (NGO)	5	6	5	5	6	6	6	6	9	7	11	16	6	7	10	16	1	1	21	29
MS2.6	All corporations (other than health insurance)	271	281	305	298	337	346	338	335	381	373	467	415	399	458	480	554	606	609	678	715
MS9	Rest of the world (ROW)	-	-	-	-	-	-	-	-	-	-	1	0	0	0	0	-	-	-	-	-
	<b>Total</b>	<b>483</b>	<b>496</b>	<b>548</b>	<b>546</b>	<b>618</b>	<b>640</b>	<b>771</b>	<b>836</b>	<b>905</b>	<b>1,040</b>	<b>1,420</b>	<b>1,256</b>	<b>1,328</b>	<b>1,362</b>	<b>1,508</b>	<b>1,798</b>	<b>2,593</b>	<b>2,468</b>	<b>2,653</b>	<b>2,816</b>

**Table 7.3c: Health Expenditure for Public Health Services (including Health Promotion and Prevention) by Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Ministry of Health (MOH)	30.26	28.11	30.29	30.64	31.91	31.45	39.86	40.81	40.27	47.73	34.83	48.01	47.26	49.42	49.90	49.95	63.02	62.42	62.33	63.08
MS1.1.1.9	Other federal agencies (including statutory bodies)	2.60	3.38	3.47	3.98	3.99	4.40	4.16	4.38	4.63	4.61	3.87	4.47	5.03	5.41	6.22	6.54	4.95	4.92	5.22	5.31
MS1.1.2.1	(General) State government	5.07	5.84	5.26	5.21	4.33	4.71	6.73	8.77	5.38	5.37	4.70	5.67	4.35	4.60	3.80	3.77	1.04	1.33	1.29	1.40
MS1.1.2.2	Other state agencies (including statutory bodies)	0.59	0.69	0.52	0.49	0.53	0.52	0.85	0.77	1.11	0.91	0.44	0.50	0.99	1.90	2.00	1.88	2.56	3.16	1.95	1.92
MS1.1.3	Local authorities (LA)	1.24	1.28	1.23	1.35	1.34	1.52	1.65	2.27	2.83	2.00	20.50	5.18	10.40	2.94	4.08	4.59	2.80	1.83	1.99	0.83
MS1.2.2	Social Security Organization (SOCOSO)	0.48	0.47	0.45	0.52	0.47	0.49	0.45	0.46	0.49	0.47	0.38	0.09	0.08	0.12	0.28	0.29	1.37	0.94	0.32	0.40
MS2.4	Private household out-of-pocket expenditures (OOP)	2.52	2.45	2.23	2.24	1.99	1.92	1.60	1.78	2.26	2.39	1.60	1.75	1.39	1.43	1.20	1.26	0.86	0.69	0.54	0.63
MS2.5	Non-profit institutions serving households (NGO)	1.13	1.12	0.97	1.00	0.93	0.91	0.82	0.69	0.96	0.88	0.80	1.30	0.46	0.55	0.68	0.87	0.05	0.05	0.81	1.03
MS2.6	All corporations (other than health insurance)	56.12	56.66	55.58	54.57	54.50	54.08	43.88	40.05	42.06	35.83	32.86	33.02	30.05	33.63	31.84	30.83	23.37	24.68	25.55	25.39
MS9	Rest of the world (ROW)	-	-	-	-	-	-	-	-	-	-	0.04	0.02	0.00	0.00	0.00	-	-	-	-	-
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

#### 7.4 HEALTH EXPENDITURE BY FUNCTIONS OF HEALTH CARE - HEALTH EDUCATION AND TRAINING BY SOURCES OF FINANCING

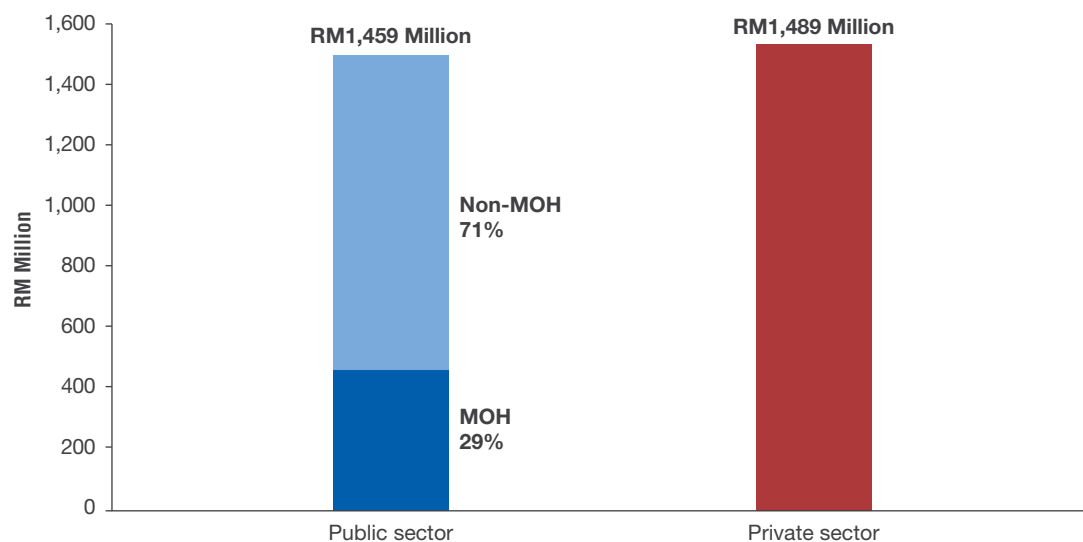
This includes expenditure for all health and health-related education and training of personnel. Although MNHA Framework includes this expenditure under the Total Expenditure on Health, the SHA 1.0 framework excludes this because of the shortfall in the assumptions and difficulties in the capture of this expenditure. Furthermore, personnel who undergo health and health-related education and training may not continue to provide services in the health sector.

The source of data for health expenditure in this chapter came from public and private universities and training institutions conducting training in the field of health at post-secondary and tertiary levels. Data on health personnel in-service training expenditure is currently not available, in part due to the resource intensiveness in the manner of capturing or extracting this type of expenditure which is embedded in other expenditures, such as expenditure for administration at each hospitals and health departments.

In 2016, a total of RM2,948 million or about 6 per cent of Total Expenditure on Health is spent on health education and training of health personnel. A total of RM1,459 million or 49 per cent of this amount is funded by public sector source of financing with MOH spending 29 per cent and non-MOH spending the balance (Figure 7.4 and table 7.4a).

The 1997 to 2016 time series data shows that although both the public sector and private sector sources of financing has an increasing trend in expenditure for this function of health care service, the public sector expenditure remains almost two times of private sector in absolute *Ringgit Malaysia* (RM) value between year 1997 and 2011. From year 2012 onwards, public sector sources showed slower increase compared to private sector sources. In years 2015-2016, private sector source of financing has overtaken public sector in this expenditure by 2 per cent difference (Table 7.4b and Table 7.4c). In the public sources of financing alone, the non-MOH spent about twice to triple of MOH expenditure for education and training throughout the years.

**Figure 7.4: Health Expenditure for Health Education and Training by Sources Financing, 2016**



**Table 7.4a: Health Expenditure for Health Education and Training by Sources of Financing, 2016**

MNHA Code	Sources of Financing	RM Million	Per cent
MS1.1.1.1	Public sector (MOH)	428	14.51
MS1 (others)	Public sector (Non-MOH)	1,031	34.98
MS2 + MS9	Private sector*	1,489	50.51
<b>Total</b>		<b>2,948</b>	<b>100.00</b>

Note: \*Data includes expenditure under 'Rest of the world'

**Table 7.4b: Health Expenditure for Health Education and Training by Sources of Financing, 1997-2016 (RM Million)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Public sector (MOH)	35	33	68	96	147	186	231	222	218	270	275	310	325	340	380	377	407	438	446	428
MS1 (others)	Public sector (Non-MOH)	92	116	128	142	170	188	243	297	337	386	496	688	939	985	1,198	1,033	883	993	985	1,031
MS2 + MS9	Private sector*	79	104	131	174	187	229	296	284	280	312	355	364	598	827	884	1,181	1,491	1,344	1,459	1,489
	<b>Total</b>	<b>206</b>	<b>253</b>	<b>326</b>	<b>412</b>	<b>504</b>	<b>604</b>	<b>770</b>	<b>803</b>	<b>835</b>	<b>969</b>	<b>1,126</b>	<b>1,362</b>	<b>1,862</b>	<b>2,153</b>	<b>2,462</b>	<b>2,592</b>	<b>2,781</b>	<b>2,776</b>	<b>2,891</b>	<b>2,948</b>

Note: \*Data includes expenditure under 'Rest of the world'

**Table 7.4c: Health Expenditure for Health Education and Training by Sources of Financing, 1997-2016 (Per cent, %)**

MNHA Code	Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MS1.1.1.1	Public Sector (MOH)	16.95	13.07	20.81	23.39	29.18	30.79	30.04	27.60	26.13	27.89	24.42	22.78	17.45	15.81	15.45	14.56	14.64	15.79	15.43	14.51
MS1 (others)	Public Sector (Non - MOH)	44.56	45.89	39.13	34.44	33.76	31.22	31.56	37.02	40.31	39.87	44.07	50.50	50.43	45.76	48.66	39.86	31.75	35.78	34.09	34.98
MS2 + MS9	Private sector*	38.49	41.04	40.06	42.16	37.06	37.99	38.40	35.38	33.56	32.24	31.51	26.72	32.12	38.43	35.89	45.58	53.61	48.43	50.48	50.51
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Note: \*Data includes expenditure under 'Rest of the world'

## CHAPTER 8

### MOH HEALTH EXPENDITURE

There has been much interest among policy makers to further explore Ministry of Health (MOH). There are differences in reporting MOH expenditures using MNHA Framework and government treasury accounting system used by MOH Accounts Division (AG database). This chapter aims to provide some information on MOH expenditure as share of total expenditure on health and national GDP, MOH actual expenditure in relation to budget allocations, as well as to enlighten the differences in expenditure reporting of MOH hospitals as provider of healthcare services and MOH source of financing at MOH hospitals using MNHA Framework.

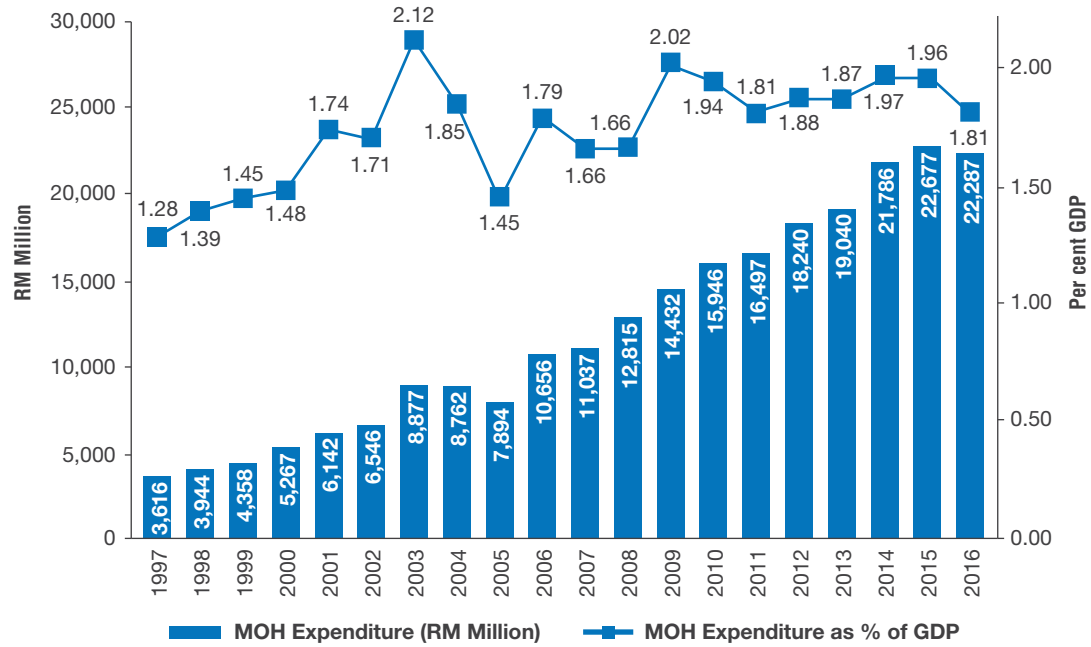
The first section in this chapter describes the proportion of MOH expenditure from Total Expenditure on Health, and MOH health expenditure as percentage of national GDP using MNHA Framework. The second section describes the amount of budget allocation received from the federal government and actual expenditure by MOH in RM million using government treasury accounting system. The third section aims to explain some differences in NHA reporting of expenditure at hospitals based on the two dimensions of MNHA Framework sources of financing and functions of health care.

#### 8.1 MOH HEALTH EXPENDITURE - MOH SHARE OF TOTAL EXPENDITURE ON HEALTH AND NATIONAL GDP

MOH health expenditure reported in this section describes what MOH as a 'source of financing' spends on health care. Expenditure of MOH as 'source of financing' differs from what is reported in the government treasury accounting system based on AG data as total MOH expenditure, which is inclusive of operating and development expenditures/ for a particular year. The NHA framework allows tracking of reimbursements by various agencies (e.g. EPF, SOCSO, private health insurance, state government (including statutory bodies), etc.) which are then deducted from total MOH expenditure to reflect the actual MOH expenditure at health care providers level, thus leaving MOH expenditure as 'source of financing' to be of slightly lower value under the MNHA Framework. (This is due to the effect of 'addressing double counting' as explained in Chapter 3, paragraph 3.4.1.2).

Using the MNHA Framework in 2016, a total amount of RM 22,287 million or 43 per cent of Total expenditure on health (TEH) has been spent by MOH. In relation to GDP, MOH health expenditure takes up 1.81 per cent of the national GDP in the same year. The 1997-2016 time-series MOH expenditure data in general shows an increasing pattern of expenditure except for 2016. MOH expenditure throughout the same period dominates the TEH, ranging between 42 and 51 percent of the TEH. In 1997, MOH spent RM3,616 million or 42 per cent of TEH while in year 2016, RM22,287 million or 43 per cent of TEH was spent by MOH. In relation to GDP, MOH expenditure in 1997 is equivalent to 1.28 per cent of national GDP while in 2016, MOH expenditure was 1.81 per cent of the national GDP (Figure 8.1 and Table 8.1).

**Figure 8.1: MOH Share of Total Expenditure on Health and Per cent GDP, 1997-2016**



<b>Year</b>	<b>MOH / Expenditure</b>	<b>TEH, Nominal (RM Million)</b>	<b>MOH Expenditure (RM Million)</b>	<b>MOH Expenditure as % TEH</b>	<b>TEH (Nominal) as % GDP</b>	<b>MOH Expenditure as % of GDP</b>
1997		8,604	3,616	42	3.05	1.28
1998		9,218	3,944	43	3.25	1.39
1999		10,021	4,358	43	3.33	1.45
2000		11,811	5,267	45	3.31	1.48
2001		12,768	6,142	48	3.62	1.74
2002		13,709	6,546	48	3.58	1.71
2003		17,268	8,877	51	4.12	2.12
2004		18,265	8,762	48	3.85	1.85
2005		18,294	7,894	43	3.37	1.45
2006		22,144	10,656	48	3.71	1.79
2007		24,480	11,037	45	3.68	1.66
2008		27,840	12,815	46	3.62	1.66
2009		29,452	14,432	49	4.13	2.02
2010		32,962	15,946	48	4.01	1.94
2011		35,965	16,497	46	3.94	1.81
2012		39,586	18,240	46	4.08	1.88
2013		41,671	19,040	46	4.09	1.87
2014		46,756	21,786	47	4.23	1.97
2015		49,838	22,677	46	4.30	1.96
2016		51,742	22,287	43	4.21	1.81

## 8.2 MOH HEALTH EXPENDITURE - MOH TOTAL ALLOCATION AND EXPENDITURE

This section describes total MOH expenditure as reported in the Accountant General's Department of Malaysia (AG database) using government treasury accounting system and its relationship with total MOH budget allocation based on the operating and development expenditure statement (*Penyata Perbelanjaan Mengurus dan Pembangunan*) as reported in the federal government's financial statement (*Penyata Kewangan Persekutuan*) as of 31st December of the years 2015 and 2016.

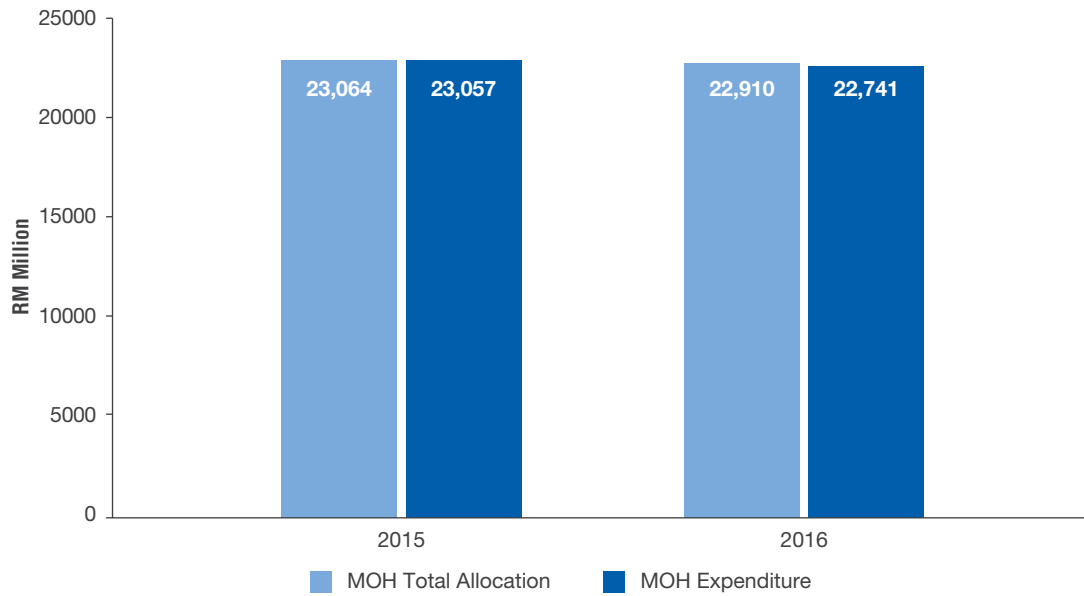
Of note, all MOH budget comes from federal government consolidated funds. The federal government budget allocation comprise of Operating Budget (code B42) and Development Budget (code P42). This allocation is used for various health and health-related services provided by MOH hospitals, clinics, public health laboratories, research, training and others. The allocation is also used for purchasing outsource or support services such as hospital IT systems maintenance, facility management and even consultancy expenditures for health and policy planning.

The total allocation to MOH over the two-year period were RM23,064 million in 2015 and RM22,910 million in 2016. Using government treasury accounting system, MOH expenditure in 2015 was RM23,057 while in 2016 MOH spent RM22,741 million (Figure 8.2 and Table 8.2). MOH expenditure for year 2017 is expected to be higher.

Section 8.1 and this section show the differences in MOH expenditure reporting under MNHA Framework and using government treasury accounting system. This difference have to be considered whenever stakeholders wish to use MOH expenditure data.



**Figure 8.2: MOH Total Allocation vs. Expenditure, 2015-2016 (RM Million)**



**Table 8.2: MOH Total Allocation vs. Expenditure, 2015-2016**

Year	RM Million	
	MOH Total Allocation*	MOH Expenditure**
2015	23,064	23,057
2016	22,910	22,741

Note: \*Finance Division, MOH as of June 2018 - for MOH total allocation data

\*\*Accountant General's Department of Malaysia - for MOH expenditure data, including both operating and development expenditures

### 8.3 MOH HEALTH EXPENDITURE - MOH HOSPITAL

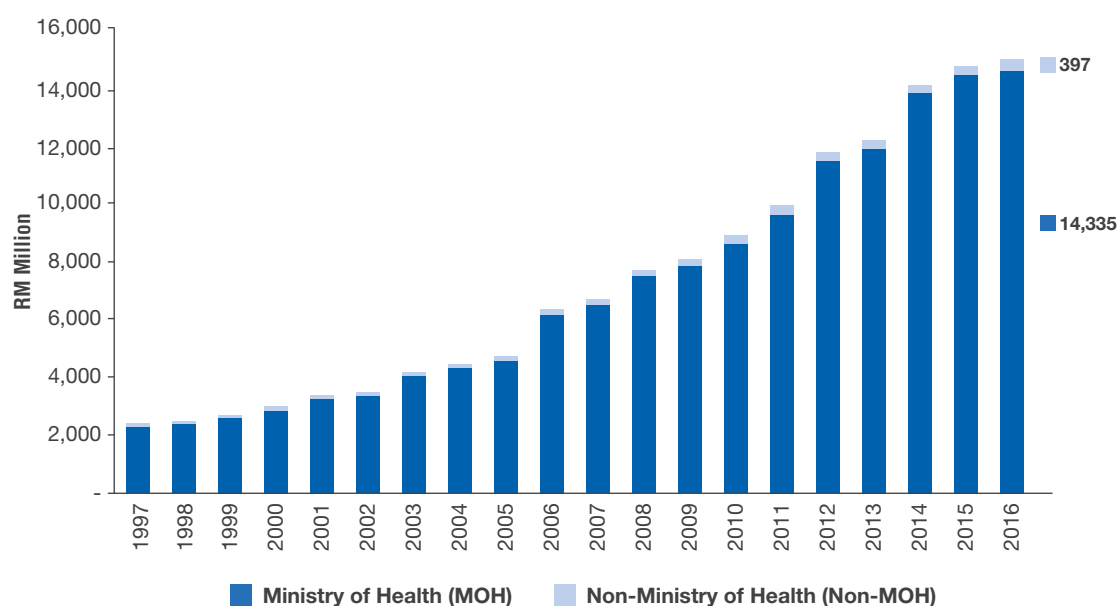
All programs, projects and services under the purview of MOH inclusive of health care services provided at all MOH hospitals comes from federal government consolidated funds. MOH hospitals as provider of health care services takes up the largest percentage of the total MOH allocated funds. All development budget spent at MOH hospital is assigned as non-curative care expenditure mainly for hospital facility development and renovation. Using MNHA Framework, the operating budget spent at MOH hospitals is assigned as curative care expenditure for patient care services disaggregated based on functional classification and categorized as in-patient, out-patient and day care and this is described under paragraph 3.4.1.1 of this report.

#### 8.3.1 MOH Health Expenditure - MOH Hospital, Sources of Financing

In 2016, a total of RM14,732 million was spent by public sector and private sector sources of financing at MOH hospitals. Various financiers were tracked through MOH hospitals accounting systems and sources of financing codes were assigned for payments made through private household out-of-pocket, private health insurance and other types of sources of financing. As a result, of the RM14,732 million spent at MOH hospitals, only RM14,335 million or 97.31 per cent is assigned as MOH source of financing. A small amount of RM397 million or 2.69 per cent were accounted by other financiers such as private household OOP (RM303 million), private insurance enterprises (other than social insurance) (RM48 million), Social Security Organization or SOCSO (RM23 million) and the remaining non-MOH expenditure at RM23 million (Table 8.3.1a).

The 1997 to 2016 time-series expenditure on sources of financing show similar trend with MOH as the highest financier followed by non-MOH (Figure 8.3.1 and Table 8.3.1b). The time-series data on MOH as source of financing shows that the expenditure has increased by 7-fold in absolute *Ringgit Malaysia* (RM) value. The same time-series indicate an average of 97 per cent is channelled through MOH budget allocation to all MOH hospitals (Table 8.3.1c).

**Figure 8.3.1: Health Expenditure at MOH Hospitals by Sources of Financing, 1997-2016 (RM Million)**



**Table 8.3.1a: Health Expenditure at MOH Hospitals by Sources of Financing, 2016\***

	MNHA Code	Sources of Financing	RM Million	Per cent
<b>Ministry of Health (MOH)</b>	<b>MS1.1.1.1</b>	<b>Ministry of Health (MOH)</b>	<b>14,335</b>	<b>97.31</b>
<b>Non-Ministry of Health (Non-MOH)</b>	MS2.4	Private household out-of-pocket expenditures (OOP)	303	76.42
	MS2.2	Private insurance enterprises (other than social insurance)	48	12.00
	MS1.2.2	Social Security Organization (SOCSO)	23	5.88
	MS1.1.1.9	Other federal agencies (including statutory bodies)	11	2.71
	MS1.1.2.2	Other state agencies (including statutory bodies)	5	1.19
	MS2.6	All corporations (other than health insurance)	4	1.09
	MS2.5	Non-profit institutions serving households (NGO)	1	0.30
	MS1.2.1	Employees Provident Fund (EPF)	1	0.22
	MS1.1.2.1	(General) State government	1	0.16
	MS1.1.3	Local authorities (LA)	0	0.02
		<b>Non-MOH Sub-total</b>	<b>397</b>	<b>2.69</b>
<b>Total</b>			<b>14,732</b>	<b>100.00</b>

Note: \*MOH Hospital Provider codes include MP1.1a, MP1.2a and MP1.3a

Table 8.3.1b: Health Expenditure at MOH Hospitals by Sources of Financing, 1997-2016 (RM Million)

Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ministry of Health (MOH)	2,167	2,282	2,470	2,741	3,121	3,214	3,876	4,174	4,402	6,029	6,359	7,345	7,666	8,442	9,437	11,282	11,670	13,595	14,190	14,335
Non-Ministry of Health (Non-MOH)	81	79	81	88	95	108	117	132	140	155	174	186	237	273	302	284	286	250	329	397
<b>Total</b>	<b>2,248</b>	<b>2,361</b>	<b>2,552</b>	<b>2,829</b>	<b>3,216</b>	<b>3,323</b>	<b>3,993</b>	<b>4,306</b>	<b>4,542</b>	<b>6,184</b>	<b>6,532</b>	<b>7,531</b>	<b>7,903</b>	<b>8,715</b>	<b>9,739</b>	<b>11,567</b>	<b>11,956</b>	<b>13,845</b>	<b>14,519</b>	<b>14,732</b>

Table 8.3.1c: Health Expenditure at MOH Hospitals by Sources of Financing, 1997-2016 (Per cent, %)

Sources of Financing	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ministry of Health (MOH)	96.39	96.67	96.81	96.88	97.03	96.74	97.07	96.93	96.91	97.50	97.34	97.53	97.00	96.87	96.90	97.54	97.61	98.20	97.73	97.31
Non-Ministry of Health (Non-MOH)	3.61	3.33	3.19	3.12	2.97	3.26	2.93	3.07	3.09	2.50	2.66	2.47	3.00	3.13	3.10	2.46	2.39	1.80	2.27	2.69
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

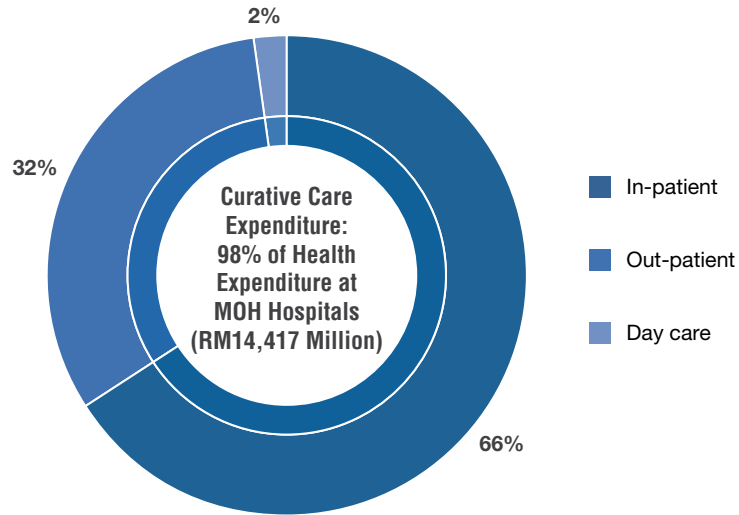
### 8.3.2 MOH Health Expenditure - MOH Hospital, Function of Curative Care

This section provides further information on patient care services at MOH hospitals. Function of curative care services provided in MOH hospital is further categorised as in-patient curative care, out-patient curative care and day cases of curative care. Under the MNHA Framework, these types of services would be inclusive of allopathic as well as some traditional and complementary health care services.

In 2016, RM14,732 million is spent at MOH hospitals. From this amount, RM14,417 million or 98 per cent is for curative care services (Table 8.3.2a). In the same year, the expenditure for curative care services at MOH hospitals showed that RM9,574 million or 66 per cent was spent for in-patient curative care services. This is followed by RM4,567 million or 32 per cent for out-patient curative care services and RM276 million or 2 per cent for day cases of curative care services (Figure 8.3.2).

The 1997 to 2016 time-series data shows that in absolute *Ringgit Malaysia* (RM) value the curative care services expenditure has increased by 7-fold (Table 8.3.2b). The curative care services expenditure in time-series shows an average of 97 per cent spending at the MOH hospitals (Table 8.3.2c).

**Figure 8.3.2: Health Expenditure at MOH Hospitals by Curative Care Function of Health Care, 2016**



**Table 8.3.2a: Health Expenditure at MOH Hospitals by Functions of Health Care, 2016\*\***

	MNHA Code	Functions of Health Care	RM Million	Per cent
<b>Curative Care</b>	MF1.1	In-patient curative care	9,574	64.99
	MF1.3*	Out-patient curative care	4,567	31.00
	MF1.2	Day cases of curative care	276	1.87
<b>Non-Curative Care</b>	<b>Sub-total (curative care)</b>		<b>14,417</b>	<b>97.86</b>
	MR1	Capital formation of health care provider institutions	315	2.14
<b>Total</b>			<b>14,732</b>	<b>100.00</b>

Note: \*Data includes home care

\*\* Excludes MOH development expenditure to hospitals

**TABLE 8.3.2b: Health Expenditure at MOH Hospitals by Functions of Health Care, 1997-2016\*\* (RM Million)**

Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Curative Care*	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	8,097	9,643	11,302	11,590	13,576	14,228	14,417
Non-Curative Care	32	53	78	63	130	68	121	155	247	176	214	103	122	618	96	265	366	269	291	315
<b>Total</b>	<b>2,248</b>	<b>2,361</b>	<b>2,552</b>	<b>2,829</b>	<b>3,216</b>	<b>3,323</b>	<b>3,993</b>	<b>4,306</b>	<b>4,542</b>	<b>6,184</b>	<b>6,532</b>	<b>7,531</b>	<b>7,903</b>	<b>8,715</b>	<b>9,739</b>	<b>11,567</b>	<b>11,956</b>	<b>13,845</b>	<b>14,519</b>	<b>14,732</b>

Note: \*Data includes home care

\*\* Excludes MOH development expenditure to hospitals

**Table 8.3.2c: Health Expenditure at MOH Hospitals by Functions of Health Care, 1997-2016\*\* (Per cent, %)**

Functions of Health Care	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Curative Care*	98.57	97.74	96.94	97.77	95.95	97.96	96.97	96.40	94.56	97.15	96.73	98.63	98.45	92.91	99.02	97.71	96.94	98.06	97.99	97.86
Non-Curative Care	1.43	2.26	3.06	2.23	4.05	2.04	3.03	3.60	5.44	2.85	3.27	1.37	1.55	7.09	0.98	2.29	3.06	1.94	2.01	2.14
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Note: \*Data includes home care

\*\* Excludes MOH development expenditure to hospitals

## CHAPTER 9

### OUT-OF-POCKET HEALTH EXPENDITURE

Most often, many countries attain household out-of-pocket (OOP) health expenditures through community surveys. However, the best approach for this health expenditure estimation as used in this report, is through a complex method called the integrative method whereby the gross level of direct health spending from consumption, provision and financing perspectives are collated followed by a deduction of third party financial reimbursements by various agencies to avoid double counting.

The data shown in this chapter includes OOP spending for Traditional and Complementary Medicine (TCM) as well as OOP spending for health-related education and training. OOP health expenditure estimation through integrative method is explained in Chapter 3 - Section 3.4.2. In brief, OOP health expenditure estimation uses the formula as follows:

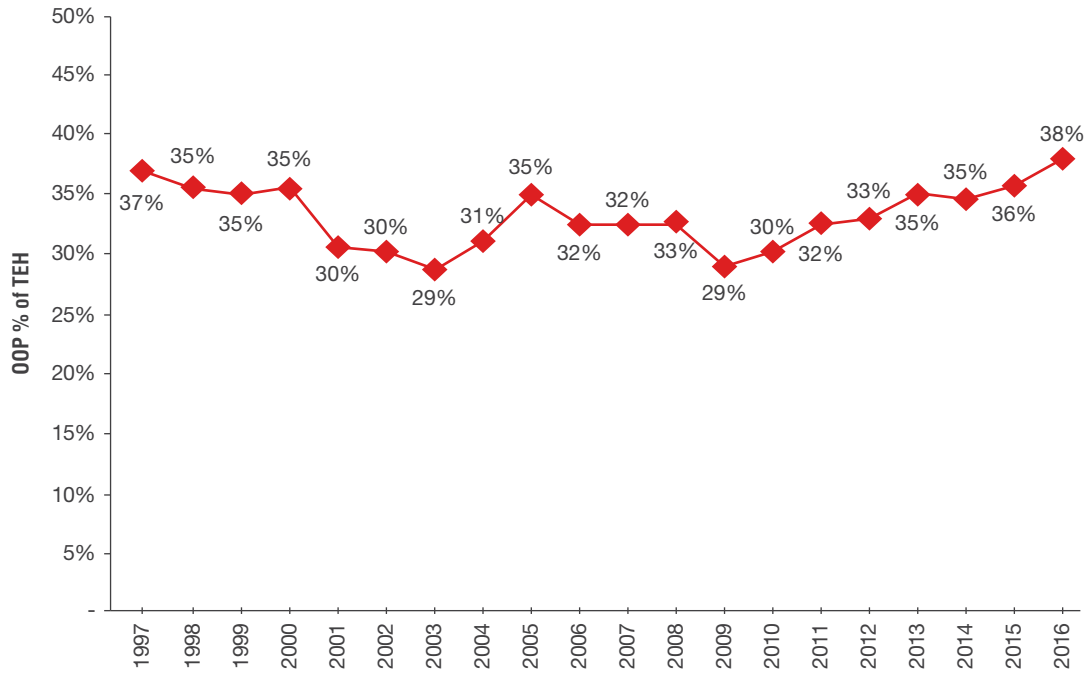
$$\text{OOP Health Expenditure} = (\text{Gross OOP Health Expenditure} - \text{Third Party Payer Reimbursement}) + \text{OOP Expenditure for Health Education \& Training}$$

#### 9.1 OUT-OF-POCKET HEALTH EXPENDITURE – OOP SHARE OF TOTAL EXPENDITURE ON HEALTH AND NATIONAL GDP

In 2016, the OOP health expenditure amounts to RM19,570 million, which is equivalent to 38% of the Total Expenditure on Health and 78% share of the private sector health expenditure. The 1997-2016 time series data shows that the household OOP health expenditure is between 29 per cent and 38 per cent of Total Expenditure on Health. Throughout the years, it remains the largest single source of financing in the private sector amounting to an average of 75 per cent of this sector spending (Figure 9.1a, Figure 9.1b). The OOP health expenditure from 1997 to 2016 has increased from RM3,166 million to RM19,570 million which is an increase from 1.12 per cent GDP to 1.59 per cent GDP (Figure 9.1c).



**Figure 9.1a: OOP Share of Total Expenditure on Health, 1997-2016 (Per cent, %)**



**Figure 9.1b: OOP Share of Private Sector Health Expenditure, 1997-2016 (Per cent, %)**

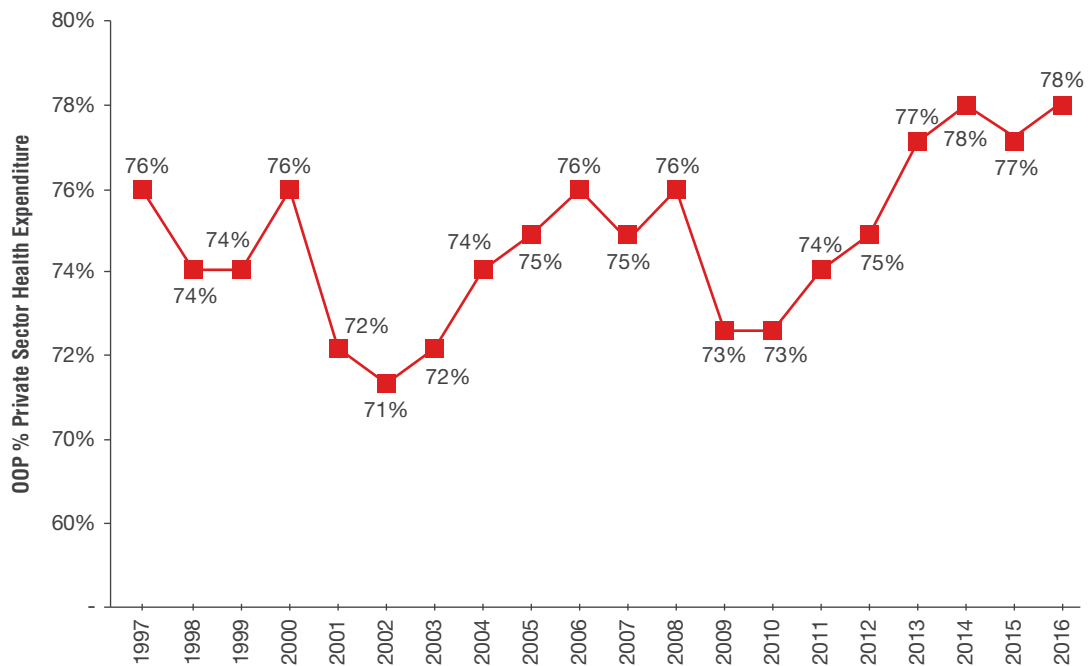
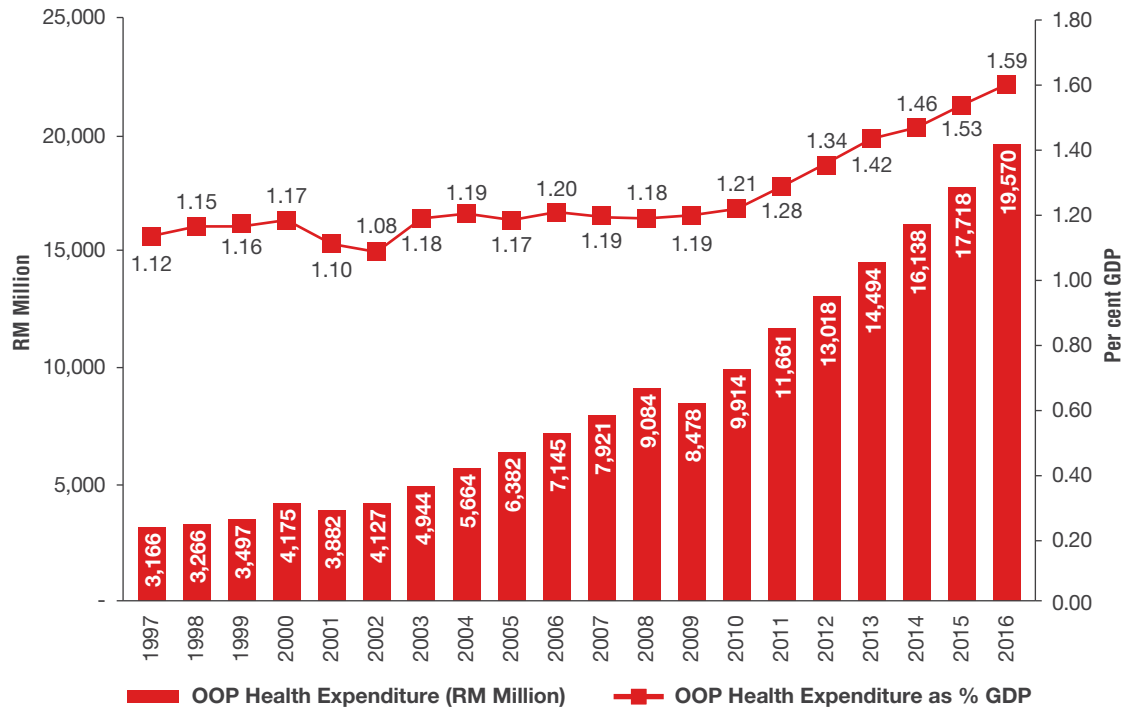


Figure 9.1c: OOP Health Expenditure and Per cent GDP, 1997-2016 (RM Million, Per cent, %)



## 9.2 OUT-OF-POCKET HEALTH EXPENDITURE TO PROVIDERS

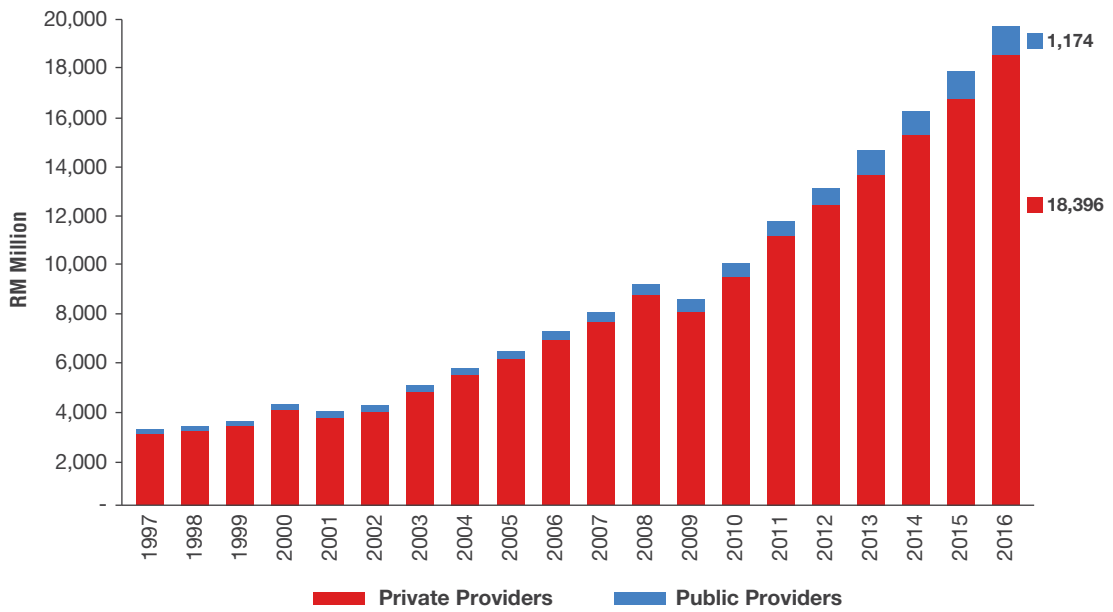
This section cross tabulates OOP health expenditure with providers of health care. Health providers are defined as entities that produce and provide health care goods and services, which benefit individuals or population groups. These providers could be either public or private providers of health care. The bulk of public sector health care services for patients in this country have always been heavily subsidized by the government, even if the government outsources any of the services to private providers of health care. However, under the provision of public sector services there are some components of healthcare services and several products like most prosthesis, which are purchased by patients from private providers of health care. When patients seek private sector services they are often at liberty to purchase these services or products separately or as part of the services. The private providers of health care include several categories of standalone private facilities such as private hospitals, private medical clinics, providers of medical appliances, Traditional and Complementary Medicine (TCM) providers, private dental clinic, private pharmacies and private laboratories. OOP is the mode of payment for services either in public sector or private sector. Furthermore, the final amount reported under OOP health expenditure includes expenditure reported by this mode for health education and training.

Throughout the 1997-2016 time series, OOP health expenditure generally shows an increasing pattern, with a slight reduction in year 2009, followed by a progressive increase from then onwards (Figure 9.2a).

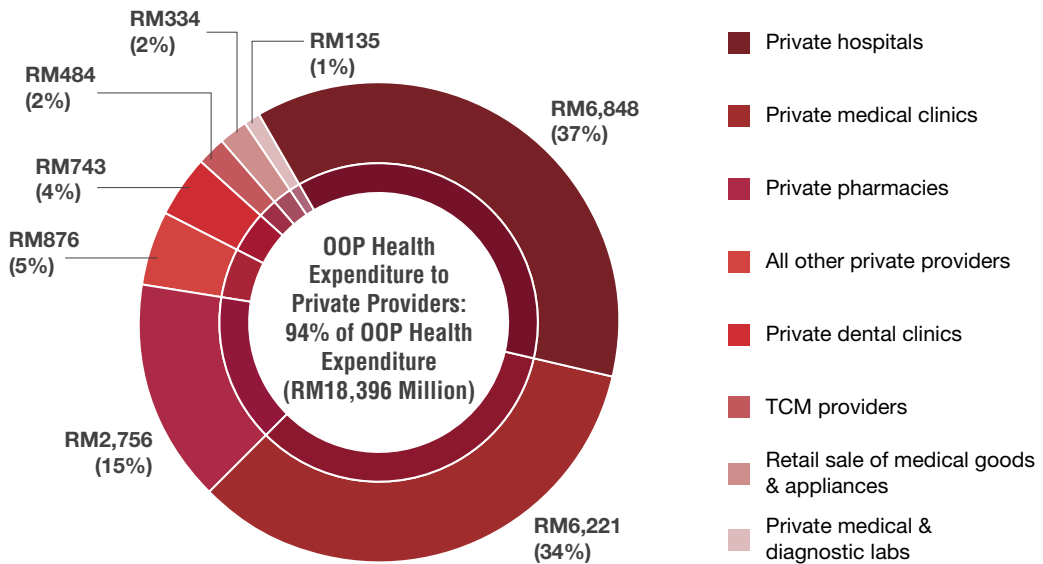
In 2016, of the total RM18,396 million of OOP health expenditure to private providers of health care, private hospitals consumed the largest share at RM6,848 million (37 per cent) followed by private medical clinics at RM6,221 million (34 per cent), private pharmacies at RM2,756 million (15 per cent), private dental clinics at RM743 million (4 per cent), TCM providers at RM484 million (3 per cent), retail sale and other suppliers of medical goods and appliances at RM334 million (2 per cent), private medical and diagnostic laboratories at RM135 (1 per cent) and the balance, RM876 million (5 per cent) comprise of other private providers of health care (Figure 9.2b).

The 1997 to 2016 time series data shows an average of 94 per cent OOP health expenditure occurred at private providers of health care, with increasing expenditure pattern at all the various private providers. The highest increase in absolute amount is seen at private hospitals from RM1,159 million in 1997 to RM6,848 million in 2016, a difference of RM5,689 million. However, there is 8-fold increase in spending at private pharmacies from RM325 million in 1997 to RM2,756 million in 2016. The OOP health expenditure at private medical clinics show a steady increase from RM815 million in 1997 to RM2,315 million in 2007 but declined from 2008 to 2010 and increasing back from 2011 onwards to RM 6,221 in 2016. The time series data also shows an increasing pattern of OOP health expenditure at public providers with an average of 6 per cent throughout the years (Table 9.2a and Table 9.2b).

**Figure 9.2a: OOP Health Expenditure to Public and Private Providers of Health Care, 1997-2016**



**Figure 9.2b: OOP Health Expenditure to Private Providers of Health Care, 2016 (RM Million, Per cent %)**



**Table 9.2a: OOP Health Expenditure to Providers of Health Care, 1997-2016 (\$M Million)**

Provider Name	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private hospitals	1,159	1,166	1,257	1,573	1,467	1,592	2,109	2,360	2,664	2,972	3,292	4,323	4,238	4,817	5,404	5,693	5,858	6,213	6,465	6,848
Private medical clinics	815	816	863	1,065	951	1,013	1,149	1,481	1,810	2,096	2,315	2,152	1,374	1,724	2,420	2,912	3,457	4,344	5,119	6,221
Private pharmacies	325	363	408	464	448	479	572	718	712	755	871	943	1,074	1,144	1,406	1,580	1,843	2,362	2,628	2,756
Private dental clinics	135	140	152	183	182	200	227	249	277	288	296	371	364	451	513	562	595	651	691	743
Traditional and Complementary Medicine (TCM) providers	294	292	277	289	247	227	202	176	210	240	277	333	319	361	384	412	424	452	464	484
Retail sale and other suppliers of medical goods & appliances	150	161	158	173	156	154	151	151	181	208	239	287	275	303	321	326	326	335	331	334
Private medical and diagnostic laboratories	25	26	25	25	21	18	14	9	11	12	14	18	17	29	43	59	77	102	117	135
All other private sector providers of health care	96	107	144	179	162	180	239	192	191	217	232	209	260	498	527	772	887	691	789	876
<b>Sub-Total (Private Providers)</b>	<b>2,988</b>	<b>3,071</b>	<b>3,283</b>	<b>3,952</b>	<b>3,635</b>	<b>3,862</b>	<b>4,662</b>	<b>5,336</b>	<b>6,055</b>	<b>6,787</b>	<b>7,535</b>	<b>8,635</b>	<b>7,921</b>	<b>9,327</b>	<b>11,029</b>	<b>12,315</b>	<b>13,467</b>	<b>15,150</b>	<b>16,605</b>	<b>18,396</b>
Public hospitals	136	143	158	158	167	174	180	205	202	223	230	255	242	266	286	305	351	305	390	465
Public medical clinics	10	10	11	11	13	16	19	23	25	27	32	35	26	31	22	10	42	44	54	57
Public institutions providing health-related services	22	42	46	54	66	75	84	100	101	108	124	159	288	291	324	388	634	638	669	652
<b>Sub-Total (Public Providers)</b>	<b>167</b>	<b>195</b>	<b>215</b>	<b>223</b>	<b>247</b>	<b>265</b>	<b>283</b>	<b>328</b>	<b>328</b>	<b>358</b>	<b>386</b>	<b>450</b>	<b>556</b>	<b>587</b>	<b>692</b>	<b>703</b>	<b>1,028</b>	<b>988</b>	<b>1,113</b>	<b>1,174</b>
<b>Total</b>	<b>3,166</b>	<b>3,266</b>	<b>3,497</b>	<b>4,175</b>	<b>3,882</b>	<b>4,127</b>	<b>4,944</b>	<b>5,664</b>	<b>6,382</b>	<b>7,145</b>	<b>7,921</b>	<b>9,084</b>	<b>8,478</b>	<b>9,914</b>	<b>11,661</b>	<b>13,018</b>	<b>14,494</b>	<b>16,138</b>	<b>17,718</b>	<b>19,570</b>

**Table 9.2b: OOP Health Expenditure to Providers of Health Care, 1997-2016 (Per cent, %)**

Provider Name	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private hospitals	36.60	35.72	35.94	37.69	37.80	38.57	42.65	41.67	41.73	41.59	41.56	47.59	49.99	48.59	46.34	43.73	40.41	38.50	36.49	34.99
Private medical clinics	25.74	24.98	24.67	25.50	24.50	24.54	23.23	26.14	28.36	29.33	29.22	23.69	16.21	17.39	20.75	22.37	23.85	26.92	28.89	31.79
Private pharmacies	10.26	11.11	11.65	11.11	11.54	11.60	11.56	12.67	11.15	10.57	10.99	10.38	12.67	11.53	12.06	12.13	12.72	14.63	14.83	14.08
Private dental clinics	4.26	4.29	4.34	4.38	4.68	4.85	4.58	4.40	4.33	4.03	3.73	4.08	4.30	4.55	4.40	4.32	4.11	4.04	3.90	3.80
Traditional and Complementary Medicine (TCM) providers	9.28	8.95	7.93	6.93	6.37	5.49	4.08	3.11	3.29	3.35	3.50	3.66	3.76	3.64	3.38	3.16	2.92	2.80	2.62	2.47
Retail sale and other suppliers of medical goods & appliances	4.73	4.92	4.52	4.15	4.02	3.73	3.06	2.67	2.84	2.91	3.02	3.16	3.24	3.06	2.75	2.50	2.25	2.07	1.87	1.71
Private medical and diagnostic laboratories	0.79	0.79	0.70	0.61	0.55	0.44	0.29	0.16	0.17	0.17	0.18	0.19	0.20	0.29	0.37	0.45	0.53	0.63	0.66	0.69
All other private sector providers of health care	3.04	3.27	4.11	4.29	4.18	4.35	4.83	3.38	2.99	3.04	2.92	2.30	3.06	5.02	4.52	5.93	6.12	4.28	4.45	4.48
<b>Sub-Total (Private Providers)</b>	<b>94.71</b>	<b>94.03</b>	<b>93.86</b>	<b>94.65</b>	<b>93.65</b>	<b>93.58</b>	<b>94.29</b>	<b>94.21</b>	<b>94.87</b>	<b>94.99</b>	<b>95.13</b>	<b>95.05</b>	<b>93.44</b>	<b>94.08</b>	<b>94.58</b>	<b>94.60</b>	<b>92.91</b>	<b>93.88</b>	<b>93.72</b>	<b>94.00</b>
Public hospitals	4.30	4.39	4.51	3.77	4.31	4.22	3.63	3.62	3.16	3.12	2.90	2.81	2.86	2.68	2.45	2.34	2.42	1.89	2.20	2.38
Public medical clinics	0.30	0.31	0.30	0.27	0.33	0.38	0.39	0.40	0.38	0.38	0.40	0.39	0.30	0.31	0.19	0.07	0.29	0.27	0.31	0.29
Public institutions providing health-related services	0.69	1.27	1.32	1.30	1.71	1.82	1.69	1.77	1.59	1.51	1.57	1.75	3.40	2.94	2.78	2.98	4.38	3.95	3.77	3.33
<b>Sub-Total (Public Providers)</b>	<b>5.29</b>	<b>5.97</b>	<b>6.14</b>	<b>5.35</b>	<b>6.35</b>	<b>6.42</b>	<b>5.71</b>	<b>5.79</b>	<b>5.13</b>	<b>5.01</b>	<b>4.87</b>	<b>4.95</b>	<b>6.56</b>	<b>5.92</b>	<b>5.42</b>	<b>5.40</b>	<b>7.09</b>	<b>6.12</b>	<b>6.28</b>	<b>6.00</b>
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

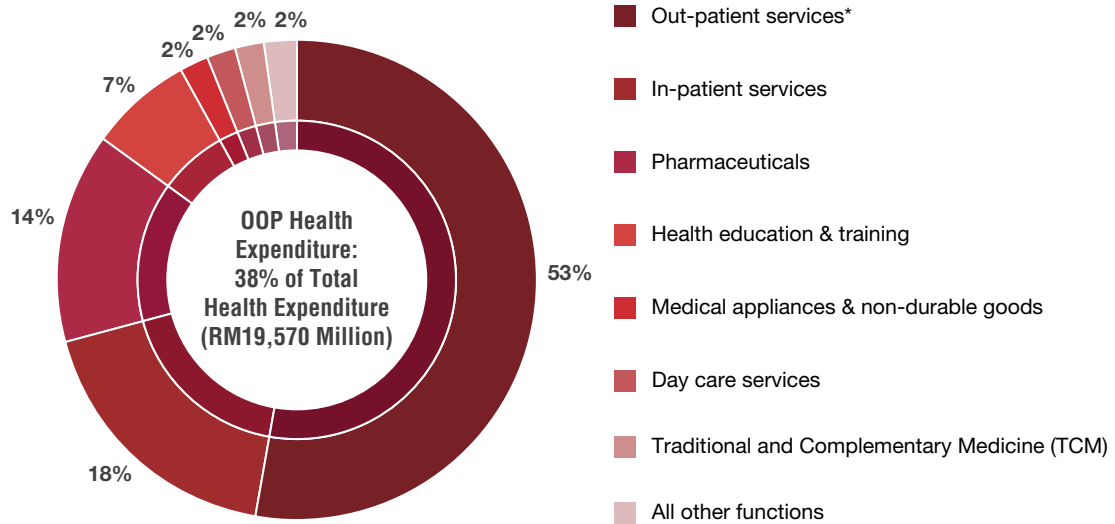
### 9.3 OUT-OF-POCKET HEALTH EXPENDITURE BY FUNCTIONS

The data under this section responds to the question on the type of health care services and products that are purchased with the OOP spending. This includes expenditures for core functions of health care such as for services of curative care, ancillary services, medical goods & appliances and others, as well as health-related functions such as capital asset purchases, education & training, research & development and others.

In 2016 the largest proportion of OOP health expenditure is RM10,330 million or 53 per cent for out-patient care services (Figure 9.3a). This would include out-patient care services provided both in standalone medical clinics as well as in hospital facilities. In the same year in-patient care services is RM3,478 million or 18 per cent of OOP health spending. This would include spending at both public and private hospitals with greater proportion at private hospitals. The OOP health spending for pharmaceuticals including over-the-counter and prescription drugs is RM2,756 million or 14 per cent, health education and training is RM1,437 million or 7 per cent, medical appliances and non-durable goods is RM424 million or 2 per cent, day care services at RM398 million or 2 per cent, Traditional and Complementary Medicine (TCM) is RM353 million or 2 per cent and the remaining RM394 million or 2 per cent is for other functions.

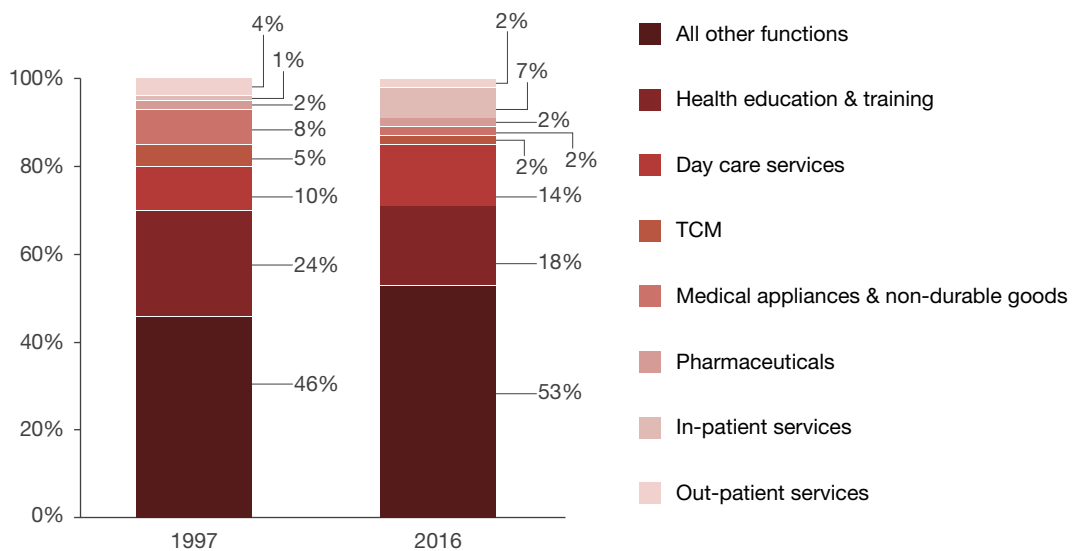
The 1997 to 2016 time series data although shows general increase in the level of OOP health spending for various functions, the proportions show some variations. Over this 20-year time period, the OOP health spending for out-patient services has increased from RM1,441 million in 1997 to RM10,330 million in 2016, the proportion of out-patient services has actually increased from 46 per cent to 53 per cent over this time (Figure 9.3b). This time period has also seen a rise in in-patient services from RM747 million in 1997 to RM3,478 million in 2016 with the proportion of this function remains around 18-25 per cent over this time. There is nearly 52-fold increase in OOP health spending for health education and training from RM28 million in 1997 to RM1,437 million in 2016 and 8-fold increase in OOP health expenditure for pharmaceuticals from RM325 million in 1997 to RM2,756 million in 2016 (Table 9.3a and Table 9.3b).

**Figure 9.3a: OOP Health Expenditure by Functions of Health Care, 2016 (Per cent %)**



Note: \*Data includes home care

**Figure 9.3b: OOP Health Expenditure by Functional Proportion, 1997 & 2016 (Per cent %)**



**Table 9.3a: OOP Health Expenditure by Functions of Health Care, 1997-2016 (RM Million)**

Function Name	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Out-patient services*	1,441	1,493	1,606	1,970	1,846	2,005	2,392	2,866	3,336	3,816	4,236	4,588	3,812	4,471	5,433	6,136	6,860	8,018	8,967	10,330
In-patient services	747	716	759	929	843	886	1,171	1,312	1,477	1,608	1,732	2,243	2,156	2,510	2,859	2,979	2,954	3,035	3,218	3,478
Pharmaceuticals	325	363	408	464	448	479	572	718	712	755	871	943	1,074	1,144	1,406	1,580	1,843	2,362	2,628	2,756
Health education & training	28	49	100	146	158	197	277	262	257	286	312	321	513	744	794	1,094	1,454	1,259	1,383	1,437
Medical appliances & non-durable goods	168	180	179	197	180	181	180	183	220	244	273	334	322	360	384	394	398	414	415	424
Day care services	77	78	84	102	101	112	128	145	165	189	217	323	285	325	387	394	364	381	409	398
Traditional and Complementary Medicine (TCM)	264	263	247	253	212	188	160	130	156	180	209	253	244	275	298	310	317	335	341	353
All other functions	116	125	115	114	93	80	64	49	59	68	71	79	72	86	99	132	305	334	357	394
<b>Total</b>	<b>3,166</b>	<b>3,266</b>	<b>3,497</b>	<b>4,175</b>	<b>3,882</b>	<b>4,127</b>	<b>4,944</b>	<b>5,664</b>	<b>6,382</b>	<b>7,145</b>	<b>7,921</b>	<b>9,084</b>	<b>8,478</b>	<b>9,914</b>	<b>11,661</b>	<b>13,018</b>	<b>14,494</b>	<b>16,138</b>	<b>17,718</b>	<b>19,570</b>

*Note: \*Data includes home care*

**Table 9.3b: OOP Health Expenditure by Functions of Health Care, 1997-2016 (Per cent, %)**

Function Name	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Out-patient services*	45.53	45.72	45.93	47.19	47.55	48.59	48.39	50.60	52.27	53.40	53.48	50.50	44.97	45.09	46.59	47.13	47.33	49.69	50.61	52.78
In-patient services	23.59	21.91	21.70	22.25	21.72	21.46	23.68	23.16	23.14	22.51	21.86	24.69	25.44	25.32	24.52	22.88	20.38	18.80	18.16	17.77
Pharmaceuticals	10.26	11.11	11.65	11.11	11.54	11.60	11.56	12.67	11.15	10.57	10.99	10.38	12.67	11.53	12.06	12.13	12.72	14.63	14.83	14.08
Health education & training	0.87	1.49	2.87	3.49	4.08	4.76	5.60	4.62	4.03	4.00	3.94	3.54	6.05	7.50	6.81	8.40	10.03	7.80	7.80	7.35
Medical appliances & non-durable goods	5.31	5.50	5.11	4.73	4.65	4.38	3.63	3.24	3.44	3.42	3.45	3.68	3.79	3.63	3.30	3.03	2.75	2.57	2.34	2.17
Day care services	2.43	2.38	2.40	2.44	2.60	2.70	2.60	2.56	2.59	2.65	2.74	3.56	3.36	3.28	3.32	3.02	2.51	2.36	2.31	2.03
Traditional and Complementary Medicine (TCM)	8.35	8.06	7.05	6.07	5.46	4.57	3.24	2.29	2.44	2.51	2.64	2.79	2.88	2.77	2.55	2.38	2.18	2.08	1.93	1.80
All other functions	3.66	3.83	3.29	2.73	2.41	1.93	1.29	0.86	0.93	0.95	0.89	0.87	0.85	0.86	0.85	1.02	2.10	2.07	2.01	2.01
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

*Note: \*Data includes home care*



## CHAPTER 10

### INTERNATIONAL NHA DATA

Global Health Expenditure Database (GHED) is the main data source for international level data on national health expenditure for more than 190 World Health Organization (WHO) member states. This is freely accessible via the related website. On an annual basis every member country is obliged to submit their national health expenditure data according to WHO request formats. However WHO carries out their own country level analysis based on System of Health Accounts (SHA) framework for several reasons. It could be that data submitted by various countries could either be estimated in SHA framework or a different framework. Furthermore some countries are unable to produce timely annual NHA data. However available country specific data form the basis of WHO analysis. In addition to the submitted country specific NHA data, WHO also uses country specific macro level data from various sources such as United Nations (UN), World Bank (WB), International Monetary Fund (IMF) and other sources for their NHA analysis.

The outputs of WHO analysis are then uploaded onto GHED database as the international health expenditure data for member countries. These WHO estimations for member countries allow standardization in NHA reporting and ensure better cross country comparability. However it is important to recognize that every member country, like Malaysia, may produce their own NHA reporting based on local needs. As such MNHA Framework with slightly different boundaries of definitions is more important in the Malaysian context especially for policy makers, health planners, researchers and other interested parties.

SHA is an internationally accepted methodology for summarizing, describing, and analyzing financial flow in health systems of various countries. It was first published in 2000 by Organization for Economic Cooperation and Development (OECD) and then adapted by WHO to inform health policy and measure health system performance. This first version of the SHA is referred to as SHA 1.0. Over time, more than 100 developing countries have completed their NHA estimations based on SHA 1.0. After ten years, following an intensive exercise involving large numbers of people and working closely with country counterparts for more than a year, the related international organizations of OECD, Eurostat, and WHO produced an updated version called SHA 2011.

In keeping with this new development, December 2017 saw the challenging transformation of GHED under WHO website to accommodate NHA data reporting based on the latest SHA 2011 framework. It was decided that for countries which are yet to migrate to this new format of NHA reporting, WHO would carry out their own analysis based on whatever available data, either in SHA 1.0 or SHA 2011 formats. For the time being, Malaysia NHA data from 2000 to 2016 was submitted using the previous SHA 1.0 format.

Navigation of GHED website remains the same under the original 4 main headings of “Data explorer”, “Quick reports”, “Documentation Centre” and “Help”, but with different contents under each of the headings. Each one of these 4 main headings can further be expanded to obtain more information. As such the section on “Data explorer” is further divided into another 4 sections namely “Indicators”, “Health expenditure data”, “Macro data” and “Global health observatory data” whereby various NHA related data is available under the first two sections. Tables 10.1 contain headers of the 4 sections which have further disaggregated data as listed in Appendix Table A9.1 and A9.2. Some selected data for country comparison will be highlighted further in this chapter.

A total of 16 developing and developed countries with potential policy relevance to Malaysia are selected from WHO GHED database. Comparisons are made based on the year 2015 as the latest available year at the time of this report is produced. The countries include Australia, Bangladesh, China, France, Germany, India, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United Kingdom and United States of America.

As mentioned earlier, all Malaysia NHA estimations use MNHA Framework & SHA 1.0 Framework. Therefore, as stated earlier international data for Malaysia is estimated by WHO Geneva experts using the SHA 1.0 data. Appendix Tables A3-A8 contains all the recent international data submitted to WHO using WHO prepared templates. However, the following comparisons below are based on WHO estimations which were extracted from GHED database to ensure better country comparability.

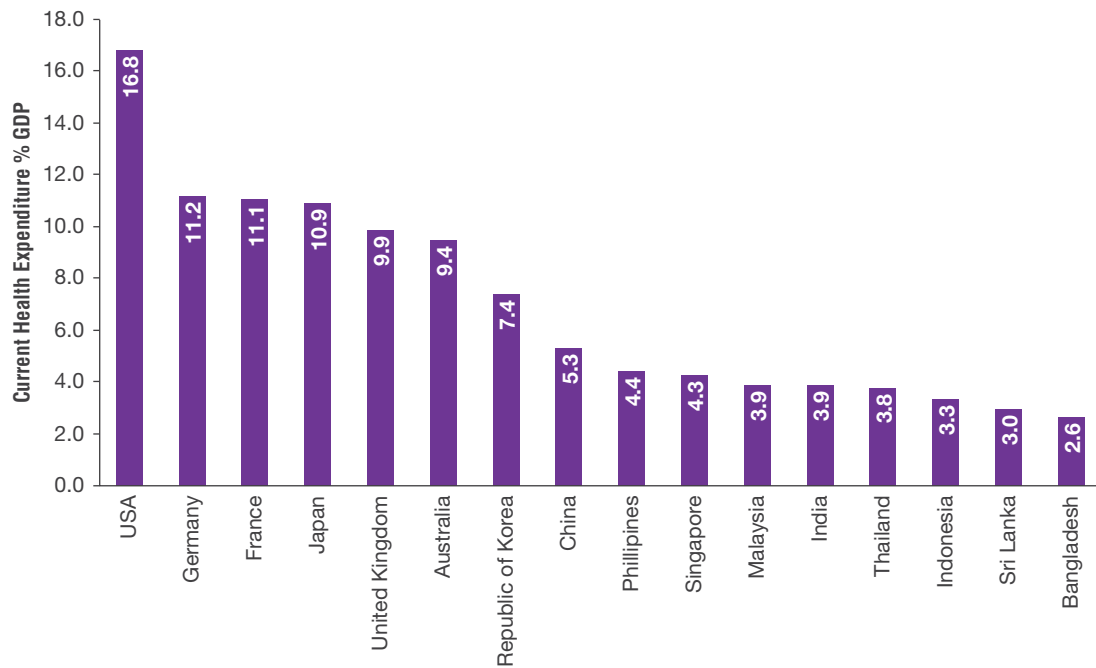
As clarified earlier in section 2.1, CHE instead of TEH has been used by WHO for international comparison. In 2015 based on WHO GHED database, CHE of Malaysia was 3.9 per cent GDP which is lower than neighbouring countries such as Singapore, Philippines, China and Korea but higher than other regional countries such as Thailand, Indonesia, Sri Lanka and Bangladesh (Figure 10.1). Health expenditures in developed countries like Australia, UK, Japan, France and Germany were between 9 to 11 per cent GDP with USA nearing 17 per cent GDP. Likewise the per capita health expenditure of developed countries ranged from twice to four times of Malaysia with USA as the outlier (Figure 10.2). However this reported value of per capita is not based on actual utilization of healthcare services and is a very gross comparison.

Even though SHA 2011 does not use the terms “public” or “private” sources of financing, GHED database maintains this terminology under the list of indicators under “domestic general government” and “domestic private” health expenditure (Appendix Table A9.1). Most developed countries including Singapore, Malaysia and Sri Lanka has a higher domestic government health expenditure compared to domestic private health expenditure (Figure 10.3). Amongst the selected country comparison, those with some form of Social Health Insurance include France, Germany, Republic of Korea, China, USA, Philippines, Indonesia, Thailand, India, Singapore and Malaysia. SHA 2011 identifies classification of government and compulsory financing schemes which includes social health insurance (SHI) schemes. The proportion of SHI of all government and compulsory health financing schemes varies from 10 to 95 per cent in countries with SHI (Figure 10.5). Although the SOCSO health expenditure is a very small proportion of all Current Health Expenditure in Malaysia, it is considered as a form of SHI.

Table 10.1: Available Data in GHED under Various Headers			
	Main Header		Sub-Header
1	Indicators	1.1	Aggregates
		1.2	Financing Schemes
		1.3	Financing Sources
		1.4	Cross classifications
2	Health Expenditure Data	2.1	Revenues
		2.2	Financing Schemes
		2.3	By Disease/Condition
		2.4	Capital Expenditure
3	Macro Data	3.1	Consumption
		3.2	Exchanges Rates
		3.3	Price Index
		3.4	Population
4	Global Health Observatory	4.1	Life expectancy at birth
		4.2	Infant mortality rate
		4.3	Maternal mortality ratio
		4.4	Median availability of selected generic medicines (%) - Public
		4.5	Median availability of selected generic medicines (%) - Private
		4.6	Median consumer price ratio of selected generic medicines - Public
		4.7	Median consumer price ratio of selected generic medicines - Private
		4.8	Under-five mortality rate
		4.9	Births attended by skilled health personnel (%)
		4.10	Population at risk of malaria

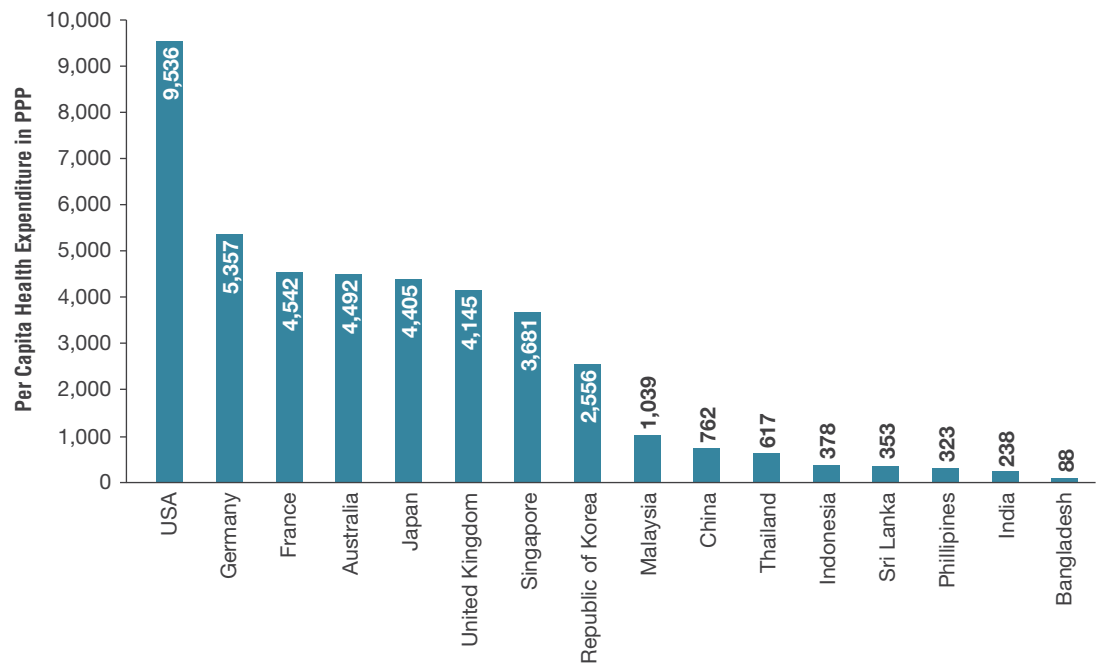
Source: Global Health Expenditure Database (GHED) WHO NHA on 3rd July 2018

**Figure 10.1: International Comparison of Current Health Expenditure as Per cent GDP, 2015**



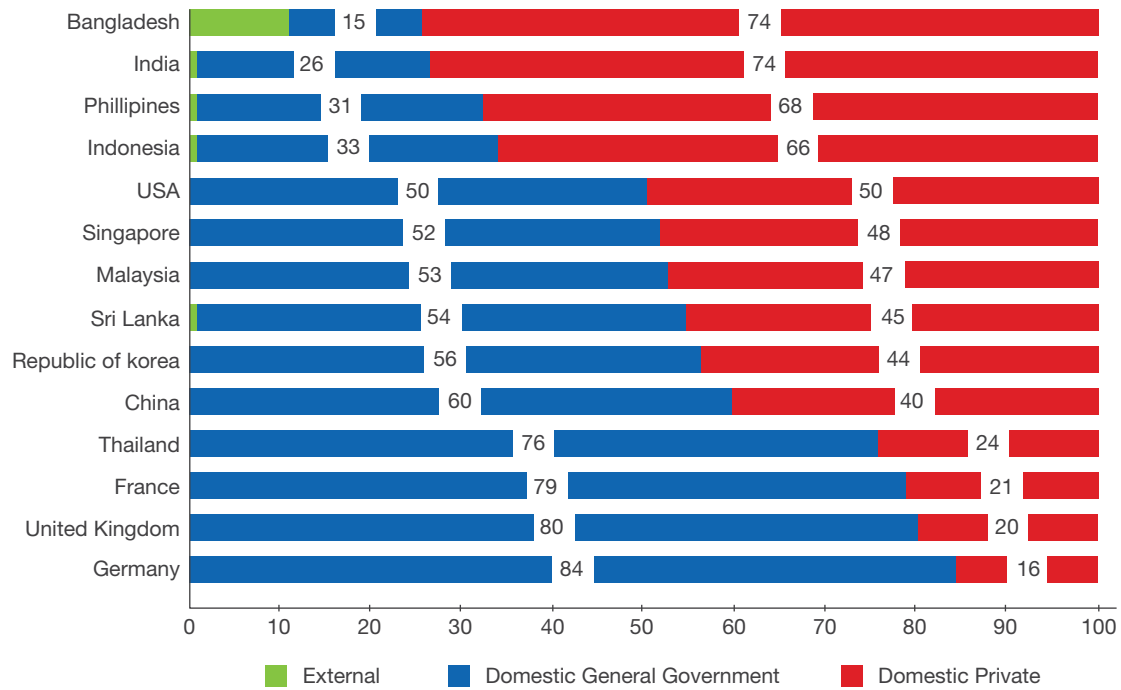
Source: Global Health Expenditure Database (GHED) WHO NHA on 3<sup>rd</sup> July 2018

**Figure 10.2: International Comparison of Per Capita Health Expenditure, 2015**



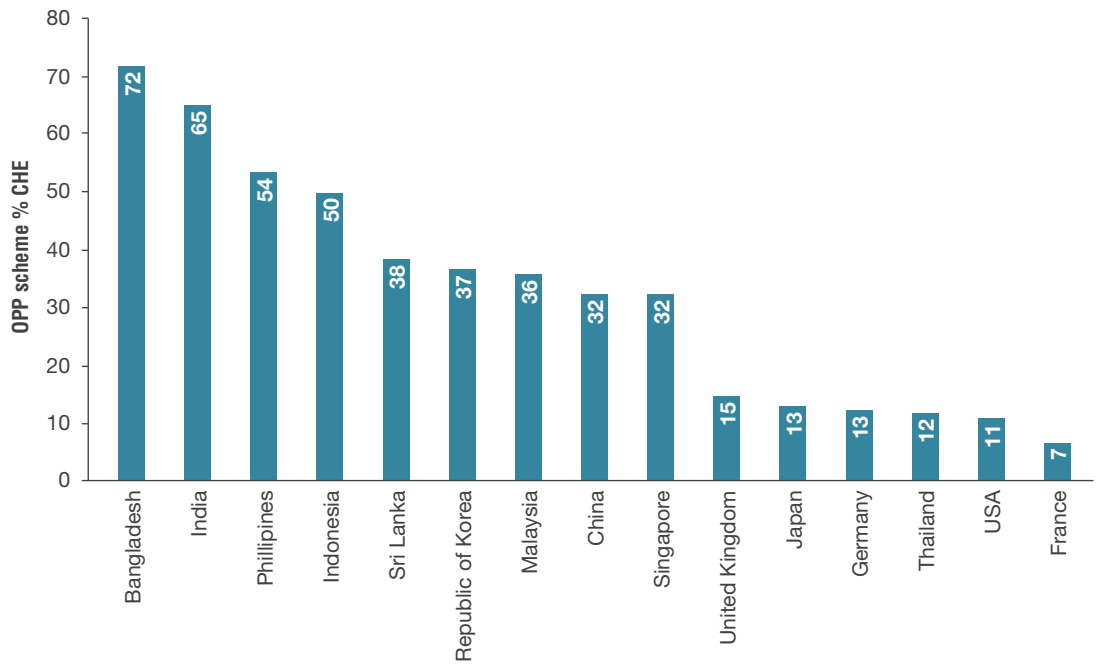
Source: Global Health Expenditure Database (GHED) WHO NHA on 3<sup>rd</sup> July 2018

**Figure 10.3: International Comparison of Domestic Government and Private Health Expenditure, 2015**



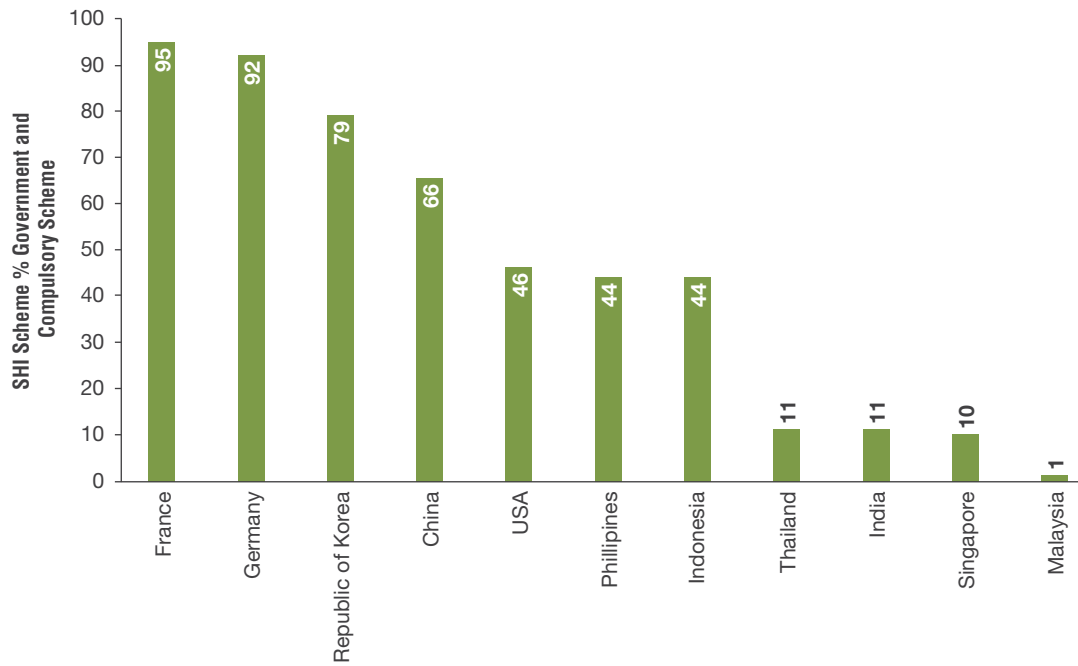
Source: Global Health Expenditure Database (GHED) WHO NHA on 3<sup>rd</sup> July 2018

**Figure 10.4: International Comparison of Out-of-Pocket Health Financing Scheme as Per cent Current Health Expenditure, 2015**



Source: Global Health Expenditure Database (GHED) WHO NHA on 3<sup>rd</sup> July 2018

**Figure 10.5: International Comparison of Social Health Insurance as Per cent Government and Compulsory Health Financing Schemes, 2015**



Source: Global Health Expenditure Database (GHED) WHO NHA on 3<sup>rd</sup> July 2018

## APPENDIX TABLES

Table A1.1 : Source of Data			
Data Sources for Public Sector Estimation			
PUBLIC SECTOR			
	Main Agencies	Specific Organization	Source of Data
1	Ministry of Health (MOH)	Accountant-General's Department	MOH - AG DATA (expenditure)
2	Other Ministries	Ministry of Higher Education	MNHA survey - MOHE
		Ministry of Defence	MNHA survey - MOD
3	Other Federal Agencies	National Population and Family Development Board	MNHA survey - LPPKN
		Department of Orang Asli Development	MNHA survey - JAKOA
		Public Service Department-Pension	MNHA survey - JPA
		Civil Defence Department	MNHA survey - JPAM
		Prison Department of Malaysia	MNHA survey - PENJARA
		Social Welfare Department	MNHA survey - JKM
		Occupational Safety And Health Department	MNHA survey - DOSH
		National Institute of Occupational Safety & Health Malaysia	MNHA survey - NIOSH
		National Anti-Drug Agency	MNHA survey - AADK
		Pilgrims Fund Board	MNHA survey - LTH
		National Heart Institute	MNHA survey - IJN
		Federal Statutory Bodies	MNHA survey - BERKANUN (Fed)
		Public Water Supply Department (Federal)	MNHA survey - JBA (OFA)
		National Sports Institute of Malaysia	MNHA survey - ISN
		Employees Provident Fund - HQ	MNHA survey - KWSP (0001)
		Employees Provident Fund - state	MNHA survey - KWSP (0002)
		Social Security Organization - HQ	MNHA survey - PERKESO (0001)
		Social Security Organization - state	MNHA survey - PERKESO (0002)
		Ministry of Science Technology and Innovation	MNHA survey - MOSTI
		Public Higher Education Institutions	MNHA survey - TRAINING (OFA-Pu)
Private Higher Education Institutions	MNHA survey - TRAINING (OFA-Pr)		
4	State Agencies	State Government (General)	MNHA survey - KN
		Public Water Supply Department (State)	MNHA survey - JBA (state)

<b>Table A1.1 : Source of Data</b>			
<b>Data Sources for Public Sector Estimation</b>			
<b>PUBLIC SECTOR</b>			
	<b>Main Agencies</b>	<b>Specific Organization</b>	<b>Source of Data</b>
		State Statutory Body (SSB)	MNHA survey - BERKANUN (state)
		Public Water Supply Department (State Statutory Body)	MNHA survey - JBA (SSB)
		State Islamic Religious Council / Zakat Collection Centre	MNHA survey - MAIN
5	Local Authorities	Local Authority - Health care Services	MNHA survey - PBT (Perkhid)
		Local Authority - Staff	MNHA survey - PBT (Ktgn)



T A1.2 : Source of Data			
Data Sources for Private Sector Estimation			
PRIVATE SECTOR			
	Main Agencies	Specific Organization	Source of Data
1	Private Insurance	Central Bank of Malaysia	MNHA survey - BNM
		Insurance Agencies	MNHA survey - INSURAN
2	Managed Care Organization	MCO Agencies	MNHA Survey - MCO
3	Out of Pocket (Gross Spending)	MOH user charges	MOH - AG DATA (Revenue)
		IJN user charges	MNHA Survey -IJN
		MOHE user charges	MNHA Survey - KPT
		Private Hospital (MNHA)	MNHA Survey - PRIVATE HOSPITAL
		Private Hospital (DOSM)	DOSM Survey - PRIVATE HOSPITAL
		Private Clinic Medical, DOSM	DOSM Survey - PRIVATE MEDICAL CLINIC
		Private Clinic Dental, DOSM	DOSM Survey - PRIVATE DENTAL CLINIC
		Private Haemodialysis Centre (MNHA)	MNHA Survey - PRIVATE HEMO (0001)
		Pharmacy Division, MOH	MNHA Survey - FARMASI (0001)
		IMS	MNHA Survey - FARMASI (0002)
		Medical supplies HES, DOSM	DOSM Survey - HES DATA
		Medical durables / prostheses / equipments HES, DOSM	DOSM Survey - HES DATA
		Ancillary services HES, DOSM	DOSM Survey - HES DATA
			Private TCM HES, DOSM
	Public Higher Education Institutions	MNHA survey - TRAINING (OOP-Pu)	
	Private Higher Education Institutions	MNHA survey - TRAINING (OOP-Pr)	
4	Out-of Pocket (Third Party Deductions)	Insurance Agencies	MNHA Survey - INSURAN
		Central Bank of Malaysia	MNHA survey - BNM
		Private Corporations	MNHA Survey - PRIVATE CORPORATION
		Employees Provident Fund	MNHA Survey - KWSP
		Social Security Organization	MNHA Survey - PERKESO
		Federal Statutory Bodies	MNHA Survey - BERKANUN (Fed)

<b>T A1.2 : Source of Data</b>			
<b>Data Sources for Private Sector Estimation</b>			
<b>PRIVATE SECTOR</b>			
	<b>Main Agencies</b>	<b>Specific Organization</b>	<b>Source of Data</b>
		State Statutory Body	MNHA Survey - BERKANUN (state)
		FOMEMA/UNITAB MEDIC - OOP data	MNHA Survey - UNITABMEDIC
		GROWARISAN - OOP data	MNHA Survey - GROWARISAN
5	Non-Government Organization	Non-Governmental Organizations	MNHA survey - NGO
6	Corporations	Limited and Private Limited Corporations	MNHA Survey - PRIVATE CORPORATION
		Corps - Labour Force Survey	DOSM Survey - CORPS_DOS (0002)
		Industrial Survey & Manufacturing, DOSM	DOSM Survey - CORPS_DOS (0001-non med)
		Private Hospital staff, DOSM	DOSM Survey - CORPS_DOS (0001-hosp)
		Private Clinic Medical, DOSM	DOSM Survey - CORPS_DOS (0001-clinic)
		Private Clinic Dental, DOSM	DOSM Survey - CORPS_DOS (0001-dental)
		Private Water Supply Department	MNHA survey - JBA (corp)
		FOMEMA/UNITAB MEDIC	MNHA Survey - UNITABMEDIC
		GROWARISAN	MNHA Survey - GROWARISAN
		Public Higher Education Institutions	MNHA survey - TRAINING (Corp-Pu)
		Private Higher Education Institutions	MNHA survey - TRAINING (Corp-Pr)
7	Rest of the World	International Organizations in Malaysia	MNHA survey - Rest
8	Other National Surveys	DOSM-Population survey	General-DOS General_DOS (0001)
		DOSM-GDP & GDP Deflator	General-DOS General_DOS (0002)
		DOSM-Household Consumption	General-DOS General_DOS (0003)

## TABLE A2: Comparison of MNHA Framework to SHA 1.0 with SHA Tables

The data in this document is reported using the MNHA Framework. However, the revised data analysis is produced under dual coding and a set of tables showing the comparison of MNHA codes mapped to ICHA codes are shown for reference (Appendix Table A2.1 to A2.3). This is followed by six SHA Tables (Appendix Table A3 to A8).

Table A2.1 : Classification of Total Expenditure on Health by Sources of Financing			
MNHA Code	ICHA Code	Sources of Financing	Description
MS1	HF.1	Public Sector	Refers to MS1.1 and MS1.2 classifications
MS1.1	HF.1.1	Public sector excluding social security funds	Refers to Federal Government, state government & local authorities
MS1.2	HF.1.2	Social security funds	SOCOSO & EPF
MS2	HF.2	Private sector	Refers to MS2 classification
MS2.1	HF.2.1	Private social insurance	Currently does not exist in Malaysia
MS2.2	HF.2.2	Private insurance enterprises (other than social insurance)	Private health insurance
MS2.3	HF.2.2	Private MCOs and other similar entities	Registered MCO other than private health insurance
MS2.4	HF.2.3	Private household out-of-pocket expenditures	Individual OOP spending on health
MS2.5	HF.2.4	Non-profit institutions serving households	Health - related NGOs
MS2.6	HF.2.5	All corporations (other than health insurance)	Private employers
MS9	HF.3	Rest of the world	Rest of the world

<b>Table A2.2 : Classification of Total Expenditure on Health by Providers of Health Care</b>			
<b>MNHA Code</b>	<b>ICHA Code</b>	<b>Providers of Health Care</b>	<b>Description</b>
MP1	HP.1	All hospitals	Public & private hospitals
MP2	HP.2	Nursing and residential care facilities	Nursing care facilities including psychiatric care facilities, residential facilities for mental health, etc.
MP3	HP.3	Providers of ambulatory health care	Establishments providing ambulatory health care services directly to non-hospital setting, e.g. medical practitioner clinics, dental clinics, etc.
MP4	HP.4	Retail sale and other providers of medical goods	Pharmacies & retail sale/suppliers of vision products, hearing aids, medical appliances
MP5	HP.5	Provision and administration of public health programmes	Providers of public health programmes including health prevention & promotion services (public & private)
MP6	HP.6	General health administration and insurance	Overall administration of health care (public & private) and health insurance administration. (Note: For MOH it includes administration of HQ excluding public health programmes), state health dept., admin. cost for hospitals management
MP7	HP.7	Other industries (rest of the Malaysian economy)	Private occupational health care & home care, etc.
MP8	HP.7.9	Institutions providing health-related services	Health training institutions (public & private)
MP9	HP.9	Rest of the world	Non - resident providers providing health care for the final use of residents of Malaysia

Table A2.3 : Classification of Total Expenditure on Health by Functions of Health Care			
MNHA Code	ICHA Code	Functions of Health Care	Description
MF1	HC.1	Services of curative care	Curative care provider at inpatient, outpatient, day care & homecare services
MF2	HC.2	Services of rehabilitative care	Rehabilitative care provider at inpatient, outpatient, day care & homecare services
MF3	HC.3	Services of long-term nursing care	Long term nursing care provider at inpatient, outpatient, day care & homecare services
MF4	HC.4	Ancillary services to health care	Stand-alone laboratory, diagnostic imaging, transport & emergency rescue, etc.
MF5	HC.5	Medical goods dispensed to out-patients	Pharmaceuticals, appliances, western medicines, TCM, etc.
MF6	HC.6	Public health services, including health promotion and prevention	Health promotion, prevention, family planning, school health services, etc.
MF7	HC.7	Health program administration and health insurance	Administration at HQ, State health dept., local authorities, SOCSO, EPF, private insurance, etc.
MR1	HC.R.1	Capital formation of health care provider institutions	Administration at HQ, State health dept., local authorities, SOCSO, EPF, private insurance, etc.
MR2	HC.R.2	Education and training of health personnel	Government & private provision of education and training of health personnel, including admin., etc.
MR3	HC.R.3	Research and development in health	Research and development in relation to health care
MR9	HC.R.6	All other health-related expenditures	Category to capture all other expenditures that not classified elsewhere in MNHA

Table A3 : Ratio indicators for Expenditure on Health (2000-2016) (SHA 1.0 compatible MNHA data)*																	
Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Health Expenditure (THE) % Gross Domestic Product (GDP)	3.2	3.4	3.4	3.9	3.6	3.2	3.5	3.5	3.4	3.8	3.7	3.6	3.8	3.8	3.9	4.0	3.9
Current Health Expenditure (CHE) as % of Gross Domestic Product (GDP)	2.8	3.0	2.9	3.2	3.2	3.0	3.3	3.2	3.2	3.4	3.2	3.4	3.6	3.6	3.8	3.9	3.8
Capital spending (HK) as % of Gross Domestic Product (GDP)	<	<	<	0.7	<	<	<	<	<	<	<	<	<	<	<	<	<
General Government Health Expenditure (GGHE) as % of Gross Domestic Product (GDP)	1.7	2.0	1.9	2.3	2.1	1.7	2.0	1.9	1.9	2.3	2.2	2.0	2.1	2.1	2.2	2.2	2.0
Total Health Expenditure (THE) per Capita in US\$	126	132	137	169	175	172	213	247	285	278	331	372	401	401	430	379	366
Total Health Expenditure (THE) per Capita in Int\$ (Purchasing Power Parity)	391	425	437	531	532	495	588	625	647	713	755	780	857	889	982	;	;
General Government Health Expenditure (GGHE) per Capita in US\$	67	76	79	102	101	91	121	139	160	167	195	209	225	225	243	208	191
General Government Health Expenditure per Capita in Int\$ (Purchasing Power Parity)	209	245	252	321	308	262	335	351	364	428	445	437	482	498	554	;	;
FINANCING SOURCES																	
External Resources on Health as % of Total Health Expenditure (THE)	;	;	;	;	;	;	;	<	<	<	<	<	;	;	;	;	;
Externally funded current health expenditure as % of Current Health Expenditure (CHE)	0	0	0	0	0	0	0	<	<	<	<	<	0	0	0	0	0
Public Funds as % of Total Health Expenditure (THE)	53.4	57.7	57.6	60.4	57.8	52.9	56.9	56.2	56.2	60.0	58.9	56.0	56.3	56.0	56.4	54.8	52.2
Public Funds for Health % General Government Expenditure (GGE) (excluding external resources)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Public Funds for Health per Capita in Constant 2009 US\$	99	114	115	144	134	111	137	140	143	167	166	160	173	176	192	;	;
FINANCING AGENTS																	
General Government Health Expenditure (GGHE) as % of Total Health Expenditure	53.4	57.7	57.6	60.4	57.8	52.9	56.9	56.2	56.2	60.0	58.9	56.0	56.3	56.0	56.4	54.8	52.2
Private Health Expenditure (PvHE) as % of Total Health Expenditure (THE)	46.6	42.3	42.4	39.6	42.2	47.1	43.1	43.8	43.8	40.0	41.1	44.0	43.7	44.0	43.6	45.2	47.8
Out of Pocket Expenditure (OOPS) as % of Total Health Expenditure (THE)	35.8	30.8	30.4	28.7	31.4	35.5	32.7	33.0	33.5	29.2	30.1	32.8	32.6	33.7	34.0	34.9	37.3
Out of Pocket Current Health Expenditure as % of Current Health Expenditure (CHE)	40.7	35.7	34.8	34.5	36.1	38.1	34.9	35.3	35.6	32.3	34.4	35.1	34.5	35.3	35.1	36.0	38.4
General Government Health Expenditure (GGHE) as % of General government expenditure (GGE)	5.2	5.3	5.2	5.9	6.3	5.3	5.8	5.6	5.1	5.8	6.6	6.2	5.6	5.7	6.0	6.6	6.6
Social Security Funds as % of General Government Health Expenditure (GGHE)	1.4	1.4	1.4	1.2	1.4	1.7	1.3	1.3	0.9	0.9	0.9	1.1	1.0	1.2	1.3	1.2	1.5
Out of Pocket Expenditure (OOPS) as % of Private Health Expenditure (PvHE)	76.8	72.9	71.8	72.5	74.4	75.3	75.9	75.2	76.4	73.0	73.2	74.7	74.6	76.6	77.9	77.2	78.1

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)

Table A4: Ratio Indicators for Expenditure on Health by Providers and Functions, 2000-2016 (SHA 1.0 compatible MNHA data)*																	
Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private Insurance as % of Private Health Expenditure (PvtHE)	9.8	11.7	13.1	15.0	14.6	13.3	13.8	14.0	14.9	18.2	18.2	18.0	17.4	17.4	17.0	17.3	16.6
Non-Profit Institutions Expenditure on Health as % of Private Health Expenditure (PvtHE)	1.6	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2.1	2.1	2.3	<	<	<	<
EXPENDITURE BY PROVIDERS																	
Total Expenditure on Hospitals as % of Total Health Expenditure (THE)	47.6	48.0	48.6	46.1	48.2	51.1	52.8	52.0	55.6	54.4	52.1	55.0	56.0	55.6	55.8	55.1	55.0
Hospitals Financed by General Government % of General Government Health Expenditure (GGHE)	54.9	53.2	53.1	47.5	51.3	57.8	59.1	57.9	60.2	55.1	52.1	58.9	61.9	61.4	62.7	62.8	64.3
EXPENDITURE BY FUNCTIONS																	
Services of Curative and Rehabilitative Care % Total Health Expenditure (THE)	63.9	63.0	63.9	60.5	64.4	69.9	71.2	70.2	72.2	67.7	66.3	71.3	73.4	72.3	72.5	73.0	75.0
Government Expenditure on Services of Curative and Rehabilitative Care % General Government Health Expenditure (GGHE)	62.7	61.1	61.7	55.2	60.0	67.9	69.5	67.9	70.5	64.9	62.0	70.0	73.9	70.5	70.3	70.6	73.0
Services of Long-Term Nursing Care % Total Health Expenditure (THE)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Government Expenditure on Long-Term Nursing Care % General Government Health Expenditure (GGHE)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Ancillary Services to Health Care % Total Health Expenditure (THE)	0.9	1.0	0.9	0.7	0.7	0.7	1.0	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Government Expenditure on Ancillary Services to Health % General Government Health Expenditure (GGHE)	<	0.6	0.6	0.7	1.0	1.0	1.4	1.1	1.3	1.2	1.1	1.2	1.0	1.0	1.0	1.0	0.9
Prevention and Public Health Services % Total Health Expenditure (THE)	3.9	4.2	4.0	3.8	3.8	4.3	4.1	5.2	3.9	4.0	3.5	3.5	3.8	5.7	4.6	4.7	4.8
Government Expenditure on Prevention and Public Health Services % General Government Health Expenditure (GGHE)	3.3	3.3	3.3	3.6	4.0	4.8	4.8	6.5	4.9	5.1	4.4	4.9	5.4	8.7	7.1	7.3	7.8
Administration and Health Insurance % Total Health Expenditure (THE)	10.5	10.6	11.6	11.9	11.3	11.2	11.4	10.8	10.7	11.0	10.4	10.9	9.7	9.2	9.5	9.0	6.8
Government Expenditure on Health Administration and Health Insurance % General Government Health Expenditure (GGHE)	10.9	10.6	12.3	12.0	11.7	12.5	12.9	12.3	12.2	11.8	10.6	11.7	9.4	10.4	12.2	11.6	8.5
COST OF FACTORS																	
Total Pharmaceutical Expenditure as % of Total Health Expenditure (THE)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Private Pharmaceutical Expenditure as % of Private Health Expenditure (PvtHE)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Compensation of Health Employees as % of Total Health Expenditure (THE)	49.7	54.3	74.4	65.5	55.0	75.5	69.6	67.7	89.7	78.8	79.3	79.0	78.6	79.9	;	;	;
Government Compensation of Health Employees as % of General Government Health Expenditure (GGHE)	34.7	33.6	37.8	31.2	33.6	39.6	40.1	37.5	41.7	39.7	40.8	44.6	44.4	44.3	;	;	;

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)

Table A5: Financing Sources and Agents on Health Expenditure, 2000-2016 (SHA 1.0 compatible MNHA data)*																	
Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>FINANCING SOURCES</b>																	
<b>Public funds</b>	6006	6967	7438	9834	9955	11934	12960	14722	16384	17943	18546	20553	21419	24394	25317	25062	
of which : current	4657	5303	5828	7069	7681	10626	11450	13162	13686	14129	16397	18567	19630	22940	23903	23673	
of which : capital	1350	1665	1610	2765	2274	1307	1510	1560	2699	3813	2149	1985	1789	1454	1414	1389	
<b>Rest of the world funds / External resources</b>							1	0	0	0	0	0	0	0	0	0	
of which : current	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
of which : capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>FINANCING AGENTS</b>																	
<b>Total expenditure on health</b>	11249	12076	12909	16270	17218	20964	23079	26189	27298	30472	33099	36526	38219	43263	46216	48020	
of which : current	9892	10407	11292	13496	14934	16052	21558	24616	24584	26641	30929	34517	36413	41793	44785	46613	
of which : capital	1357	1669	1617	2773	2284	1317	1521	1574	2714	3832	2169	2009	1807	1470	1431	1406	
<b>General government expenditure on health</b>	6006	6967	7438	9834	9955	11934	12960	14722	16384	17943	18546	20553	21419	24394	25317	25062	
of which : current	4657	5303	5828	7069	7681	10626	11450	13162	13686	14129	16397	18567	19630	22940	23903	23673	
of which : capital	1350	1665	1610	2765	2274	1307	1510	1560	2699	3813	2149	1985	1789	1454	1414	1389	
Territorial governments	5922	6873	7334	9718	9816	11783	12791	14585	16245	17773	18350	20338	21158	24084	25004	24696	
Central government	5863	6810	7285	9640	9724	8869	12294	14384	15917	17567	18092	20065	20814	23752	24622	24355	
of which : current	4513	5145	5655	6875	7450	7657	10784	12824	13218	13753	15943	18080	19024	22298	23208	22966	
of which : capital	1350	1665	1610	2765	2274	1307	1510	1560	2699	3813	2149	1985	1789	1454	1414	1389	
<b>Ministry of Health</b>	5138	5954	6315	8590	8523	7659	10731	12467	14066	15566	16074	17818	18582	21298	22179	21812	
of which : current	3862	4384	4801	5899	6293	6467	9275	11017	11538	12013	14123	16041	16873	19919	20843	20502	
of which : capital	1276	1570	1514	2690	2230	1192	1287	1456	1450	2527	3553	1951	1777	1709	1379	1335	
Other Ministries	725	856	950	1050	1201	1319	1563	1917	1851	2001	2018	2248	2232	2454	2443	2543	
of which : current	651	761	854	975	1156	1191	1298	1510	1806	1679	1740	1820	2039	2152	2379	2365	
of which : capital	74	94	96	75	44	20	53	111	172	260	198	209	81	75	78	79	
States / provincial governments	42	44	47	51	57	64	70	79	88	90	99	116	123	156	168	204	
of which : current	42	44	47	51	57	64	70	79	88	90	99	116	123	156	168	204	
of which : capital																	
Locals / municipal governments	18	19	22	27	35	45	42	419	113	238	108	142	150	188	164	178	
of which : current	18	19	22	27	35	45	42	419	113	238	108	142	150	188	164	178	
of which : capital																	

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)



Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Social security funds</b>	84	95	104	116	139	157	151	168	137	140	170	196	214	261	310	312	366
of which : current	84	95	104	116	139	157	151	168	137	140	170	196	214	261	310	312	366
of which : capital	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Extra-budgetary entities	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Parastatals corporations	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Entities managed mostly with external funds (HF.3.1)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
All other general government expenditure on health	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
of which : current	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
of which : capital	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
<b>Private expenditure on health</b>	5242	5109	5471	6436	7263	8138	9031	10119	11467	10913	12530	14553	15973	16800	18870	20899	22957
of which : current	5235	5104	5464	6427	7253	8129	9021	10108	11454	10898	12511	14533	15950	16783	18853	20882	22940
of which : capital	7	5	7	8	9	9	10	11	13	15	18	20	23	17	16	17	17
<b>Private insurance</b>	516	599	718	964	1062	1084	1246	1413	1709	1991	2277	2626	2774	2916	3203	3623	3811
of which : current	516	599	718	964	1062	1084	1246	1413	1709	1991	2277	2626	2774	2916	3203	3623	3811
of which : capital	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
<b>Out of pocket expenditure</b>	4028	3722	3929	4666	5401	6124	6858	7607	8761	7963	9169	10866	11908	12868	14691	16138	17923
of which : current	4025	3719	3925	4661	5396	6118	6852	7600	8752	7952	9159	10855	11896	12853	14675	16122	17906
of which : capital	3	3	4	5	5	6	6	7	9	11	10	11	12	14	15	16	17
<b>Non-profit institutions serving households (e.g. NGOs)</b>	86	92	104	117	129	147	159	185	213	232	267	309	360	77	39	68	85
of which : current	82	90	101	114	125	143	155	180	208	229	259	300	348	73	37	67	85
of which : capital	4	1	3	4	4	3	3	4	4	4	8	9	11	3	1	1	0
Corporations (other than health insurance)	534	612	628	582	557	660	630	763	618	548	616	508	629	653	605	684	702
of which : current	534	612	628	582	557	660	630	763	618	548	616	508	629	653	605	684	702
of which : capital	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
<b>COST OF FACTORS</b>																	
Compensation of health employees	5589	6563	9605	10649	9464	13048	14588	15619	23488	21523	24176	26150	28717	30543	;	;	;
of which : government	2085	2342	2808	3067	3341	3622	4782	4864	6133	6511	7329	8278	9135	9499	;	;	;
Self-employed income (operating surplus & mixed income)	;	;	;	;	;	;	;	730	;	;	;	;	;	;	;	;	;
Pharmaceuticals																	
Pharmaceuticals: private expenditure																	

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)

Table A7: Providers and Functions on Health Expenditure, 2000-2016 (SHA 1.0 compatible MNHA data)*																	
Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>EXPENDITURE BY PROVIDERS</b>																	
Hospitals	5356	5796	6269	7501	8292	8832	11061	12002	14570	14864	15887	18212	20445	21239	24122	25468	26393
Hospitals financed by General government	3295	3706	3949	4668	5110	5281	7058	7506	8864	9025	9341	10924	12729	13157	15295	15907	16120
<b>EXPENDITURE BY FUNCTIONS</b>																	
Services of curative and rehabilitative care	7193	7605	8252	9847	11093	12070	14924	16209	18915	18477	20201	23601	26799	27632	31365	33719	36038
<b>General government to Services of curative and rehabilitative care</b>	<b>3764</b>	<b>4256</b>	<b>4591</b>	<b>5426</b>	<b>5969</b>	<b>6199</b>	<b>8299</b>	<b>8805</b>	<b>10376</b>	<b>10634</b>	<b>11116</b>	<b>12983</b>	<b>15190</b>	<b>15099</b>	<b>17154</b>	<b>17885</b>	<b>18283</b>
Services of long-term nursing care	3	3	6	10	10	11	12	14	5	5	12	15	19	1	2	1	4
General government to Services of long-term nursing care	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	1
Ancillary services to health care	106	117	110	118	126	128	201	180	238	235	264	296	290	319	353	377	380
General government to Ancillary services to health care	8	39	47	71	98	95	164	139	191	192	206	224	204	222	238	246	229
Prevention and public health services	439	506	522	617	654	742	865	1199	1022	1087	1071	1151	1403	2165	1999	2178	2304
General government to Prevention and public health services	199	233	242	356	401	437	570	846	726	834	788	912	1104	1870	1730	1859	1967
Administration and health insurance (Total)	1184	1283	1492	1936	1953	1940	2388	2497	2800	3015	3162	3619	3539	3528	4107	4138	3287
General government to Health administration and health insurance	657	741	913	1176	1166	1141	1536	1588	1789	1927	1904	2165	1940	2231	2965	2935	2139

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)

Table A8: Macro Data Consumption, Price Index and Population, 2000-2016 (SHA 1.0 compatible MNHA data)*																	
Name - SHA 1.0	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CONSUMPTION																	
Gross Domestic Product	356401	352579	383213	418769	474048	543578	596784	665340	769949	712857	821434	911733	971252	1018614	1106443	1157723	1230120
Final consumption expenditure of Households and Non-profit institutions serving households	155941	162618	172485	186674	208571	234234	258280	293040	334712	338894	394893	436980	481865	527359	579576	625836	674389
Households final consumption	155839	162514	172378	186561	208454	240045	264435	300266	344054	348006	378626	418599	461122	503864	554167		
Non-profit institutions expenditure (NPI)	102	104	107	112	117	143	149	152	161	162	165	167	173	181	191		
General government expenditure	114884	130690	144278	166948	157742	172681	204255	231359	289394	282794	270171	297382	365600	376374	405788	383727	381366
GGE (excluding external resources)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Current GGE (excluding external resources)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Capital GGE (excluding external resources)	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;	;
Exchange Rate (NCU per US\$)	3.80	3.80	3.80	3.80	3.80	3.79	3.67	3.44	3.33	3.52	3.22	3.06	3.09	3.15	3.27	3.91	4.15
Purchasing Power Parity (NCU per Int\$)	1.22	1.18	1.20	1.21	1.25	1.32	1.33	1.36	1.47	1.37	1.41	1.46	1.44	1.42	1.43		
PRICE INDEX																	
Gross domestic product - Price index (2010 = 100)	68.1	67.0	69.1	71.4	75.7	82.4	85.7	89.8	99.2	93.2	100.0	105.4	106.5	106.7	109.3		
POPULATION																	
POPULATION (in thousands)	23495	24123	24727	25320	25905	26477	26881	27186	27540	27895	28589	29062	29510	30214	30709	31186	31633

Note: \*WHO estimation based on MNHA submission of SHA 1.0 compatible MNHA data (MNHA database 1997-2016)

<b>Table A9.1: List of Available Data under “Indicators” in NHA GHED Website</b>	
<b>1. INDICATORS</b>	
<b>1.1</b>	<b>AGGREGATES</b>
	Current Health Expenditure (CHE) as % Gross Domestic Product (GDP)
	Health Capital Expenditure (HK) % Gross Domestic Product (GDP)
	Current Health Expenditure (CHE) per Capita in US\$
	Current Health Expenditure (CHE) per Capita in PPP
<b>1.2</b>	<b>FINANCING SOURCES</b>
	Domestic Health Expenditure (DOM) as % of Current Health Expenditure (CHE)
	Domestic General Government Health Expenditure (GGHE-D) as % Current Health Expenditure (CHE)
	Domestic Private Health Expenditure (PVT-D) as % Current Health Expenditure (CHE)
	External Health Expenditure (EXT) as % of Current Health Expenditure (CHE)
	Domestic General Government Health Expenditure (GGHE-D) as % General Government Expenditure (GGE)
	Domestic General Government Health Expenditure (GGHE-D) as % Gross Domestic Product (GDP)
	External Health Expenditure Channelled through Government (EXT-G) as % of External Health Expenditure (EXT)
	Domestic General Government Health Expenditure (GGHE-D) per Capita in US\$
	Domestic General Government Health Expenditure (GGHE-D) per Capita in PPP Int\$
	Domestic Private Health Expenditure (PVT-D) per Capita in US\$
	Domestic Private Health Expenditure (PVT-D) per Capita in PPP Int\$
	External Health Expenditure (EXT) per Capita in US\$
	External Health Expenditure (EXT) per Capita in PPP Int\$
<b>1.3</b>	<b>FINANCING SCHEMES</b>
	Compulsory Financing Arrangements (CFA) as % of Current Health Expenditure (CHE)
	Government Financing Arrangements (GFA) as % of Current Health Expenditure (CHE)
	Compulsory Health Insurance (CHI) as % of Current Health Expenditure (CHE)
	Social Health Insurance (SHI) as % of Current Health Expenditure (CHE)
	Voluntary Financing Arrangements (VFA) as % of Current Health Expenditure (CHE)
	Voluntary Health Insurance (VHI) as % of Current Health Expenditure (CHE)

Table A9.1: List of Available Data under “Indicators” in NHA GHED Website		
		Out-of-pocket (OOPS) as % of Current Health Expenditure (CHE)
		Other Financing Arrangements as % of Current Health Expenditure (CHE)
		Compulsory Financing Arrangements (CFA) as % of General Government Expenditure (GGE)
		Compulsory Financing Arrangements (CFA) per Capita in US\$
		Compulsory Financing Arrangements (CFA) per Capita in PPP Int\$
		Voluntary Financing Arrangements (VFA) per Capita in US\$
		Voluntary Financing Arrangements (VFA) per Capita in PPP Int\$
		Out-of-Pocket Expenditure (OOPS) per Capita in US\$
		Out-of-Pocket Expenditure (OOPS) per Capita in PPP Int\$
1.4	<b>CROSS CLASSIFICATIONS</b>	
		Government Budget Transfers to Social Health Insurance (SHI-G) as % of Social Health Insurance (SHI)

**Table A9.2: List of Available Data Under “Health Expenditure Data” in NHA GHED Website**

**2. HEALTH EXPENDITURE DATA**

<b>2.1</b>	<b>REVENUES</b>	<b>Current health expenditure by revenues of health care financing schemes</b>	
	2.1.1	Transfers from government domestic revenue (allocated to health purposes)	
		2.1.1.1	Internal transfers and grants
		2.1.1.2	Transfers by government on behalf of specific groups
		2.1.1.3	Subsidies
		2.1.1.4	Other transfers from government domestic revenue
	2.1.2	Transfers distributed by government from foreign origin	
	2.1.3	Social insurance contributions	
	2.1.4	Compulsory prepayment (Other, and unspecified, than FS.3)	
	2.1.5	Voluntary prepayment	
	2.1.6	Other domestic revenues n.e.c.	
		2.1.6.1	Other revenues from households n.e.c.
		2.1.6.2	Other revenues from corporations n.e.c.
		2.1.6.3	Other revenues from NPISH n.e.c.
		2.1.6.4	Unspecified other domestic revenues (n.e.c.)
	2.1.7	Direct foreign transfers	
	2.1.8	Unspecified revenues of health care financing schemes (n.e.c.)	
<b>2.2</b>	<b>FINANCING SCHEMES</b>	<b>Current health expenditure by financing schemes</b>	
	2.2.1	Government schemes and compulsory contributory health care financing schemes	
		2.2.1.1	Government schemes
		2.2.1.2	Compulsory contributory health insurance schemes
		2.2.1.2.1	Social health insurance schemes
		2.2.1.2.2	Compulsory private insurance schemes
		2.2.1.3	Compulsory Medical Saving Accounts (CMSA)
	2.2.2	Voluntary health care payment schemes	
		2.2.2.1	Voluntary health insurance schemes
		2.2.2.2	NPISH financing schemes (including development agencies)
		2.2.2.3	Enterprise financing schemes
	2.2.3	Household out-of-pocket payment	
	2.2.4	Rest of the world financing schemes (non-resident)	
	2.2.5	Unspecified financing schemes (n.e.c.)	
<b>3. BY DISEASE/ CONDITION</b>		<b>Current health expenditure by disease crossed with revenue sources</b>	
<b>3.1</b>	Public domestic sources of spending on Infectious and parasitic diseases		
<b>3.2</b>	External sources of spending on Infectious and parasitic diseases		
<b>3.3</b>	Public domestic sources of spending on HIV/AIDS and Other Sexually Transmitted Diseases (STDs)		
<b>3.4</b>	External sources of spending on HIV/AIDS and Other Sexually Transmitted Diseases (STDs)		
<b>3.5</b>	Public domestic sources of spending on Tuberculosis (TB)		
<b>3.6</b>	External sources of spending on Tuberculosis (TB)		
<b>3.7</b>	Public domestic sources of spending on Malaria		
<b>3.8</b>	External sources of spending on Malaria		
<b>3.9</b>	Public domestic sources of spending on Reproductive health		

<b>Table A9.2: List of Available Data Under “Health Expenditure Data” in NHA GHED Website</b>	
<b>3.10</b>	External sources of spending on Reproductive health
<b>3.11</b>	Public domestic sources of spending on Contraceptive management (family planning)
<b>3.12</b>	External sources of spending on Contraceptive management (family planning)
<b>3.13</b>	Public domestic sources of spending on Nutritional deficiencies
<b>3.14</b>	External sources of spending on Nutritional deficiencies
<b>3.15</b>	External sources of spending on Non-communicable diseases (NCDs)
<b>3.16</b>	Public domestic sources of spending on Non-communicable diseases (NCDs)
<b>3.17</b>	Public domestic sources of spending on Injuries
<b>3.18</b>	External sources of spending on Injuries
<b>3.19</b>	Public domestic sources of spending on Immunization programmes
<b>3.20</b>	External sources of spending on Immunization programmes
<b>4. CAPITAL EXPENDITURE</b>	<b>Capital health expenditure</b>

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