



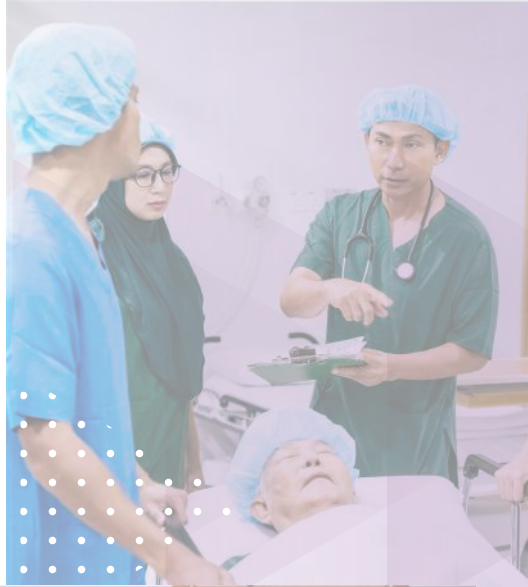
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MINISTRY OF HEALTH MALAYSIA



2022 ANNUAL REPORT

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VISION

A nation working together for better health.

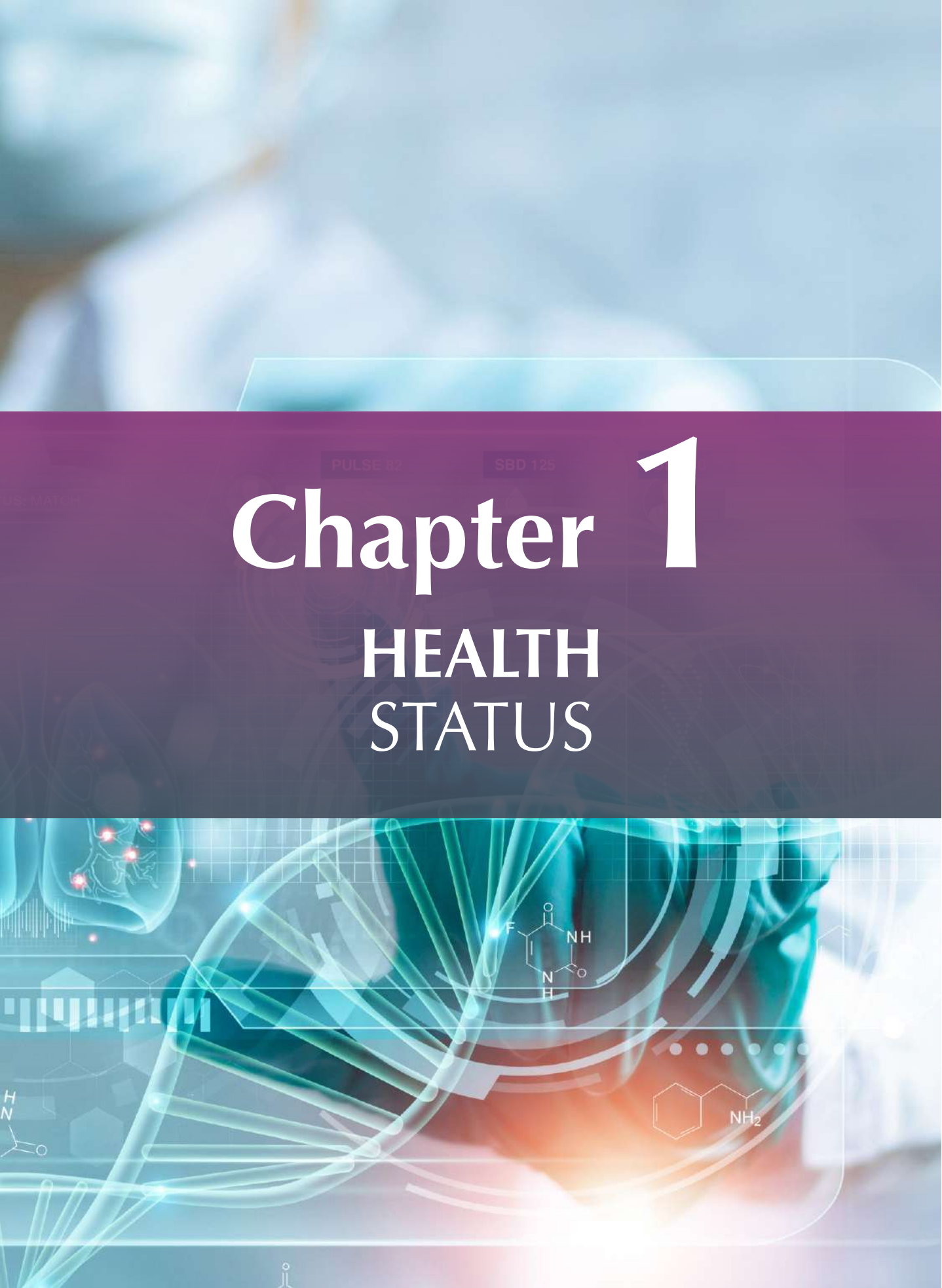
MISSION

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

- to facilitate and support the people to:
 - fully attain their potential in health
 - appreciate health as a valuable asset
 - take individual responsibility and positive action for their health

- to ensure a high quality health system that is:
 - customer centre
 - equitable
 - affordable
 - efficient
 - technologically appropriate
 - environmentally adaptable
 - innovative

- with emphasis on:
 - professionalism, caring and teamwork value
 - respect for human dignity
 - community participation

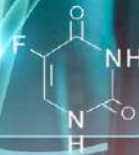


PULSE 82

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Chapter 1

HEALTH STATUS



INTRODUCTION

Malaysians today are generally healthier, live longer, and are better disposed to be more productive. The overall level of health attained is one of the key measures of the success of our country. Good health enables Malaysians to lead productive and fulfilling lives. In addition, a high level of health contributes to increased prosperity and overall social stability.

POPULATION STRUCTURE

The population of Malaysia in 2022 was estimated at 32.70 million with an annual population growth rate of 0.37 per cent. The total population in 2022 showed an increase of 0.12 million as compared to 32.58 million recorded in 2021. The geographical distribution of population showed that Selangor was the most populous state at 7.05 million, while Federal Territory (FT) Labuan recorded the lowest population at 0.10 million. FT Putrajaya recorded the highest annual population growth rate of 1.55 per cent, while FT Kuala Lumpur recorded negative annual growth rate of 0.14 per cent (**Table 1.1**).

Table 1.1
Population and Annual Population Growth Rate by State, Malaysia,
2021 and 2022

State	Population ('000)		Annual Population Growth Rate (%)	
	2021	2022 ^p	2021	2022
Johor	4,020.00	4,028.30	0.26	0.21
Kedah	2,151.70	2,163.10	0.95	0.53
Kelantan	1,812.30	1,830.60	1.10	1.00
Melaka	1,004.50	1,008.60	0.61	0.41
Negeri Sembilan	1,204.20	1,207.90	0.35	0.31
Pahang	1,601.50	1,614.30	0.64	0.80
Pulau Pinang	1,740.00	1,740.90	-0.02	0.05
Perak	2,515.80	2,514.40	0.79	-0.06
Perlis	287.60	289.80	0.94	0.76
Selangor	7,014.70	7,050.30	0.29	0.51
Terengganu	1,170.70	1,186.60	1.84	1.36
Sabah	3,412.60	3,414.90	-0.18	0.07
Sarawak	2,465.60	2,473.50	0.48	0.32
FT Kuala Lumpur	1,964.00	1,961.20	-0.92	-0.14
FT Labuan	96.00	96.90	0.94	0.93
FT Putrajaya	115.20	117.00	5.35	1.55
MALAYSIA	32,576.30	32,698.10	0.40	0.37

Notes:

1. Current mid-year population estimates 2021 and 2022, based on Population and Housing Census 2020, Malaysia (Census 2020)
2. The added total may differ due to rounding.

Source: Current Population Estimates, Malaysia 2023, Department of Statistics Malaysia

In 2022, the male population in Malaysia outnumbered the females at 17.0 million and 15.7 million respectively, with the sex ratio recording 109 males for every 100 females. The population was predominantly urban, with 75.5 per cent of the total population living in urban areas, and 24.5 per cent of the population living in the rural areas (**Table 1.2**). The economically-active (working age) population which consists of population aged 15 to 64 years was 22.8 million or 69.6 per cent of the total population. Meanwhile, young age and old age population were 7.6 million (23.2%) and 2.4 million (7.2%) respectively.

Table 1.2
Principal Statistics of Population, 2022

Population	2022	
	Number ('000)	% of Total Population
Male	16,999.5	52.06
Female	15,652.0	47.94
Sex ratio	109 males per 100 females	
Urban	24,695.20	75.5
Rural	8,003.00	24.5
Working age group (15 - 64 years)	22,754.40	69.6
Young age group (below 15 years)	7,580.00	23.2
Old age group (65 years & above)	2,363.70	7.2
Total dependency ratio	43.7	
Young age dependency ratio	33.3	
Old age dependency ratio	10.4	

Notes:

1. Current mid-year population estimates 2021 and 2022, based on Population and Housing Census 2020, Malaysia (Census 2020)
2. The added total may differ due to rounding.

Source: Current Population Estimates, Malaysia 2023, Department of Statistics Malaysia

The dependency ratio is the number of people in the young and old age groups that must be borne for every 100 people in the working age group. This ratio can be disaggregated into the total dependency ratio, young age dependency ratio and the old age dependency ratio. The total dependency ratio decreased to 43.7 in 2022 compared to 44.1 in 2021. The young dependency ratio also showed a declining trend to record 33.3 from 34.0. Meanwhile, the old age dependency ratio recorded an increasing trend at 10.4 as compared to 10.1 in the previous year.

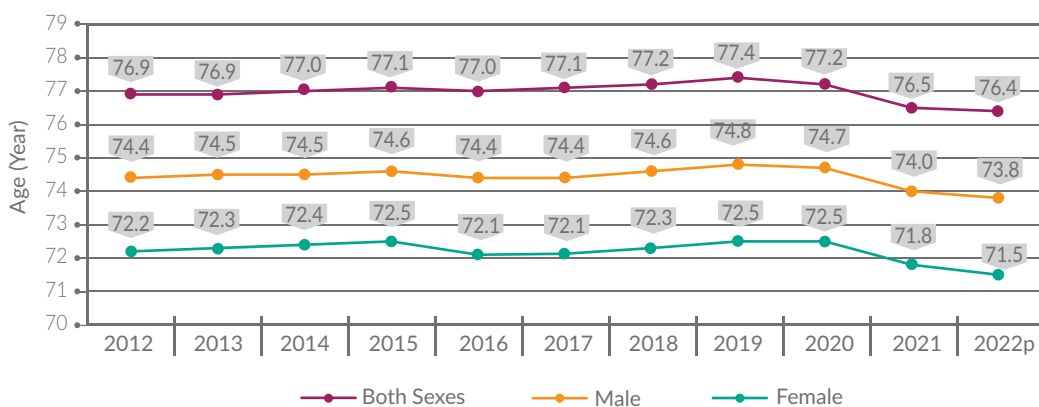
HEALTH STATUS

Health status is measured by the health condition of the individual and the population as a whole. It can be measured through some health status indicators such as life expectancy at birth, mortality and morbidity.

Life Expectancy at Birth

Life expectancy is the average remaining age (years) for a person is expected to live at the beginning of the certain age. Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth are to stay the same throughout its life. In 2022, the life expectancy at birth for Malaysian population decreased by 0.6 years to 73.8 years as opposed to 74.4 years in 2012. A similar situation was observed for males and females. The life expectancy for males has decreased by 0.7 years to 71.5 years in 2022 as compared to 72.2 years in 2012, whereas for females also decreased by 0.5 years to 76.4 years from 76.9 years. The declining trend observed in life expectancy for the period of 2020 to 2022 was attributed to the increase in the number of excess deaths during pandemic COVID-19 in 2021. (**Figure 1.1**).

Figure 1.1
Life Expectancy at Birth, Malaysia, 2011 to 2022



Notes:

1. ^p Preliminary figure

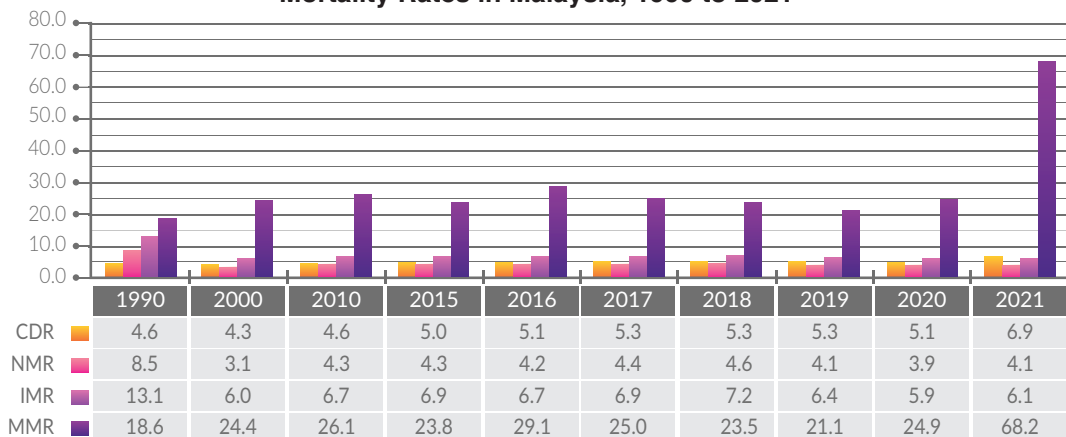
Source: Abridged Life Tables 2021-2023, Department of Statistics Malaysia

Mortality

Mortality data provides a useful endpoint for measuring health. These data provide a comprehensive picture of the health of the community, for each individual.

The trends for crude mortality rate (CDR), neonatal mortality rate (NMR), infant mortality rate (IMR) and maternal mortality ratio (MMR) in Malaysia for the period of 1990 to 2021 are shown in **Figure 1.2**. From 1990 to 2021, the CDR in Malaysia has increased from 4.6 per 1,000 population in 1990 to 6.9 per 1,000 population in 2021. The significant increase was also reflected in the ratio of maternal mortality from 18.6 per 100,000 live births in 1990 to 68.2 per 100,000 live births in 2021. However, neonatal and infant mortality rates showed a decline from 8.5 to 4.1 per 1,000 live births and 13.1 to 6.1 per 1,000 live births respectively during the same period. The trends for other mortality rates are shown in **Table 1.3**.

Figure 1.2
Mortality Rates in Malaysia, 1990 to 2021



Source: Vital Statistics Malaysia 2022, Department of Statistics Malaysia

Table 1.3
Mortality Rates in Malaysia, 2015 to 2021

Indicator	2015	2016	2017	2018	2019	2020	2021
Crude death rate (per 1,000 population)	5.0	5.1	5.3	5.3	5.3	5.1	6.9
Stillbirth rate (per 1,000 births)	4.4	5.2	5.4	5.5	5.4	5.1	5.0
Perinatal mortality rate (per 1,000 births)	7.7	8.3	8.7	8.9	8.4	8.0	8.2
Neonatal mortality rate (per 1,000 live births)	4.3	4.2	4.4	4.6	4.1	3.9	4.1
Infant mortality rate (per 1,000 live births)	6.9	6.7	6.9	7.2	6.4	5.9	6.1
Toddler mortality rate (per 1,000 population aged 1 - 4 years)	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Under-5 mortality rate (per 1,000 live births)	8.4	8.1	8.4	8.8	7.7	7.0	7.4
Maternal mortality ratio (per 100,000 live births)	23.8	29.1	25.0	23.5	21.1	24.9	68.2

Source: Vital Statistics, Malaysia, 2022, Department of Statistics Malaysia

Morbidity

The health status of a community is usually measured in terms of morbidity, which focuses on the incidence or prevalence of disease.

Hospitalisation indicates the severity of disease that needs further treatment, stabilisation of patients or the need of isolation in order to prevent the spreading of the diseases to others. The number of admissions in Ministry of Health (MOH) Hospitals in 2022 showed an increase of 165,462 or 6.99 per cent to record 2,532,126 as compared to 2,366,664 in the previous year. The 10 principal causes of hospitalization in the MOH Hospitals for 2022 are shown in **Table 1.4**. The diseases were classified based on the International Statistical Classification of Disease 10th Revision (ICD10). In 2022, Pregnancy, childbirth and the puerperium remained as the top cause of admissions in MOH hospitals at 19.71 per cent, followed by Diseases of the respiratory system (13.43%) and Certain conditions originating in the perinatal period (9.19%).

Table 1.4
10 Principal Causes of Hospitalisation in MOH Hospitals, 2022^p

No.	Principal Causes	ICD-10 Code	Percentage to total discharge (%)
1.	Chapter XV: Pregnancy, Childbirth and the Puerperium	O00-O99	19.71
2.	Chapter X: Diseases of the Respiratory System	J00-J99	13.43
3.	Chapter XVI: Certain Conditions Originating in the Perinatal Period	P00-P96	9.19
4.	Chapter IX: Diseases of the Circulatory System	I00-I99	8.65
5.	Chapter XIX: Injury, Poisoning and Certain Other Consequences of External Causes	S00-T98	6.53
6.	Chapter I: Certain Infectious and Parasitic Diseases	A00-B99	6.34
7.	Chapter XXII: Codes for Special Purposes	U00-U89	5.14
8.	Chapter II: Neoplasms	C00-D48	4.84
9.	Chapter XI: Diseases of the Digestive System	K00-K93	4.57
10.	Chapter XIV: Diseases of the Genitourinary System	N00-N99	3.76

Notes:

1. Based on ICD10 3-digit code grouping

2. ^p Preliminary figure

Source: MyHDW Fixed Format Report 2022 (as of August 2023)

The number of deaths (for all causes) in MOH Hospitals showed a decline of 12,176 or 17.04 per cent from 83,613 in 2021 to 71,437 in 2022. Starting in 2014, tabulations for causes of death in MOH Hospitals are based on the underlying cause of death as recommended by the World Health Organisation (WHO). Diseases of the circulatory system was the top cause of death in MOH hospitals in 2022 which registered 21.79 per cent, followed by Diseases of the respiratory system (21.74%) and *Certain infectious and parasitic diseases* (10.62%). The 10 principal causes of deaths in the MOH Hospitals for 2022 are as shown in **Table 1.5**.

Table 1.5
10 Principal Causes of Death* in MOH Hospitals, 2021^P

No	Principal Causes	ICD-10 Code	Percentage to total deaths (%)
1.	Chapter IX: Diseases of the Circulatory System	I00-I99	20.79
2.	Chapter X: Diseases of the Respiratory System	J00-J99	20.55
3.	Chapter I: Certain Infectious and Parasitic Diseases	A00-B99	11.61
4.	Chapter II: Neoplasms	C00-D48	9.29
5.	Chapter XIV: Diseases of the Genitourinary System	N00-N99	5.38
6.	Chapter XXII: Codes for Special Purposes	U00-U89	4.76
7.	Chapter IV: Endocrine, Nutritional and Metabolic Diseases	E00-E90	4.38
8.	Chapter XI: Diseases of the Digestive System	K00-K93	4.25
9.	Chapter XX: External Causes of Morbidity and Mortality	V01-Y98	3.55
10.	Chapter VI: Diseases of the Nervous System	G00-G99	1.79

Notes:

1. *Based on underlying causes of death
2. Based on ICD10 3-digit code grouping

Source: MyHDW Fixed Format Report 2022 (as of August 2023)

HEALTH FACILITIES AND FACILITY UTILISATION

The total number of MOH hospitals in 2022 was 148 which consisted of 137 hospitals and 11 special medical institutions with total beds of 39,581 and 5,586 beds respectively. The Bed Occupancy Rate (BOR) for MOH hospitals and special medical institutions in 2021 was 69.01 per cent (**Table 1.6**).

There were 1,077 Health Clinics, 1,722 Rural Clinics and 83 Maternal and Child Health Clinics in 2021. Starting from 1 January 2019, 1Malaysia Clinic (K1M) was renamed to Community Clinic (KKom) and as of 31 December 2022, there were 239 KKoms nationwide that provide immediate healthcare to the population. The services provided by the KKom is similar to K1M introduced in 2010 which is to provide basic medical services for illnesses and injuries to the community.

Table 1.6
Health Facilities by Type, Number of Bed Complement and BOR in MOH,
2017 to 2022

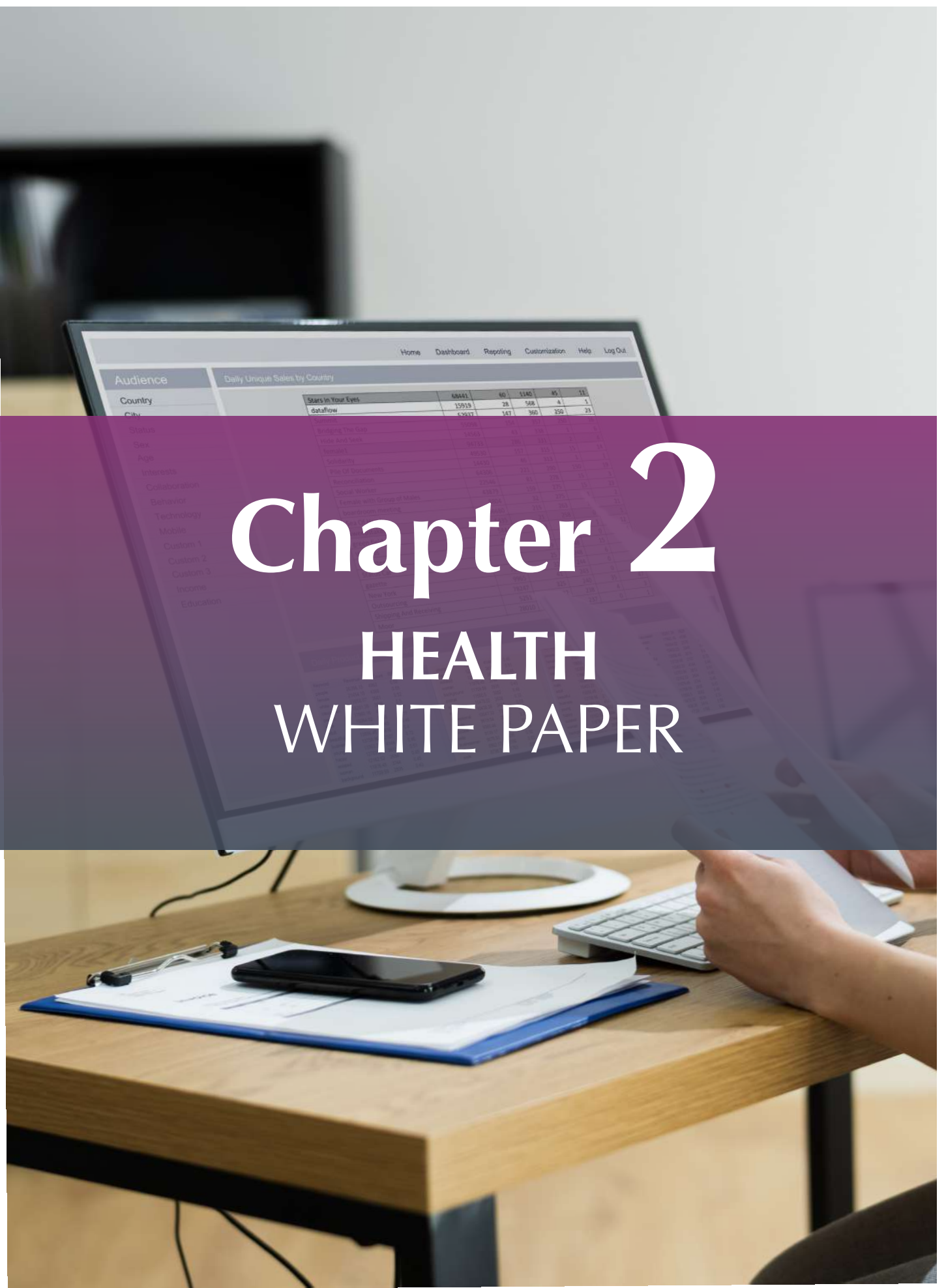
No.	Facility	2017	2018	2019	2020	2021	2022
1.	Number of Hospital	144	144	144	146	146	148
	i. - Hospital	135	135	135	135	135	137
	ii. - Special Medical Institution	9	9	9	11	11	11
2.	Number of Bed Complement ¹	42,302	42,434	42,936	44,117	44,849	45,167
	i. - Hospital	37,470	37,619	38,131	38,543	39,263	39,581
	ii. - Special Medical Institution	4,832	4,815	4,805	5,574	5,586	5,586
3.	Bed Occupancy Rate, BOR (%) ¹	60.75	68.75	70.01	64.72	77.52	69.01
4.	Number of Health Clinics	994	1,000	1,027	1,051	1,057	1,077
5.	Number of Rural Clinics	1,798	1,791	1,771	1,752	1,749	1,722
6.	Number of Maternal and Child Health Clinics	91	90	87	87	86	83
7.	Number of 1Malaysia Clinic/ Community Clinics ²	342	343	286	257	255	239

Notes:

¹ ¹ Refers to number of bed complement and BOR in MOH Hospitals and Special Medical Institutions

² ² From 1 January 2019, 1Malaysia Clinic (K1M) was renamed to Community Clinic (KKom)

Source: Health Informatics Centre, MOH



Chapter 2

HEALTH WHITE PAPER

Audience

Daily Unique Sales by Country

Country

City

Status

Sex

Age

Interests

Collaboration

Behavior

Technology

Mobile

Custom 1

Custom 2

Custom 3

Income

Education

Home Dashboard Reporting Customization Help Log Out

Starts in Your Eyes	80	1140	85	11	
dataflow	15919	28	588	4	1
	49937	147	360	350	23

Budgeting The Gap	11913	41	128	11	4
Books And Tools	10723	78	271	21	11
Brandkit	9930	107	351	39	13
Analytics	14491	80	811	31	11
File Of Documents	4438	71	288	28	11
Reproduction	2346	81	273	28	11
Social Worker	13273	108	22	28	11
Female with Original Male		21	28	28	11
Business meeting		21	28	28	11
Partner		21	28	28	11
New York		21	28	28	11
Outstanding		21	28	28	11
Shipping And Tracking		21	28	28	11
Work		21	28	28	11

INTRODUCTION

The Health White Paper is a government document which outlines the current status, the gaps and constraints faced by the health system. It proposes phased solutions in service delivery reforms, financing, governance and organisation covering a period of 15 years. This document will be publicly available. The Health White Paper is expected to be tabled in Parliament in mid-2023 to gain bipartisan support and Parliament's approval.

HEALTH WHITE PAPER DEVELOPMENT

The Health White Paper development was approved by the Cabinet on 6 April 2022. It is led by the Planning Division with active involvement from various divisions, programmes, the National Institute of Health (NIH) and other units in the MOH through the Technical Committee and the participation of other government ministries/agencies through the Steering Committee.

Development of the Health White Paper takes into account inputs and suggestions from various stakeholders and the public through multiple engagement sessions, town halls, conference as well as recommendations of past health systems studies.

In 2022, a total of 2,313 stakeholders from various categories whether internal or external MOH have attended 31 engagement sessions to get their views on formulating a holistic and inclusive national health reform strategy. The categories of stakeholders involved include from non-governmental organisations that are related to vulnerable groups, disabled and people with diseases, consumer associations, opinion leaders, social media influencers, researchers and think tanks, medical practitioners' associations, academicians, teaching hospitals, pharmaceuticals industry and medical devices, ministries and government agencies as well as from MOH.

The development of the Health White Paper also received expert advice and technical input from World Health Organization (WHO) consultants for health policy and strategic communication. The Health White Paper Advisory Council consisting of 13 experts from outside the MOH was also established on 15 August 2022 to provide expert advice in developing the document.

HEALTH POLICY SUMMIT 2022 AND THE HEALTH WHITE PAPER TOWN HALLS

The Health Policy Summit 2022 themed *The Future of Our Healthcare - Health White Paper Development* was successfully held at the Kuala Lumpur Trade Centre from 15 to 16 August 2022. The Summit was inaugurated by the Honourable Prime Minister of Malaysia, and was attended by 450 participants from all over the country.

The summit, which was organised for the first time, brought together stakeholders from various sectors to share their opinions on health reform proposals to strengthen the country's health system. A total of 27 panellists who are experts in health system-related fields shared inputs and experiences through 7 panel sessions and 1 policy dialogue which involved the Minister of Health and former Minister of Health.

Image 2.1
Health Policy Summit 2022



Source: Planning Division, MOH

Image 2.2
Town Hall Session in Sarawak



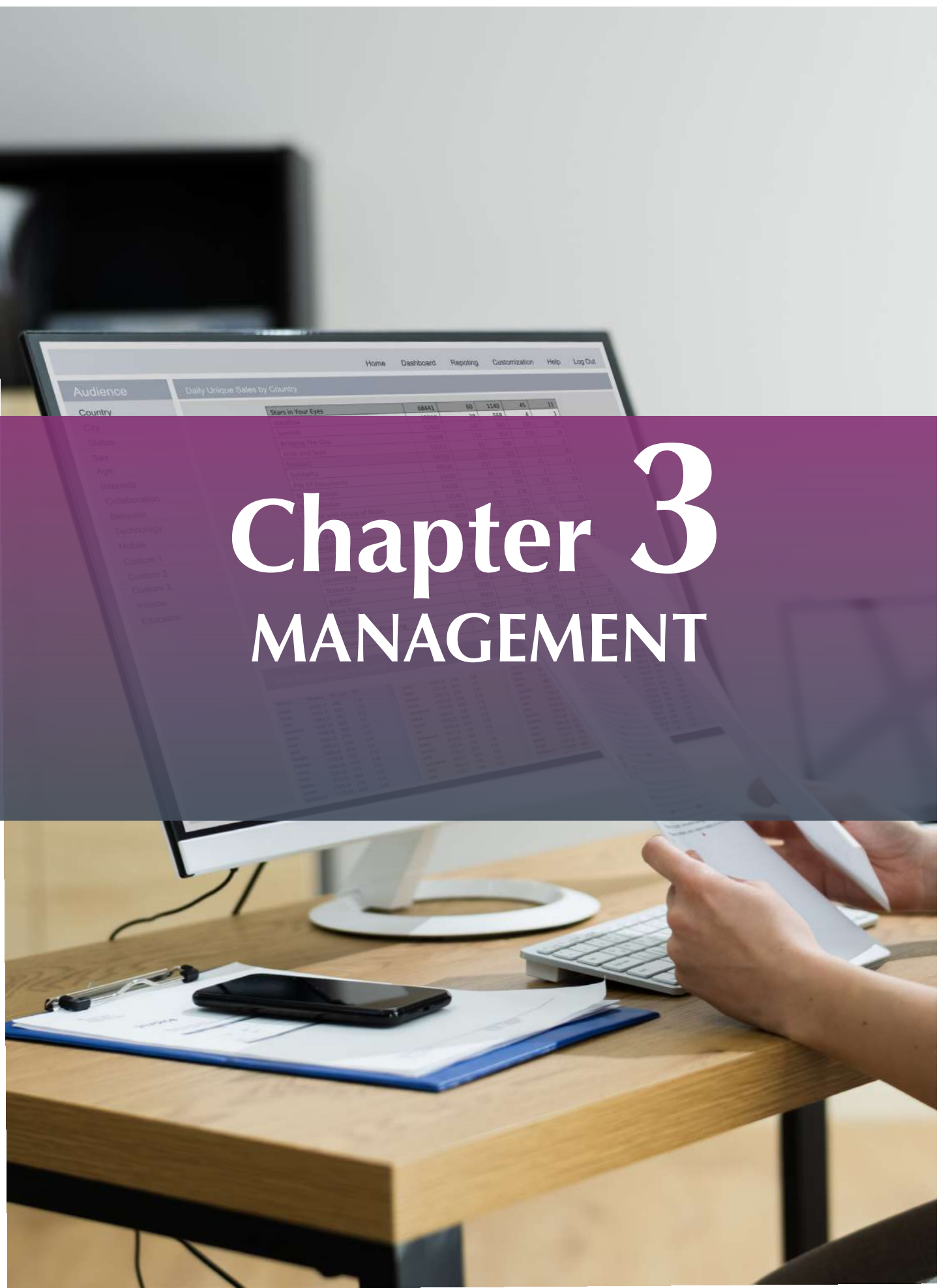
Source: Planning Division, MOH

Two Health White Paper town hall sessions with the Minister of Health and top management of the MOH were held in Sarawak and Sabah on 5 September and 10 September 2022 respectively which were attended by more than 430 people. The town hall sessions were another platform for the community to share information and voice their views on the country's health system reform.

Image 2.3
Town Hall session in Sabah



Source: Finance Division, MOH



The image shows a person's hands holding a smartphone at a desk. In the background, a computer monitor displays a dashboard with a navigation menu (Home, Dashboard, Reporting, Customization, Help, Log Out) and a table titled 'Daily Unique Sales by Country'. The table has columns for 'Country' and 'Stars in Your Eyes'. A purple semi-transparent banner is overlaid on the monitor, containing the text 'Chapter 3 MANAGEMENT'.

Chapter 3

MANAGEMENT

MANAGEMENT PROGRAMME

The management sector under the Ministry of Health Malaysia (MOH) is responsible in planning and developing competent human resources to ensure efficiency, organise and effective organisational governance. This sector consists of five (5) main divisions under supervision of Deputy Secretary General (Management) as follows:

- i. Human Resource Department (BSM);
- ii. Training Management Department (BPL);
- iii. Competency Development Department (BPK);
- iv. Management Service Department (BKP); and
- v. Information Management Department (BPM).

HUMAN RESOURCE DIVISION (BSM)

Management of human resources consist of human resources planning, appointments, service affairs, in-service training, promotion, employer-employee relations, organisation development, remuneration, disciplinary management and retirement affairs. These roles are carried out by the BSM through the following branches:

i. Policy, Remuneration and Staffing Branch

Involving policy studies related to organisation, human resources and staffing, review of program functions, service delivery capacity and redistribution of staffing, policy management on performance, allowance management as well as study of improvement, expansion and rationalization of allowances and incentives as well as the management of employer-employee relations;

ii. Service and Support Management Branch

Involving recruitment management through collaborative relationship with the Public Service Commission (PSC), placement and exchange management, review of salary and allowance eligibility, leave management, service review as well as issues arising from discipline and complaints; and

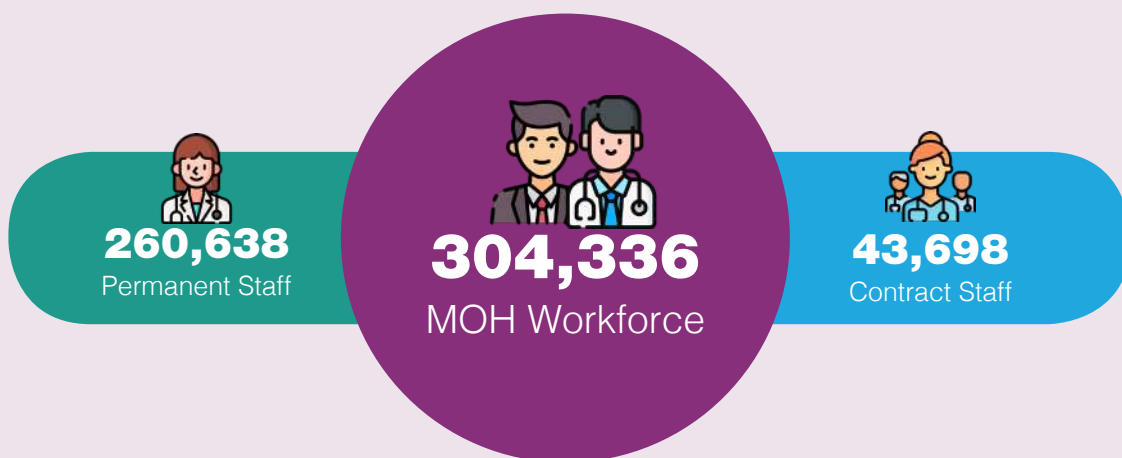
iii. Promotion, Evaluation and Performance Branch

Involving the management and monitoring of the Key Performance Indicators (KPI) of the top management, the management of acting and promotion as well as performance management

HUMAN RESOURCES CAPACITY

MOH is the ministry with the second highest human resources after the Ministry of Education (MOE). As of 31 December 2022, the total number of human resources serving at the MOH is 304,336 officers. This number consist of 260,638 (86 per cent) permanent appointed officers and 43,698 (14 per cent) contract appointed officer as shown in **Figure 3.1**.

Figure 3.1
Permanent and Contract Appointments for Year 2022

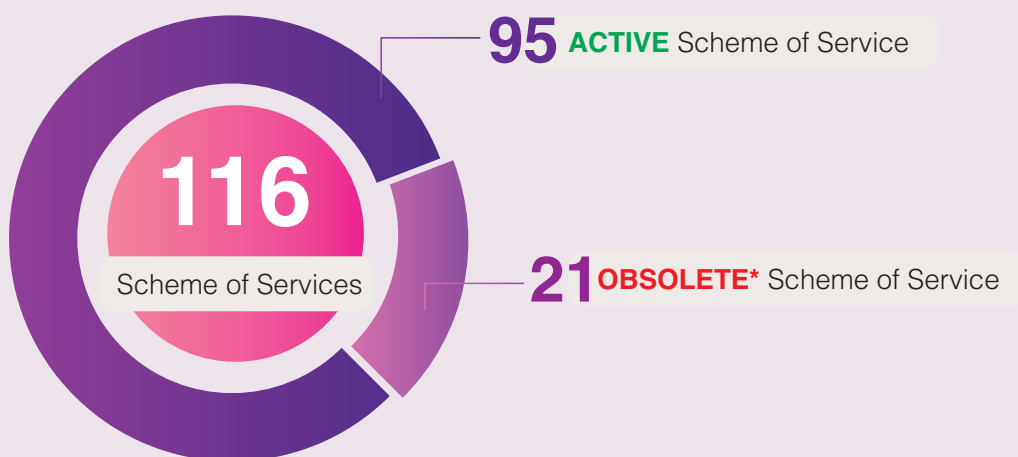


Source: Human Resource Department, MOH

DIVERSITY OF SERVICE SCHEMES

The efficiency and effectiveness of the operation of MOH health facilities is achieved through collective commitment and cooperation from various levels of human resources and scheme of service backgrounds. There are 116 schemes of service in the MOH that are still active, consist of 95 active schemes of service and 21 obsolete schemes of service which still have an incumbent serving as illustrated in **Figure 3.2**.

Figure 2.2
Total Scheme of Service in MOH



Note: *Obsolete Scheme of Service will be complete abolished when the current incumbent retires or resigns.

Source: Human Resource Department, MOH

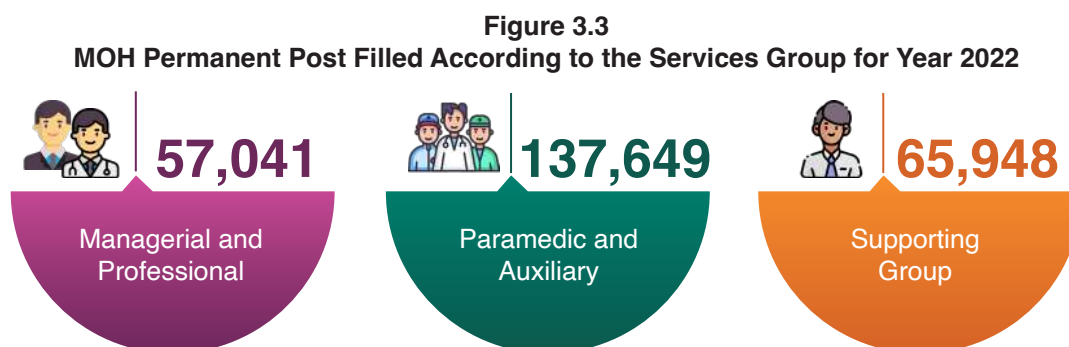
ADDITIONAL PERMANENT POST

From the year 2019 to 31 December 2022, MOH has received a total of 21,356 new posts. This increase was received following the need for additional staffing in existing, upgraded as well as newly constructed health facilities.

This increase shows the success of the MOH in negotiating with central agencies to create additional permanent post while other ministries and agencies facing constraint to optimise their existing staffing in dealing with expansion of service's needs. Among the successes of the MOH in creating additional post in 2022 are as follows:

- i. 4,186 additional posts for three (3) schemes of service consist of 3,586 medical officers, 300 dental officers and 300 pharmacy officers;
- ii. 10,675 additional posts for health facilities which had been completely upgraded and newly built from 2019 until June 2021; and
- iii. 6,495 additional posts for upgraded and new health facilities which had been completely upgraded and newly build from July 2021 until December 2021.

Following this success, MOH has a total of 277,984 permanent post, an increase of 3.8 per cent compared to 2021, with achievement of filling permanent post as many as 260,638 (93.6 per cent) officers. The filling of post involving positions in the appointment grade and promotion grade continues through a collaborative relationship with the PSC and approval on acting of post and promotion to the Promotion Board by considering the attrition factors such as resignations and retirements. **Figure 3.3** indicates filled MOH personnel according to the services group.



Note:

- i. Managerial and Professional group is an officer in grade 41 and above including those in Top Management Group (Superscale and Special Grade) and integrated scheme of service.
- ii. The total of permanent posts in MOH exclude 2,697 filled cadre posts in other ministries or government agencies.

Source: Human Resource Department, MOH

MOH also commit to help other ministries such as the Ministry of Internal Affair through health support services implemented by agencies under the ministry such as the Immigration Department and the National Anti-Drug Agency (NADA), the Department of Social Welfare which is under the Ministry of Women, Family and Community Development and Ministry of Defence through placement of nurses and health care assistants in hospital facilities under the Malaysian Armed Forces.

MOH has placed 2,697 health workers in cadre post in other ministries, which includes 152 officers in the management and professional group, 1,329 in the paramedic and auxiliary group and 1,216 in the implementation group.

Table 3.1
Placement of MOH Cadre Staff in Other Ministries and Government Agencies by Service Group for Year 2022

Ministry/Government Agency	Managerial and Professional	Paramedic and Auxiliary	Total Cadre Staff
Ministry of Defence	7	838	845
Ministry of Internal Affairs	60	261	321
Ministry of Women, Family and Community Development	-	144	144
Ministry of Human Resource	20	27	47
Prime Minister's Department	38	-	38
Ministry of Education	5	28	33
Ministry of Housing and Local Government	17	11	28
Ministry of Higher Education	-	15	15
Ministry of Youth and Sport	-	5	5
Ministry of Natural Resources and Environment	4	-	4
Ministry of Science, Technology and Innovation	1		1
Total	152	1,329	1,481

Note: *Exclude supporting group.

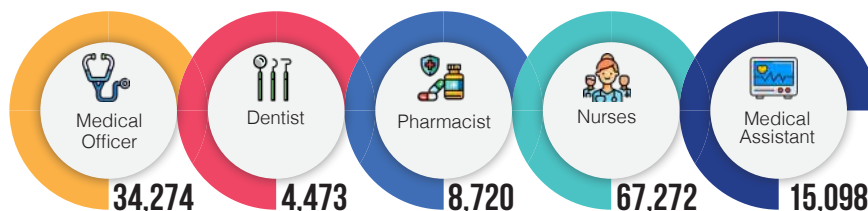
Source: Human Resource Department, MOH

APPOINTMENT OF MAIN SERVICE SCHEMES

MOH scheme of service includes medical officers, dental officers, pharmacy officers, science officers, environmental health officers, nurses, assistant medical officers, radiographer, assistant environmental officers, nutritionist officers, engineers, medical laboratory technologists and others.

In year 2022, the total number of human resources in five (5) scheme of service which are medical officers, dental officers, pharmacy officers, nurses and assistant medical officers consist of 129,837 (50 per cent) out of a total of 260,638 filling permanent posts as shown in **Figure 3.4**.

Figure 3.4
MOH Main Schemes of Service for Year 2022



Source: Human Resource Department, MOH

APPOINTMENT OF PERMANENT STAFF

MOH through the Appointing Authority, PSC, responsible to recruit medical officers, dental officers and pharmacy officers to fill permanent vacancies. The recruitment exercise in year 2022 is the largest permanent position filling matter carried out by the MOH since the contractual appointment of the position was introduced in year 2016. In addition, the MOH continues to carry out permanent recruitment for other scheme of service such as the permanent appointment of paramedics and auxiliaries.

11,320 of staff consist of nine (9) schemes of service had been appointed to fill current vacancy of MOH permanent post in year 2022 as shown in **Table 3.2**.

Table 3.2
Permanent Appointments by Scheme of Service for Year 2022

Scheme of Service	Total Appointment
Medical Officer	4,255
Dentist	1,425
Pharmacist	1,656
Nurses	3,087
Dental Surgery Assistant	501
Environmental Health Officer Assistant	135
Physiotherapist	85
Occupational Therapist	90
Dental Technologist	86
Total	11,320

Source: Human Resource Department, MOH

On 12 September 2022, a Workshop to Discuss Projection of Post, Analysis of Permanent Appointment for Contract Doctor and Planning of Additional Medical Specialist according to discipline was held to oversee future outlook of permanent appointment for contract doctor and planning to increase specialist in MOH. The purpose of this workshop is to discuss the direction of the permanent appointment of contract doctors and the MOH's plans to increase the number of medical specialists, especially in areas of expertise that are very much needed at the MOH.

Image 3.1
Workshop to Discuss Projection of Post, Analysis of Permanent Appointment for Contract Doctor and Planning of Additional Medical Specialist



Source: Human Resource Department, MOH

APPOINTMENT OF CONTRACT STAFF FOR SERVICE CONTINUITY

In year 2022, MOH achieved success in retaining contract healthcare personnel through the process of contract reappointment certification. This situation proved to be highly beneficial as MOH continued to face the challenges of COVID-19, with a significant increase in the number of patients and clients seeking medical care at MOH facilities, particularly in the Emergency and Trauma Department of hospitals.

Total of 43,698 staff consist of various scheme have been appointed on contract basis. Appointment on contract basis were made due to expertise requirement, act's requirement for housemanship training, compulsory service and to assist the continuity of current health services delivery in MOH healthcare facilities as shown in **Table 3.3**.

Table 3.3
Appointment of MOH Contract Staff for Year 2022

Scheme of Service	Total Appointment
Appointment Due To Expertise Service Requirements	
Medical Specialist	28
Dental Specialist	1
Appointment due to the Act's Requirements for Housemanship training and Compulsory Service	
Medical Officer	20,330
Dental Officer	3,702
Pharmacist	3,967

Scheme of Service	Total Appointment
Appointment to Assist The Continuity of Health Services Delivery	
Assistant Medical Officer	4,724
Nurse	2,336
Medical Labarotary Technologist	1,147
Environmental Health Officer Assistant	1,146
Dental Surgery Assistant	460
Radiographer	447
Physiotherapist	229
Occupational Therapist	221
Counsellor	200
Science Officer	139
Dental Technologist	111
Environmental Health Officer	76
Healthcare Assistant	23
Optometrist	15
Public Assistant	11
Research Officer	1
IPKKM Contract of Service Officer	2
MySTEP Personnel	4,382
Total	43,698

Source: Human Resource Department, MOH

ENGAGEMENT SESSION WITH TRADE UNION AND EMPLOYEE ASSOCIATION

To ensure efficient and effective service delivery, MOH must ensure a two-way communication implement periodically to address emerging issues faced by its officers. The employer-employee engagement platform through the *Majlis Bersama Jabatan* (MBJ) and engagement sessions with union representatives is carried out with the assistance of BSM as the secretariat, top management and administrative members.

Through the engagement session platform, the trade union or employee association will be given a chance to communicate with MOH top management in addressing their opinion, views and contributing an idea for the interest of better working environment within MOH organisation. The main engagement session with trade union and employee association as follows:

- i. Town Hall session with Minister of Health and Malaysian Medical Association (MMA) on 10 February 2023 at MOH Main Hall;
- ii. Courtesy visit session from Alliance of President and General Secretary Council (MAPSU) of trade union in MOH with Minister of Health on 24 February 2022;
- iii. Courtesy visit session from MAPSU of trade union in MOH with BSM Secretary on 10 Mac 2022;
- iv. MAPSU of trade union in MOH Convention with Deputy Health Secretary of Management on 27 October 2022 at New York Hotel Johor Bahru, Johor; and
- v. MBJ session was held four (4) times at MOH Headquarters (IPKKM), State Health Department (JKN) and *Pusat Tanggungjawab* (PTJ).

Image 3.2
MOH Engagement Sessions for Year 2022



MOH Town Hall session with MMA



MAPSU of Trade Union in MOH Convention

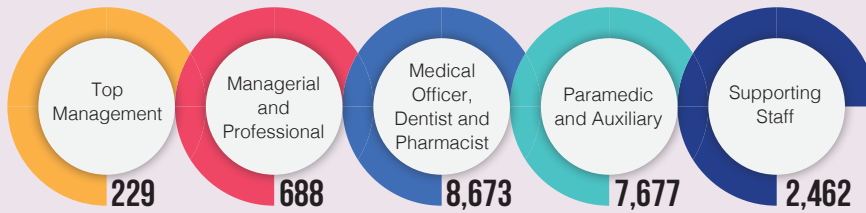
Source: Human Resource Department, MOH

EXCELLENT SERVICE AWARD (APC) AND PROMOTIONS

MOH appreciate the commitment and contributions of its officers at every level in delivering healthcare services. Each year, MOH ensures every Head of Department to conduct annual performance evaluations for all officers under their supervision for screening of APC's candidate, approval on acting of post as well as promotions to a higher grade.

For the year 2022, eight (8) per cent of all MOH officers were awarded the APC, while 19,729 officers have been approved for acting on post and promotion to higher grade as shown in **Figure 3.5**.

Figure 3.5
Promotion Affairs for Year 2022



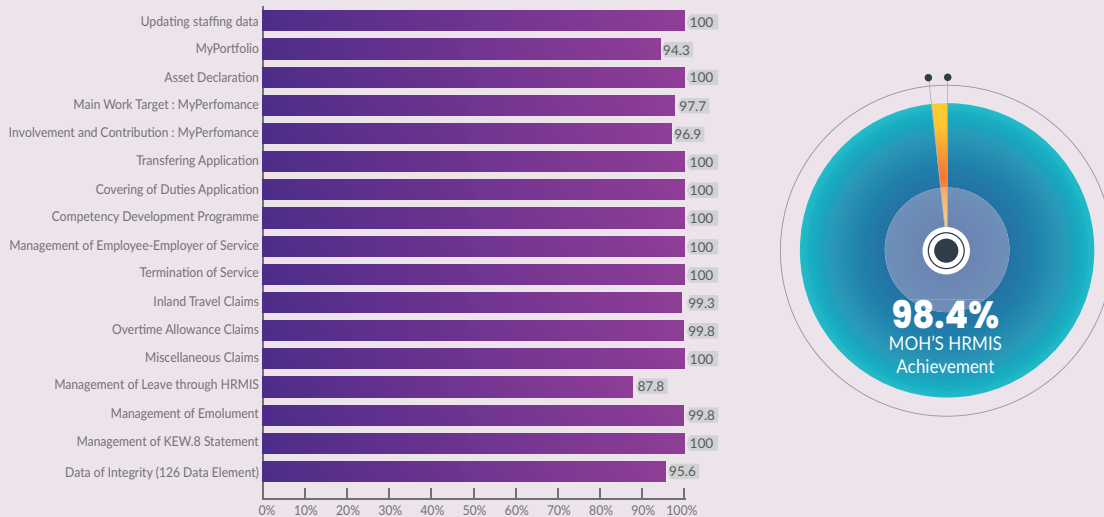
Source: Human Resource Department, MOH

HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEM (HRMIS)

HRMIS is the core human resource management system developed by the Public Service Department to manage human resource information within the public service. This system comprises core modules such as Human Resource Acquisition, Development, Performance Management, Career Management, Compensation Management, Benefits and Rewards.

HRMIS provides an up-to-date, open data and flexible human resource information system to meet management needs at MOH. Therefore, MOH is committed to ensuring the implementation of HRMIS at all levels of IPKKM, including *Pusat Tanggungjawab* in rural and remote areas. In year 2022, the achievement of HRMIS implementation in MOH was 98.4 per cent. This achievement takes into account the modules of myPortfolio and myPerformance, which are still in the early phase implementation as shown in **Figure 3.6**.

Figure 3.6
2022 MOH HRMIS Achievement Report



Source: Human Resource Department, MOH

TRAINING MANAGEMENT DIVISION (BPL)

PRE-SERVICE PROGRAMMES

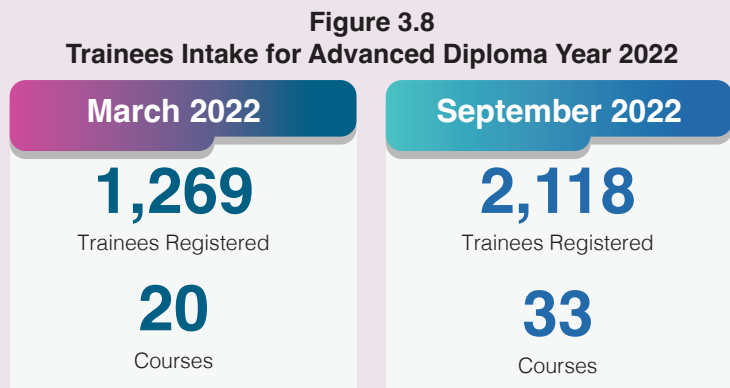
Pre-service programme is a paramedic training consisting of 13 health paramedics and auxiliaries. The numbers of intake for pre-service training in the year 2022 as in **Figure 3.7**.



Source: Training Management Division, MOH

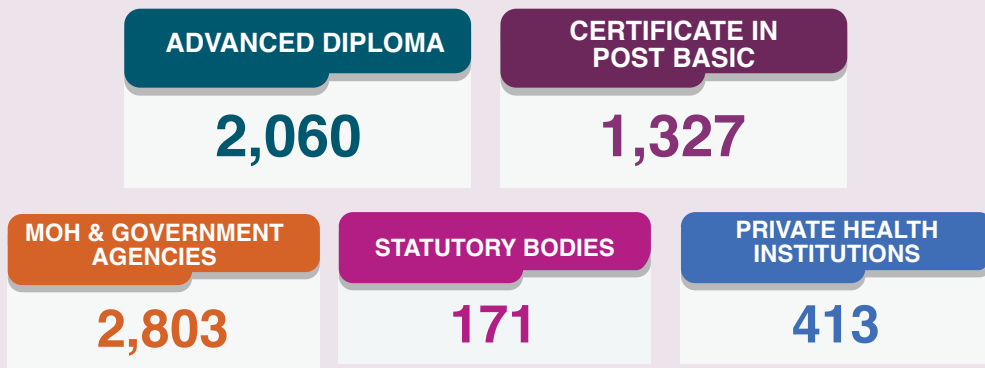
ADVANCED PROGRAMMES

The MOH Advanced Programme is an In-Service Training (LDP) programme offered to health paramedics and auxiliaries personnel from governmental agencies, statutory bodies and private health Institutions. The Advanced Diploma intakes in the year 2022 as shown in **Figure 3.8**.



Source: Training Management Division, MOH

Figure 3.9
Advanced Diploma and Certificate for Post Basic Intake Year 2022



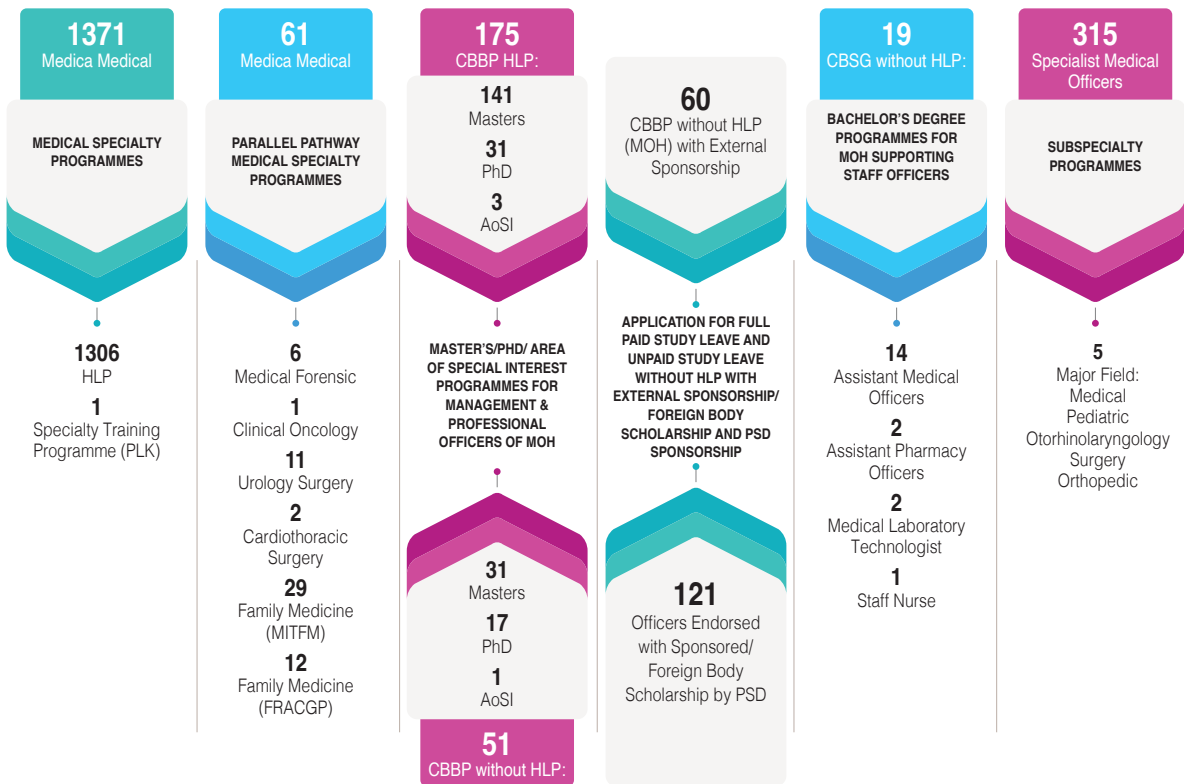
Source: Training Management Division, MOH

SPONSORSHIP FOR SPECIALTY AND ADVANCED STUDIES

BPL has been entrusted by the Public Services Department (PSD) to manage studies sponsorship for MOH officers as below:

- i. Medical Specialty Programmes;
- ii. Parallel Pathway Medical Specialty Programmes;
- iii. Master's/Doctor of Philosophy/Area of Special Interest Programmes for MOH Management & Professional Officers;
- iv. Application for Full Paid Study Leave and Unpaid Study Leave without HLP with External Sponsorship/Foreign Body Scholarship and PSD Sponsorship; and
- v. Bachelor's Degree Programmes for MOH Supporting Staff Officers and Subspecialty Programmes.

Figure 3.10
Sponsorship for Specialty and Advanced Studies for Year 2022

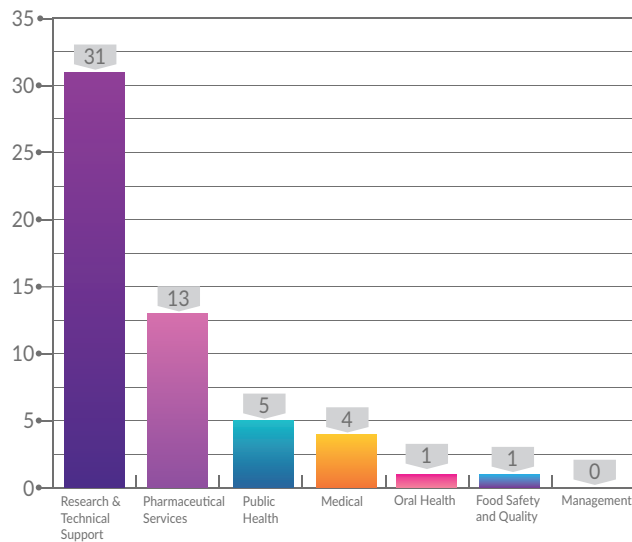


Source: Training Management Division, MOH

IN-SERVICE TRAINING (LDP)

In year 2022, the MOH organised 12 LDP Domestic Courses, with a total of 631 participation officers from BPL and ILKMM. Furthermore, 55 MOH staff members underwent LDP courses internationally, while an additional two (2) attended Advanced Competency Programme (ACP) courses abroad.

Figure 3.11
LDP International Courses for Year 2022

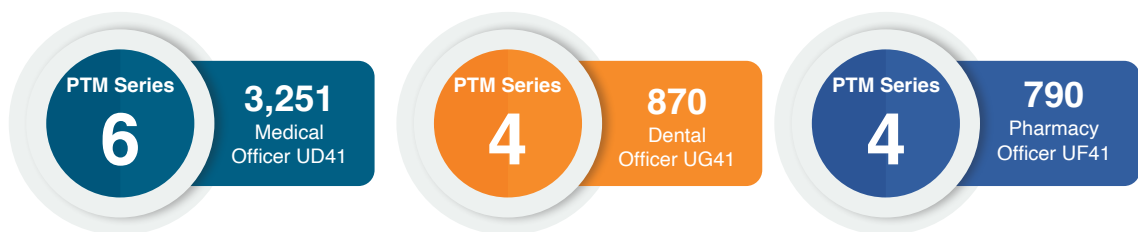


Source: Training Management Division, MOH

PROGRAM TRANSFORMASI MINDA (PTM)

PTM is conducted by BPL for medical, dental, and pharmacist, as well as ILKKM trainees, with the aim of providing knowledge on government administrative structures, civil service, and regulations that need to be adhered to as public servants. In year 2022, BPL successfully organized 14 PTM sessions to provide valuable exposure and support to help them cope with the challenges of their new roles.

Figure 3.12
PTM Courses Year 2022




Source: Training Management Division, MOH

ACCREDITATION PROGRAMME IN ILKKM BY MALAYSIAN QUALIFICATIONS AGENCY (MQA)

BPL is implementing an application for accreditation for all the programmes offered in ILKKM in phases. In year 2022, 18 programmes were awarded Full Accreditation (FA) by MQA. Accreditation is required to ensure that an institution that offers skills improvement and specialty achieves the quality standards that have been set.

Figure 3.13
Accreditation Certification Programme in ILKKM for Year 2022

ILKKM Alor Setar (Medical Assistant) Advance Diploma in Emergency Care	ILKKM Kota Kinabalu Advance Diploma in Midwifery Diploma in Nursing	ILKKM Kuala Terengganu (Nursing) Advance Diploma in Emergency Care Advance Diploma in Midwifery	ILKKM Kuching Advance Diploma in Midwifery	
ILKKM Alor Setar (Nursing) Advance Diploma in Midwifery Diploma in Nursing	ILKKM Bertam (Nursing) Diploma in Nursing	ILKKM Kuantan (Nursing) Advance Diploma in Midwifery	ILKKM Kuching (Public Health) Diploma in Environmental Health	
ILKKM Georgetown (Nursing) Advance Diploma in Midwifery		ILKKM Melaka (Nursing) Advance Diploma in Midwifery	ILKKM Port Dickson (Nursing) Advance Diploma in Midwifery	
ILKKM Kuala Pilah (Nursing) Diploma in Nursing		ILKKM Sandakan (Nursing) Advance Diploma in Midwifery	ILKKM Seremban (Medical Assistant) Advance Diploma in Emergency Care Advance Diploma in Respiratory Care	
ILKKM Kubang Kerian (Nursing) Advance Diploma in Midwifery Diploma in Nursing		ILKKM Sungai Buloh Advance Diploma in Computer Tomography Advance Diploma in Midwifery Advance Diploma in Rehabilitasi Neuro Diploma in Environmental Health Diploma in Medical Imaging Diploma in Nursing Diploma in Occupational Therapy Diploma in Physiotherapy Diploma in Radiotherapy	ILKKM Sibul (Nursing) Advance Diploma in Midwifery	ILKKM Sultan Azlan Shah Advance Diploma in Emergency Care Advance Diploma in Mental Health Care Advance Diploma in Midwifery Diploma in Health and Medical Sciences Diploma in Nursing
ILKKM Kuala Lumpur (MLT) Advance Diploma in Blood Transfusion Advance Diploma in Hematologi Advance Diploma in Histopatologi Advance Diploma in Sitologi				
ILKKM Johor Bahru Advance Diploma in Medical Imaging (Breast Imaging) Advance Diploma in Midwifery Diploma in Medical Imaging Diploma in Nursing Diploma in Occupational Therapy Diploma in Physiotherapy				

Source: Training Management Division, MOH

ILKKM CONVOCATION CEREMONY

In year 2022, BPL held a ILKKM Convocation Ceremony to celebrate a total of 8,742 graduates in six (6) days of events starting from Sarawak's Zone (1 October 2022), Sabah's (15 October 2022) and ending in Peninsular Malaysia (27 to 30 October 2022). The Convocation Ceremony 2022 theme was *Graduan Berilmu Tunjang Kesihatan Mampai*, with the government's intention to ensure the country's health system is more sustainable and resilient through the government and people's thoughts.

Image 3.3
ILKKM Convocation Ceremony 2022



Source: Training Management Division, MOH

ILKKM TUTORS PROFESSIONALISM SEMINAR

BPL has held an ILKKM Tutors Professionalism Seminar on 8 to 9 November 2022 in ILKKM Sultan Azlan Shah, Perak. The purpose of this seminar was to invigorate the spirit of research and innovation among tutors in ILKKM. A total of 200 tutors had attended physically, while 55 tutors participated virtually.

Imej 3.4

ILKKM Tutors Professionalism Seminar 2022



Source: Training Management Division, MOH

BPL COMPETENCY ENHANCEMENT PROGRAMME

BPL also implements competency enhancement programs for employees regarding human resource management, financial management, and service management. In addition, briefings are provided to explain the implementation of ILKKM's HRMIS KPI, which involve the expansion of the introduced new KPIs from six (6) to 17, as introduced by the PSD.

MIGRATION OF EXISTING E-MAIL DOMAIN (@moh.gov.my) TO EDUCATION DOMAIN @ilkkm.edu.my IN PHASES

BPL with the collaboration of MyNIC has successfully registered ilkkm.edu.my domain in August 2022 to activate the usage of MyGovUC 2.0, Malaysian Administrative Modernisation and Management Planning Unit (MAMPU)'s Google Education package. The migration from the existing Google package to the education package opened an opportunity for ILKKM's tutors in using digital facilities in Google Education Ecosystem which is also used by public educational institutions in Malaysia. In addition to driving the dominance of digital technology among the ILKKM's, these changes also support BPL's effort in transforming ILKKM into an Academic Centre of Excellence.

COMPETENCY DEVELOPMENT DIVISION (BPK)

COMPETENCY BASED TRAINING

To ensure that the staff members of MOH have the necessary skills and knowledge to perform their duties, the BPK has conducted various blended learning courses. In year 2022, a total of 56 courses were organised which comprise of the following areas as shown in **Table 3.4**.

Table 3.4
Number of Courses by Unit for Year 2022

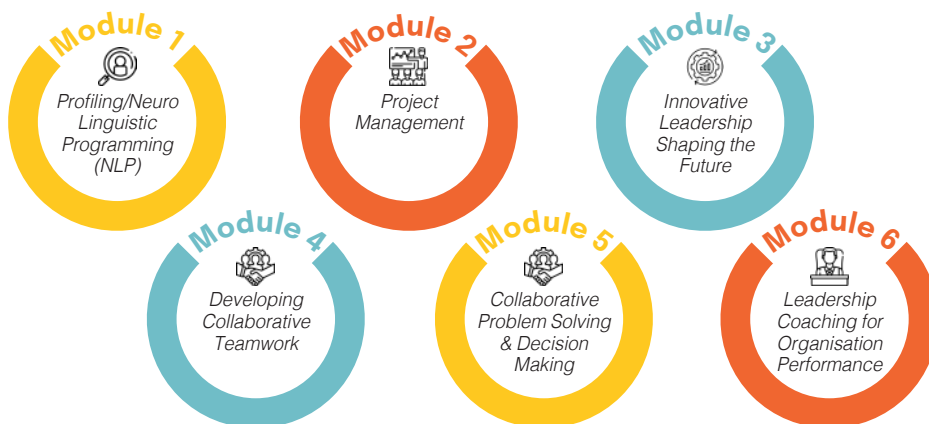
Units	Physically	Online	Total Courses
Competency Development 1	3	4	7
Competency Development 2	3	8	11
Competency Development 3	1	3	4
Competency Development 4	1	6	7
Competency Development 5	2	5	7
Competency Development 6	7	5	12
Innovation and Quality	5	1	6
Departmental Exam	2	0	2
Total	24	32	56

Source: Competency Development Division, MOH

TALENT DEVELOPMENT PROGRAMME (TDP)

TDP is a training programme based on competency generic that organised by BPK since year 2018. Until year 2022, BPK had held four (4) Cohort for TDP that involve grade 41-52 officers from various schemes in MOH. TDP Cohort 4 which is consists of seven (7) modules was started from 14 to 18 June 2022 involving grade 48-52 officers. The last module will be held on 10 to 14 January 2023. The six (6) modules that have been implemented in year 2022 are shown in **Figure 3.13**.

Figure 3.14
TDP Cohort 4



Source: Competency Development Division, MOH

Image 3.6
Launching of TDP Cohort 4



Source: Competency Development Division, MOH

DISASTER MANAGEMENT SEMINAR

The seminar is a platform to gain knowledge and understanding of all parties involved in management of operational disasters before, during and after the disaster. A total of 319 participants attended this seminar consists of the MOH Top Management, Secretary-General Ministries, Director General of departments and agencies, Director of State Health and Hospitals, Chief Department of Emergency and Trauma, Government-Linked Company (GLC) Chief Executive Officer and Head of Non-Government Organisation (NGO). A book titled *Overview of Disaster Life Support in Disaster Management* has been launched and published for reference and guidance.

DEPARTMENT SUBJECT EXAMINATION

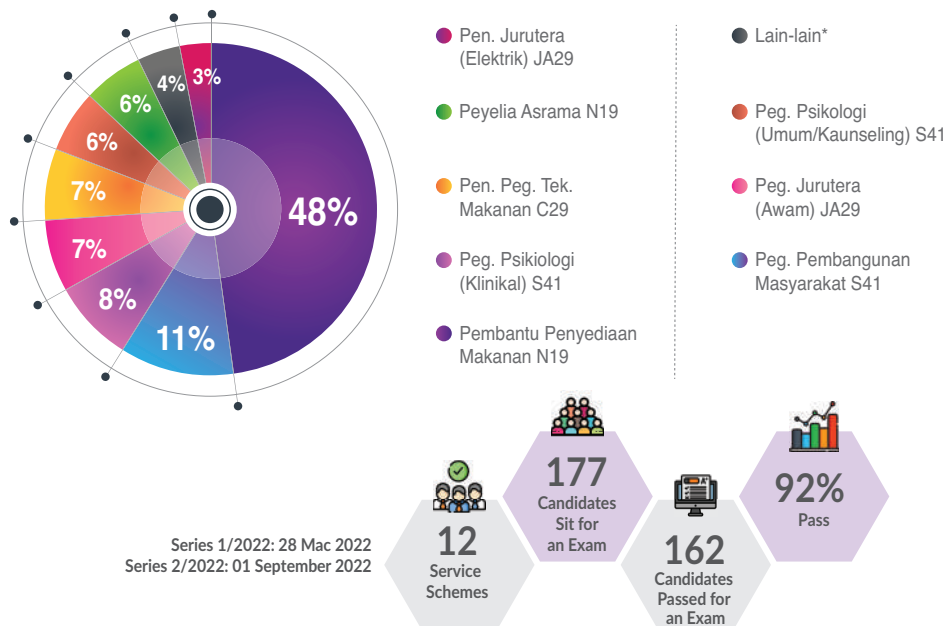
BPK implemented the Department Subject Examination which is one of the requirements for the officer's service confirmation. A newly appointed officer is required to pass the exam within the first three years of appointment. The Department Subject Examinations were held twice in the year 2022 on 28 March 2022 and 1 September 2022 involving 12 service schemes. A total of 177 candidates sat for the examination and 162 candidates have passed the examination in 2022 as shown in **Figure 3.15**.

Image 3.7
Disaster Management Seminar and Book Launch Event



Source: Competency Development Division, MOH

Figure 3.15
Department Subject Examination for Year 2022



*Other schemes: Pen. Peg. Sains C29, Pen. Jurutera (Mekanik) JA29, Peg. Penyediaan Makanan C41 dan Juruteknik Perubatan (Prostetik/Ortotik) U19

Source: Competency Development Division, MOH

MANAGEMENT SERVICES DIVISON (BKP)

FINANCIAL MANAGEMENT

BKP is responsible for planning, application, managing and evaluate allocation and expenditure for IPKKM's Management Programme. For year 2022, a total of RM1.59 billion has been allocated under the operating budget for this programme. The performance-based expenditures for the programme for the financial year ending on 31 December 2022 were more than 100 per cent as shown in **Table 3.5**.

Table 3.5
Allocations and Expenditures for the Financial Year 2022

Activity	Allocation (RM)	Expenditure (RM)
IPKKM Management	705,260,298.55	705,261,629
Human Resource	14,568,707.90	14,610,300.61
Finance	470,757,128.24	470,757,128.24
Training	358,822,343.27	358,820,436.03
Information Technology	40,553,048.78	40,553,048.78
Competency Development	4,689,116.80	4,797,506.71
Total	1,594,650,643.54	1,594,800,049.37

Source: Management Service Division, MOH

ASET MANAGEMENT

BKP is responsible for matters related to the management of government movable assets, maintenance for the IPKKM Putrajaya and IPKKM Jalan Cenderasari, Kuala Lumpur as well as procurement for the Office of Administrative Members, Top Management and the Management Services Division (including Office of Legal Counsel, Integrity Unit and Corporate Communications Unit). Achievements were according to each activity for the year 2022 are as in **Figure 3.16**.

Figure 3.16
Activities under Asset Management Unit for Year 2022

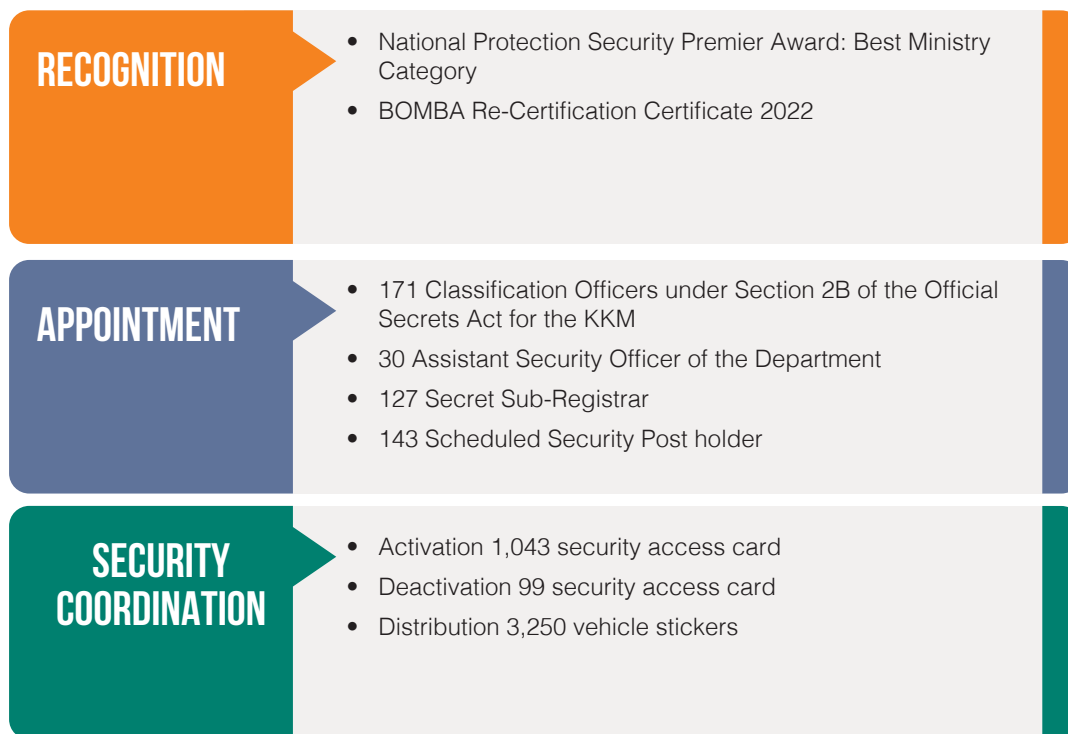


Source: Management Service Division, MOH

MANAGEMENT OF PROTECTIVE SECURITY

BKP is responsible for the management of protective security in KKM including the management of the government's official confidential documents in line with the Security Directive (Revisions and Amendments 2017) and the related circular, letters, guidelines as well orders as summarised in **Figure 3.17**.

Figure 3.17
Management of Protective Security for Year 2022

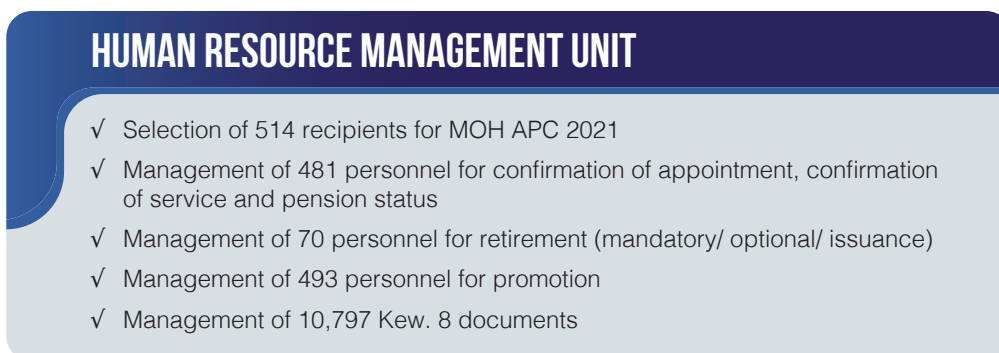


Source: Management Services Division, MOH

GENERAL MANAGEMENT

The General Management Branch manages human resources for IPKKM and matters pertaining administration including consultation for protocol, psychology and Islamic affairs matters based on demand in MOH as shown in **Figure 3.18**.

Figure 3.18
General Management Branch Activities for Year 2022



ADMINISTRATION UNIT

- √ 100% issues solved through the MBJ
 - 1,996 appointments for the Hospital Visitors Board Members (ALPH) for the period of 1 June 2020 to 31 May 2023
 - 229 appointments for the Psychiatric Hospital Visitors Board Members (ALPHP) for the period of 4 August 2020 to 3 August 2023
 - Coordination of MOH's Hari Raya Aidilfitri Celebration with the presence of the Prime Minister on 17 May 2022
 - Coordination of the Opening Ceremony for the National Institutes of Health (NIH) by His Majesty Seri Paduka Baginda Yang Di-Pertuan Agong on 9 August 2022.
 - Coordination of the Opening Ceremony for Bera Hospital, Pahang by the Prime Minister on 20 August 2022
 - Coordination of the Opening Ceremony for Rembau Hospital, Negeri Sembilan by the Minister of Health on 23 September 2022

ISLAMIC AFFAIRS UNIT

- √ Six (6) coordination of dakwah programs, application of Islamic values and Islamic Celebration Days
- √ Coordination of Hajj Medical Group for Hajj Season of 1443H/ 2022M
- √ 30 coordination of Halal Malaysia Certification for kitchen and café in hospitals, pharmaceuticals, medical devices and halal medication
- √ Advisory services related to the management of Islamic affairs in MOH:
 - 20 Worship Friendly Hospital Programmes;
 - Four (4) Lajnah Pengawalseliaan Pengamal Perubatan Islam (LAJPPI); and
 - 10 Patient Spiritual Care Program for staffs, patients and families in all MOH hospitals and health facilities

Source: Management Services Division, MOH

INFORMATION RESOURCES MANAGEMENT

BKP provides library services as well as providing access to online databases and journals through the Virtual Library Portal for MOH employees nationwide as shown in **Table 3.6**.

Table 3.6
Information Resources Management Activities for Year 2022

Activities	Achievements
Information Management and Digitalisation	<ul style="list-style-type: none"> • Subscribed six (6) databases for Virtual Library Portal: AccessMedicine, Clinical Key for Nursing (including BibliU & Wiley eBooks), Emerald Insight (Emerald Health and Social Care eJournal Collections), OVID, LawNet and eLaw. • Access to Virtual Library Discovery Services Portal (VLDS) https://vlib.ovidds.com • VLDS Portal access - 84,893 visitors. • VLDS Portal membership cumulative - 1,685 members • Virtual Library Portal and Online Database subscription sharing and awareness session.
Development and Consultancy Services	<ul style="list-style-type: none"> • Coordinate 78 medical libraries under MOH. • Organised Workshop on Skim Pengkelasan National Library of Medicine (NLM) dan Medical Subject Headings (MeSH) bagi Perpustakaan Perubatan di bawah KKM from 17 to 19 Oktober 2022. • Advisory and consultancy services visitation to MOH medical libraries: <ul style="list-style-type: none"> (i) Hospital Raja Perempuan Zainab II - 28 Ogos 2022 (ii) ILKKM Kubang Kerian - 28 Ogos 2022 (iii) ILKKM Kubang Kerian (Cawangan Kota Bharu) - 30 Ogos 2022 (iv) Hospital Tawau - 21 September 2022 (v) ILKKM Tawau - 21 September 2022 • Documentation of 455 books and thesis.

Source: Management Services Division, MOH

PHYSICAL AND DIGITAL RECORD MANAGEMENT

BKP is also responsible for the management of records in MOH including monitoring of the Digital Document Management System (DDMS) as well as MOH personnel files as shown in **Figure 3.19**.

Figure 3.19
Physical and Digital Record Management for Year 2022

Digital Documents Management System (DDMS)
<ul style="list-style-type: none"> » Implementation of DDMS on 5,829 personnel and 37 divisions in IPKKM. » 150,993 documents are uploaded into DDMS.
Management of MOH Personnel Files
<ul style="list-style-type: none"> » Management of 22,489 personnel files to Human Resources Division, IPKKM. » Registration of 5,961 personnel files through Personnel Files Management System (SPFP).

Implementation of Records Management Programme

- » Implementation of 14 courses and record management training various PTJs.
- » Implementation of Outreach Programme:
 - Records Management Unit Consultation Day in IPKKM.
 - Digital Document Management System (DDMS 2.0) Open Day in IPKKM.
- » Consultation of file and mail management to 37 divisions in IPKKM.
- » Record Management Inspectorate in three (3) North Zone (Perlis, Pulau Pinang and Kedah) in MOH.
- » Management of record disposal:
 - Disposal of 79,760 files.
 - 8 books transferred to the National Archive of Malaysia.
 - 726 photos transferred to the National Archive of Malaysia.

Management of IPKKM Mails and Registry

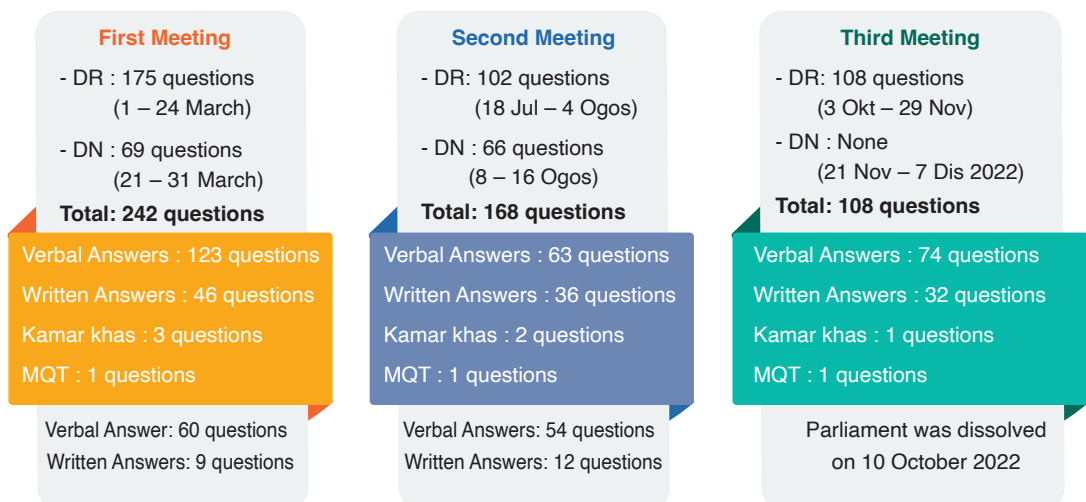
- » 106,785 mails received.
- » 105,123 mails delivered.

Source: Management Services Division, MOH

PARLIAMENT AFFAIRS AND QUALITY & INNOVATION

MOH received 518 questions from both Dewan Rakyat and Dewan Negara based on the categories as shown in **Figure 3.20**. MOH received 509 verbal and non-verbal questions which was the highest among other ministries covering issues related to vaccination management, construction, upgrading and others.

Figure 3.20
Summary of Questions Received from *Dewan Rakyat* (DR) and *Dewan Negara* (DN) by MOH for the Year 2022



Source: Management Services Division, MOH

MINISTER OF HEALTH KEY PERFORMANCE INDICATOR (KPI)

For 2022, the BKP has implemented the following activities and programmes:

i. *Jelajah Aspirasi Keluarga Malaysia (JAKM)*

Coordinator for the Safety, Wellbeing, Hygiene, Transport, and Logistics Committee (JKKKPL) and the Exhibition, Filling, and Activities Committee as the Lead Ministry. This JAKM programme has replaced the Ministerial Performance Indicator.

ii. *Performance Evaluation Based on Key Performance Indicators (KPI) for Public Service Top Management Officers (PPTPA) Tier 1, Tier 2, and Tier 3 KKM Year 2022*

The Management Services Division's KPI Unit is tasked with serving as the coordinator and monitor for the implementation of KPI-based performance evaluation for:

- PPTPA Tier 1 to Tier 3 (Management Sector);
- Under the Agency Shared Responsibility dimension, PPTPA Tier 1 to Tier 4 (Technical Sector) for Generic KPIs; and
- The PSD and PPTPA collaborated on the 26 to 28 October 2023 to refine Tier 1 KPI

APPRECIATION OF INNOVATION AT MOH

The Ministry of Health Innovation Day 2021 was held on 31 October 2022 to recognize the innovation achievements of Ministry of Health staff through Prime Innovation Award (API), Special Innovation Award (AKI), Innovation Award (AI), Innovative and Creative Group Convention (KIK) and MOH Quality Assurance (QA) Convention.

The Specimen Management Information System (SMIS) is an innovation by the Institute for Medical Research (IMR) Kuala Lumpur, which was awarded the MOH AKI for 2021. To date, a total of 920 innovation products have been produced by MOH staff and nominated for innovation awards at MOH. Through the creation and idea of such innovations, they can help facilitate the delivery of services in healthcare facilities.

Image 3.8
Ministry of Health Innovation Day 2021



Source: Management Services Division, MOH

NATIONAL TECHNOLOGY AND INNOVATION SANDBOX (NTIS)

NTIS was launched by the Prime Minister on 19 August 2022. NTIS aims to drive innovation and creativity in the country by catalysing and bringing together various existing efforts including digitalisation and Research and Development (R&D) services. This effort is a step towards increasing the commercialization rate of local products and technologies.

The Ministry of Health has been selected as a Facility Partner to provide testing and validation facilities such as laboratories, production facilities and many more, as well as a strategic partner in the implementation of NTIS Health Category. The Minister of Health and the Minister of Science, Technology, and Innovation launched four (4) hospitals that will be used as NTIS Hubs, namely Tunku Azizah Hospital (HTA), Hospital Putrajaya, National Cancer Institute (IKN) and Hospital Bera on 2 September 2022.

Image 3.9
NTIS Health Technology Hub Launching Ceremony



Source: Management Services Division, MOH

PUBLIC SECTOR CONDUCTIVE ECOSYSTEM (EKSA) CERTIFICATION

IPKKM and 21 healthcare facilities have successfully obtained certification for compliance with the EKSA for the period of 1 December 2022 to 30 November 2024 by MAMPU.

MS ISO 9001:2015 CERTIFICATION OF IPKKM

MOH and SIRIM QAS International Sdn. Bhd. conducted Phase 1 Surveillance Audit for the Quality Management System MS ISO 9001:2015 on five (5) divisions, namely the Procurement and Privatisation Division, Human Resource Division, Management Services Division, Training Management Division and Development Division from 20 to 22 April 2022.

INFORMATION MANAGEMENT DIVISION (BPM)

DIVISIONAL RESTRUCTURING

BPM is a division that coordinates and supports core Information and Communication Technology (ICT) services of MOH. The new structure of BPM was enforced in early year 2022, and has given a significant impact on the direction, role and functions of BPM. The focus of BPM is to empower digitization of government health services by strengthening data sharing and integration as well as utilisation of information guided by Data Driven Government as per highlighted in MOH Digitalisation Strategic Plan 2021 to 2025 (PSP KKM 2021-2025). In line with the current landscape changes of the new government, BPM needs to strengthen a comprehensive digital ecosystem to ensure an integrated, comprehensive and secure government service delivery can be implemented.

MOH DIGITALISATION STRATEGIC PLAN 2021 TO 2025

PSP KKM 2021-2025 comprises of four (4) strategic cores, 13 strategies and 30 programmes which will be executed by various divisions, institutions and department in MOH from year 2021 to 2025. The development of the plan started in year 2020 and completed by end of year 2021. The plan was officially launched on 28 February 2022 followed by signing off the project with MAMPU which is an agency that provides consultation in the development of the plan. The launching session was also attended by the heads of application and data, infrastructure, governance and capacity development teams. The main document has been published in MOH portal and can be downloaded for reference (<https://moh.gov.my/>).

Image 3.10
PSP KKM 2021-2025



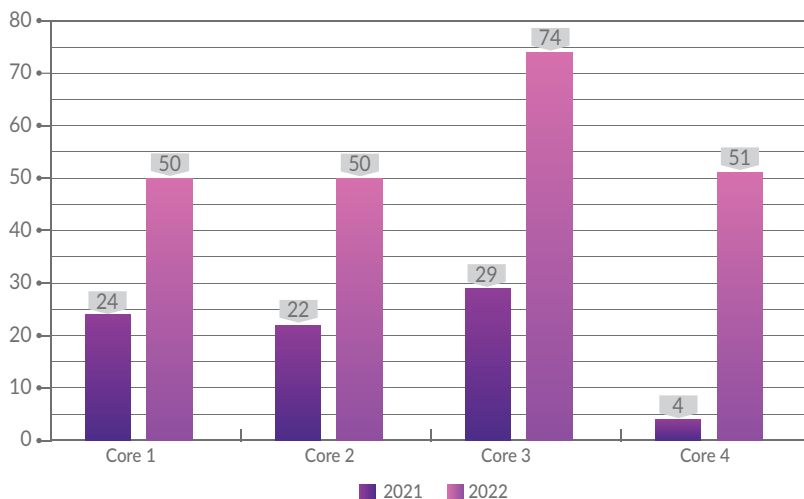
Launching Session and Project Closure Sign-Off

Progress Monitoring Workshop

Source: Information Management Division, MOH

A workshop to monitor the progress of activities planned under the PSP KKM 2021-2025 was held on 2 June 2022 at Bangi Resort Hotel. The main objective of the workshop is to update the progress status with programme owners on every initiative. They were given briefings on how to update progress status based on the template for Strategic Core 1 to 4. A hybrid meeting to monitor and update the progress of PSP KKM was held on 1 December 2022.

Figure 3.21
Progress Status of PSP KKM by Strategic Core for Year 2021 to 2022



Source: Information Management Division, MOH

In short, most of the activities outlined in PSP KKM had been executed. On the other hand, there are a few activities that are proposed to be dropped, whereas there are also new activities proposed to be added. All changes will be reviewed in the next PSP KKM 2021-2025 review session that is expected to be held in the third quarter of 2023 with every initiative and programme owners. This is to ensure all planned activities are capable to improve healthcare services and provide a positive impact to the Malaysia citizens.

EXPANSION OF HOSPITAL INFORMATION SYSTEM AT MOH (HIS@KKM)

In line the digitalisation transformation of public service, expansion of HIS@KKM has been implemented in stages to ensure that the hospital services are more effective and systematic. Lite version of HIS@KKM has been implemented at Hospital Rembau on 15 November 2021 and was operational on 12 May 2022. The implementation of HIS@KKM can improve the efficiency of patient records management which helps hospital services to be more efficient and effective. The implementation of Electronic Medical Record (EMR) via cloud computing as a Proof of Concept (POC) at Hospital Bera was implemented in phases starting from 1 July 2022 to 31 March 2023.

The development of Central Sterile Supply Services Information System (CenSSIS), Operating Theater Management System (OTMS) and Laboratory Information System (LIS@KKM) applications at Hospital Tuanku Ja'afar (HTJ), Seremban has been completed and is still under warranty period. On top of that, HIS@KKM system walkthrough via coaching session was carried out at Hospital Sultan Ismail (HSI), Johor Bahru on 5 September 2022 followed by Hospital Melaka on 1 November 2022 and JKN Sabah on 5 December 2022 to provide early exposure to Subject Matter Expert (SME) and Information Technology (IT) officers.

Image 3.11
HIS@KKM Expansion



HIS@KKM System Expansion in Hospital Cyberjaya



Implementation of EMR by Phases in Hospital Bera



Development of CenSSIS, OTMS and LIS@KKM systems in HTJ



Coaching Session for System Installation and Walk-through in HSI and JKN Sabah

Source: Information Management Division, MOH

IN-HOUSE APPLICATION DEVELOPMENT FOR KKM

BPM is responsible to develop in-house applications for MOH Headquarter (IPKKM) by fully leveraging internal expertise. There are six (6) applications involving the development of new modules and applications developed in 2022 as shown in **Table 3.7**.

Table 3.7
Development of In-house Applications for Year 2022

Application	Module
Verifications of Data for Death Not Validate by Medical in Malaysia System (VeDA)	User Management Module
Medical Assistance Fund System (STBP)	Report Module
Import Goods Acquisition Application System (SPPBI)	Scope of PTJ Module
Medico Legal Division Information System (eCML)	Surveillance and Report Module
Malaysian Healthcare Practitioners' System (MHPS)	Annual Practising Certificate Module
Medical Officer Placement System for Graduated Specialist (ePakar)	One (1) lot system

Source: Information Management Division, MOH

NEW APPLICATION SYSTEM DEVELOPMENT

MEDICAL OFFICER PLACEMENT SYSTEM FOR GRADUATED SPECIALIST (ePAKAR)

ePakar system was developed as a result of a collaboration between the BPM and Medical Development Division. ePakar manages online applications and placement for medical officers of graduated specialists. This application system is very important to ensure placement processes for medical officers who report to the office can be done quickly and efficiently. There are four (4) main modules and 21 sub-modules for ePakar as shown in **Table 3.8**.

Table 3.8
List of In-House Modules and Sub-Modules

Modules	Sub-Modules
Application	Placement
Report	List of Officers by Specific Areas/Fields
	Placement Result
	Officers Reporting to Office
	JKN Report
Users Management	Status
	Temporary Placement
	Upload Data
	Pre-Gazette Results
	Pre-Gazette Placement
	Update References and Letter Dates
	Data List
	Print Letters / Documents
	Placement
	Reporting Date Update
	Senate Review
System Maintenance	User Registration
	User Access Control
	Data Maintenance
	Code Management
	Password Change

Source: Information Management Division, MOH

Image 3.12
ePakar Training Session for Users and ePakar System Login



Source: Information Management Division, MOH

TECHNICAL APPROVAL MANAGEMENT OF ICT PROJECTS

MAMPU has issued General Circular No. 3 of 2015 – Guideline for Technical Approval and ICT Project Monitoring for Public Services effective 11 November 2015. The General Circular Letter provides guidance on technical approval process of ICT Projects to ensure ministries establish ICT-related committee to set the direction and strategies for the development and implementation of ICT at MOH.

Besides, the ICT Committee is also responsible to make decision and consideration to approve on ICT projects in various aspects such as technical viability, optimising resources as well as cost effectiveness in supporting MOH core business. Summary of ICT Projects approved by MOH ICT Committee for 2022 is as shown in **Table 3.9**.

Table 3.9
Approved ICT Projects for Year 2022

Committee	Total Project Notified and Approved
ICT Steering Committee (JPICT) MOH Chairman: MOH Chief Secretary	44
ICT Project Technical Committee (JTI) MOH Chairman: MOH Deputy Chief Secretary (Management) MOH	38
ICT Project Technical Committee (JTI) MOH Secretariat Level Chairman: Division Secretary of BPM	29
Total	111

Source: Information Management Division, MOH

INSPECTION OF ICT SECURITY POLICY COMPLIANCE

Information Security Management Inspection aims to assess and monitor the level of compliance with acts, policies, circulars and directives currently in force at MOH. The inspection activities are very crucial to ensure information security management is well managed based on Standard Information Security Management System (ISMS) ISO/IEC 27001:2013. Apart from that, these inspection activities are also used as a medium to provide exposure and awareness related to information security and ICT security management best practices.

In year 2022, a total of six (6) facilities have been selected to implement the inspection which are Hospital Sultanah Maliha, Langkawi, Kedah (22 to 24 February 2022); Hospital Kemaman, Terengganu (29 to 31 March 2022); Hospital Slim River, Perak (from 7 to 8 June 2022); JKN Perak (9 to 10 June 2022); Hospital Segamat, Johor (28 to 30 June 2022) Hospital and Balik Pulau, Pulau Pinang (26 to 28 July 2022).

Image 3.13
Information Security Management Inspection at MOH Facilities



Hospital Sultanah Maliha, Langkawi, Kedah



Hospital Kemaman, Terengganu

Source: Information Management Division, MOH

MOH ICT SECURITY DOCUMENT ENHANCEMENT

The MOH ICT Security Document Enhancement Workshop was held by BPM from 19 to 21 May 2022 in Cameron Highlands, Pahang. The main goals of the workshop were to review and improve the MOH ICT Security Policy (DKICT) Version 5.0 and to create a Guideline for Bring Your Own Device (BYOD) that aligns with the PSP KKM 2021-2025. IT officers from BPM, various divisions at IPKKM, hospitals, JKNs, Pharmacy Services Programme, IKN, National Blood Center (PDN), and NIH attended the workshop.

Image 3.14
MOH ICT Security Document Enhancement Workshop



Source: Information Management Division, MOH

PROGRAMMES AND TRAINING

BPM has successfully organised three (3) main training programmes in year 2022 as follows:

i. Quality Assurance and Enterprise Architecture (EA) Awareness Session

This session was held on 16 November 2022 at Marina, Putrajaya. The one (1) day session was attended by a total of 40 IT officers from IPKKM and nearby MOH agencies including speakers from MAMPU. The awareness session aims to give early exposure to all senior management IT officers and representatives of IT units, divisions and agencies towards ensuring a continuously sustainable, secure and structured digital health services.

ii. BPM Leadership and Professionalism Course

From 6 to 8 October 2022, BPM organised a Leadership and Professionalism course at La Crista Hotel, Melaka. The course was attended by 35 BPM senior management. The main objectives are to enhance leadership skills, such as effective communication skills and leadership professionalism in terms of self-development skills towards becoming an ethical, high integrity and creative leaders in line with BPM restructuring purpose to ensure versatility and competitiveness among their officers. BPM also took the opportunity to revise the BPM function chart during the course.

iii. Leadership Strengthen Course for The Professional Officers BPM

This course was held at Imperial Heritage Hotel, Melaka from 13 to 15 October 2022. A total of about 60 BPM officers attended the course. The main objective is to help participants to be able to work in a team effectively and efficiently, master interpersonal and intrapersonal skills while maintaining high integrity towards becoming a superior leader.

The background features a collage of financial data. At the top left, a calculator is partially visible. In the upper right, a line chart shows price fluctuations with labels for 'Fri 4/3 +0.52 | +6.52%' and 'Mon 4/6 +1.72 | +'. Below this, a pie chart is shown with segments labeled '45%' and '37%'. At the bottom, a survey legend includes 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly'. A silver pen lies across the bottom of the page. A large purple magnifying glass is centered over the text.

Chapter 4

FINANCE

FINANCE DIVISION

The management of finances within the Ministry of Health (MOH) is entrusted to the Finance Division, which holds the responsibility of overseeing the Ministry's budget, revenue, as well as ensuring compliance with financial policies and regulations. The Finance Division comprises three (3) branches, namely *Cawangan Dasar*, *Kemudahan & Pentadbiran*, *Cawangan Pengurusan Hasil* and *Cawangan Pengurusan Belanjawan*.

BUDGET MANAGEMENT

MOH was allocated RM32.41 billion in 2022 whereby RM28.03 billion was for Operation Budget (B42) and RM4.38 billion for Development Budget (P42).

PERFORMANCE OF OPERATING BUDGET FOR 2022

In year 2022, MOH has spent RM30.265 billion (107.98 per cent) of the total allocated budgets. The highest operating budget allocation was for Medical Programme with RM11.671 billion (42 per cent) and followed by allocation for the Special Programme with the amount of RM5.892 billion (21 per cent). **Table 4.1** shows the allocation and expenditure according to the program in year 2022.

Table 4.1
Allocation and Expenditure of Operating Budget by Programme Year 2022

Programme	Allocation (RM)	Expenditure (RM)	Percentage of Expenditure (%)
Medical	11,671,740,451	12,250,121,911	104.96
Special	5,892,396,730	6,984,627,719	118.54
Public Health	5,310,457,746	5,667,262,973	106.72
Management	1,988,470,274	1,915,859,819	96.35
Financial Commitment	1,400,000,000	1,692,134,715	120.87
Oral Health	1,072,967,874	1,075,367,923	100.22
Research & Technical Support	365,633,169	354,333,137	96.91
Pharmaceutical Services	222,061,135	220,910,892	99.48
Food Safety and Quality	106,272,621	105,043,138	98.84
TOTAL	28,030,000,000.00	30,265,662,227.00	107.98

Source: Finance Division, MOH

REVENUE MANAGEMENT

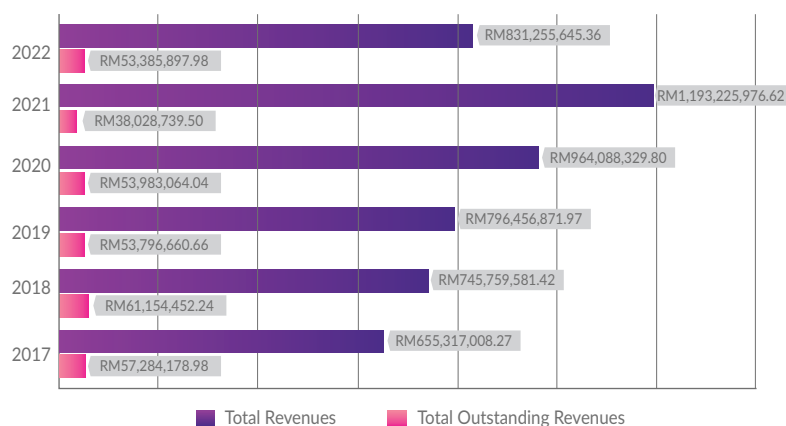
MOH has recorded a total sum of RM831.25 million in revenues in year 2022. The medical fees have contributed the largest amount of revenues, with a total collection of RM417.932 million or 50.28 per cent out of the total revenues collected. The amount is the highest ever recorded by the MOH within the past five (5) years, with an increase of 43.55 per cent from the previous year. The significant increase was due to the compound imposed for SOP violations during the COVID-19 pandemic. **Table 4.2** shows the categories in which the revenues are classified. **Figure 4.1** recorded the total outstanding revenue, together with the total revenues collected from year 2017 to 2022.

Table 4.2
Revenues Collected by Classification for the Year 2022

Code Classification	Amount (RM)	Percentage (%)
License, Registration Fees & Permits	26,987,726.54	3.25
(i) Medical Fees	417,932,083.96	50.28
(ii) Others (Non-medical fees)	53,385,897.98	6.42
Sales of Goods	4,311,381.11	0.52
Rentals	39,183,239.61	4.71
Interests & Return on Investment	229,201.79	0.03
Fines & Penalties	84,387,807.22	10.15
Local and Non-Local Contributions	5,636,646.14	0.68
Non-revenue receipts	199,201,662.01	23.96
TOTAL	831,255,646.36	100.00

Source: Finance Division, MOH

Figure 4.1
MOH Revenues and Outstanding Revenues Collection Year 2017 to 2022



Source: Finance Division, MOH

In year 2022, the total outstanding medical fees were RM28.35 million, where RM22.03 million (77.73 per cent) of the amount was non-Malaysian patients' fees. The breakdown of collection records as well as the outstanding amount according to citizenship status is shown in **Table 4.3**.

Table 4.3
Total Outstanding and Revenues Collected According to Citizenship Status under the Fees Act (Medical) in Year 2022

Citizenship	Outstanding Fees (RM)	Percentage of Outstanding Fees (%)	Fees Collected (RM)	Percentage of Fees Collected (%)
Malaysian	6,313,512.82	22.27	222,737,842.24	53.30
Non-Malaysian	22,032,551.77	77.73	195,194,241.72	46.70
TOTAL	28,346,064.59	100.00	417,932,083.96	100.00

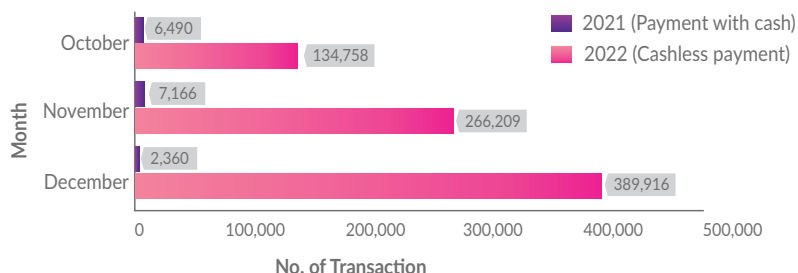
Source: Finance Division, MOH

MOH has launched a cashless payment system at its facilities starting from October 2022, as part of the Malaysian Digital Economy Blueprint 2021. This blueprint has mandated all federal and state government agencies to switch to cashless transaction for greater efficiency for year 2022.

Furthermore, this initiative aligns with MOH Anti-Corruption Plan 2021 - 2022 which highlights the adoption of cashless payment methods in KK as means to prevent fraudulent activities in the government's revenue collection process. To facilitate this transition, 1,911 Terminal Point-of-Sale (TPOS) were initially installed at MOH's facilities in October 2022, the number of installations subsequently increased to 3,675 TPOS terminals by the end of December 2022.

Figure 4.2 illustrates the increase in the number of recorded cashless payment transactions within a three-month period of implementation (October to December 2022) compared to the same period in the previous year, prior to the implementation of the cashless payment initiative in MOH facilities.

Figure 4.2
Comparison of Payment Transactions between October to December for Year 2021 and 2022



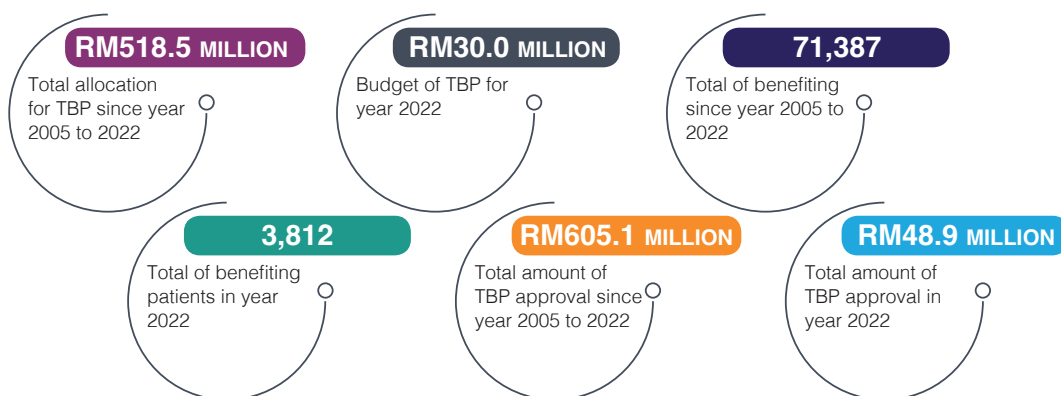
Source: Finance Division, MOH

FINANCIAL AID AND GRANT

MEDICAL ASSISTANCE FUND (TBP)

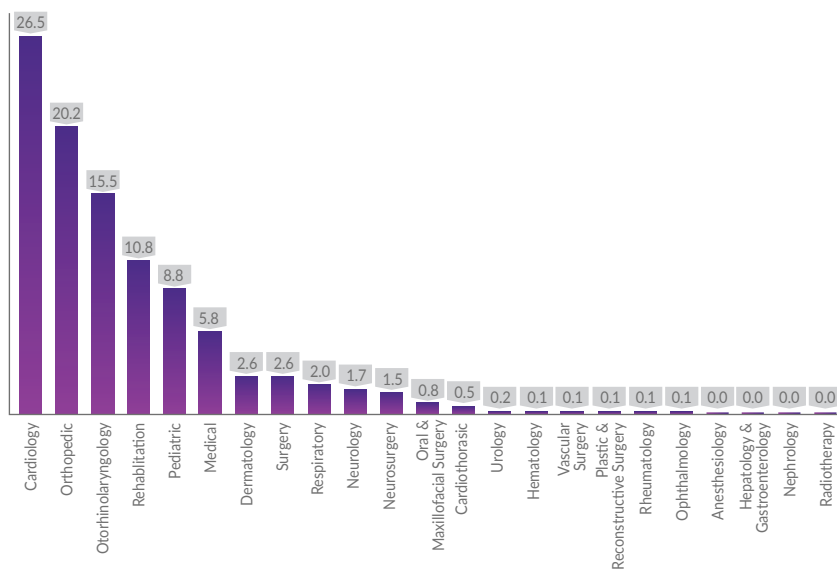
TBP was established in 2005 following Section 10 of the Financial Procedure Act 1957. It is governed by the Trust Deed, TBP Guidelines and the current regulations in force. The aim of TBP is to assist underprivileged patients in financing their treatment costs and purchase of medical supplies including medicines at MOH Hospitals and Public Hospital University. **Figure 4.3** below shows the allocation of TBP, the number of patients and the total amount of TBP approval from year 2005 to 2022. The total amount of TBP approval is based on the available balance of the *Kumpulan Wang Amanah*.

Figure 4.3
TBP Allocation from Year 2005 to 2022



Source: Finance Division, MOH

Figure 4.4
Percentage of TBP Approval by Disciplines Year 2022



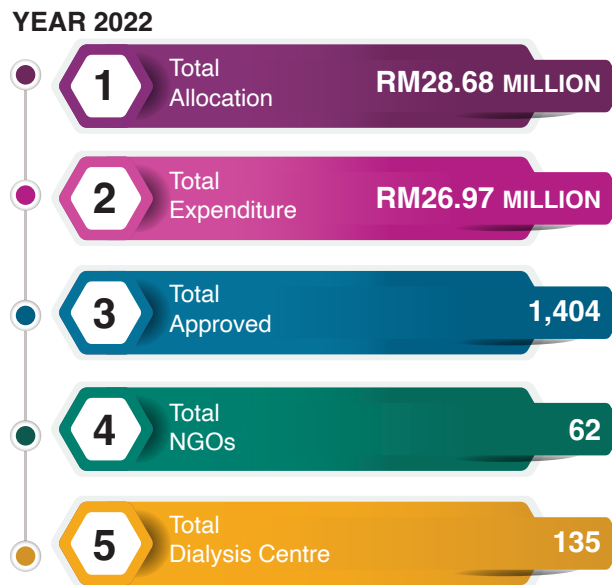
Source: Finance Division, MOH

SUBSIDY PROGRAMME FOR HEMODIALYSIS TREATMENT AND ERYTHROPOIETIN (EPO) INJECTION

Subsidies for hemodialysis treatment and EPO injection are given to patients who seek treatment at NGO hemodialysis centers which was introduced since 1 April 2001 and focused towards helping the poor and underprivileged patients. This financial assistance is in the form of subsidised treatment cost of RM100.00 for each treatment of hemodialysis. Apart from that, a subsidy of RM18.50 for each EPO injection, is also catered for poor or underprivileged patients. The total overall cost for each patient which includes hemodialysis treatment and EPO injection is RM1,640.50 per month. The number of patients from year 2018 until 2022 is 2,881 patients while the number of patients approved in year 2022 is 1,404 out of 1,603 who applied.

The total allocation in year 2022 is RM28.68 million with a total expenditure of RM26.97 million. The total number of NGOs that have been registered under this subsidy is 62 NGOs involving 135 dialysis centers as shown in **Figure 4.5**

Figure 4.5
Total Allocation, Expenditure, Beneficiaries, NGOs and Dialysis Centre under the Subsidy Programme for Haemodialysis Treatment for Year 2022



**Total expenditure of RM26.97 million was recorded for 2022 haemodialysis subsidy programme involving a total number of 2,881 patients as at 31 December 2022.*

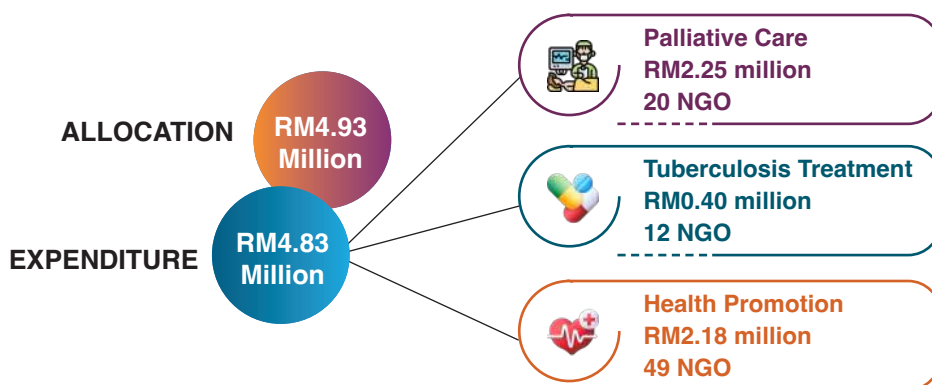
Source: Finance Division, MOH

FINANCIAL ASSISTANCE FOR NGO

The allocation for financial assistance amounted to RM4.93 million, with a total expenditure of RM4.83 million. This included disbursing aid to 20 NGOs for palliative care, totaling RM2.25 million, 12 NGOs for tuberculosis treatment, totaling RM400,000, and 49 NGOs for health promotion, totaling RM2.18 million. The total allocation and expenditure of financial assistance to NGOs for the year 2022 as shown in **Figure 4.6**.

Figure 4.6

The Total Allocation Expenditure for the Financial Aid Programme for NGOs in Year 2022



Source: Finance Division, MOH

Table 4.4 shows the total expenditure for TBP, Subsidy Program for Haemodialysis treatment and financial assistance to NGOs from 2018 to 2022.

Table 4.4
Government Expenditure and Number of Patients under MOH Medical Assistance Program Year 2018 to 2022

Type of Assistances	Expenditure and Number of Patients/NGOs				
	2018	2019	2020	2021	2022
Medical Assistance Fund (TBP)	RM51.7million 5,739 patients	RM46.5 million 4,615 patients	RM40.5 million 3,330 patients	RM44.2 million 3,459 patients	RM48.9 million 3,812 patients
Subsidy Programme for Haemodialysis Treatment	RM25.45 million (2,348 patients)	RM35.45 million (2,015 patients)	RM33.38 million (2,339 patients)	RM36.44 million (2,615 patients)	RM26.97 million (2,881 patients)
Financial Assistance to NGOs	RM2.41 million (60 NGO)	RM4.76 million (66 NGO)	RM3.43 million (40 NGO)	RM3.12 million (44 NGO)	RM4.83 million (81 NGO)

Source: Finance Division, MOH

PROCUREMENT AND PRIVATISATION DIVISION

The Procurement and Privatisation Division is responsible in planning, managing and implementing procurement, privatisation programmes, asset and store management at the MOH. The procurement process of equipments and services is implemented based on five (5) principles, which are:

i. Public Accountability

The procurement management entrusted must be carried out responsibly in accordance with the policies and regulations set.

ii. Transparent

All policies, regulations and procurement processes implemented must be clear, well known and well-understood and in accordance with established policies and regulations.

iii. Best Value for Money

Procurement management should provide the best return on every ringgit spent.

iv. Open Fair Competition

The procurement process should provide open opportunities to all parties who are eligible to compete.

v. Fair Dealing

Procurement must be invited, processed and considered fairly and equitably based on established policies and regulations.

This division is also the main secretariat for the Procurement Board of the Ministry of Health (LPKMM). The members of LPKMM consist of senior government officers and representatives from central agencies as well as technical agencies.

The division is also responsible for managing privatisation programmes involving *Makmal Ubat dan Stor*, drug and store laboratories, procurement and maintenance of medical equipment at MOH cClinics, Hospital Support Services as well as Foreign Workers Health Supervision and Inspection Services (FOMEMA). These privatisation programmes are in line with the National Privatisation Policy. Therefore, the programmes have been closely monitored and improvised constantly to ensure they achieve their objectives and desired output. The division also regulates the management of stores, inventories and MOH assets to ensure all applicable rules always adhere to.

MINISTRY'S PROCUREMENT PERFORMANCE

In 2022, MOH has undertaken procurement amounting to RM6,059,494,450.62 and obtained savings of RM500,405,873.37 or 8 per cent which covered the procurement of pharmaceuticals, medical equipment, services, ICT, vehicles, outsourcing and concession. **Table 4.5** shows the achievement of MOH Procurement in year 2022 by categories.

In line with the national resource optimisation policy, MOH had secured savings in procurement expenditure to ensure the allocation received is sufficient to cover core services and patient care needs. This was also to ensure health care services were not affected. The savings obtained were based on the comparisons between the department's estimated price with the contract prices offered as well as negotiated prices from companies.

Table 4.5
Achievement of MOH Procurement Year 2022

Category	Procurement Value (RM)	Savings (RM)
Pharmaceutical	3,453,878,805.51	267,896,118.82
Medical Equipment & Vehicle	341,831,294.60	20,037,521.40
Services	1,310,750,573.36	123,804,964.94

Category	Procurement Value (RM)	Savings (RM)
ICT	227,799,237.97	2,993,829.38
Toner / MTO	16,280,437.70	565,901.30
Outsourcing	4,305,000.00	1,493,400.00
Hospital Support Service Consession	101,780,557.86	-
Other Procurement for Other Goods and Services	674,325,367.82	83,614,137.53
Total	6,059,494,450.62	500,405,873.37

Note: Data is as of December 2022.

Source: Procurement and Privatisation Division, MOH

MANAGEMENT OF MOVABLE ASSETS

As of 31 December 2022, MOH has a total moveable asset of 2,914,874 units (excluding stocks) with procurement value of RM14,622,029,827.74. MOH's moveable assets are monitored through the of Government's Moveable Assets Management Committee at all levels in ensuring the adherence to the procedures issued by the Ministry of Finance (MOF).

e-PROCUREMENT (eP) SYSTEM

The eP System which was developed in the year 2000 serves as an online platform to enable government agencies to procure online supplies and services from the gGovernment-registered vendors. The eP System is one of the largest Government-to-Business (G2B) virtual markets in ASEAN with two (2) million online catalogues. Starting from January 2018, MOF has introduced an improved eP System. Based on the records, MOH is the largest eP System user compared to other ministries and has been using the eP System optimally. **Table 4.6** shows the Ministry's achievement in the use of the eP System for the years 2020 to 2022.

Table 4.6
MOH Achievements in the Use of the eP System Year 2020, 2021 and 2022

Year	Total Transaction	Transaction Value (RM)	Allocation (RM)	Achievement (%)
2020	715,345	5,731,877,322.29	7,000,000,000.00	81.90
2021	695,556	6,601,673,230.00	7,000,000,000.00	94.30
2022	776,779	7,465,679,863.00	6,000,000,000.00	124.43

Note: Data is as of December 2022

Source: eP System, MOF

There was an increase in the use of the eP System in 2022 compared to the previous year. MOF has stipulated that procurement be fully implemented 100 per cent using the eP System. However, some procurements such as the procurement for Hospital Support Services have been exempted and implemented manually. Similarly, since the outbreak of the COVID-19 at the end of 2019, it has rendered that some of the planned procurements were unable to be conducted and immediate procurement needed to be implemented as an Emergency Procurement basis under Treasury Instruction (AP) 173.2.

OUTSOURCING HEALTH SERVICES OF NON COVID-19 PATIENTS TO PRIVATE HOSPITALS

MOH has been providing healthcare services for non-COVID-19 patients via outsourcing starting in 2020. Between April to August 2021, there was a sharp increase in COVID-19 cases and MOH needed to provide more beds for COVID-19 patients. This resulted in the vast majority of non-COVID-19 patients being referred to private hospitals.

The implementation of outsourcing patient healthcare services from MOH hospitals to private hospitals has continued in 2022 with the main focus is to resolve backlog cases due to the previous outbreak of COVID-19. Through this initiative, a total of 5,108 surgical cases, 20,632 non-surgical cases and 735 follow-up treatment cases had been successfully outsourced to private hospitals with an expenditure of RM44.64 million.

CONCESSION AGREEMENT

The Procurement and Privatisation Division is responsible for managing three (3) privatisation projects and two (2) outsourcing services-based projects as follow:

Service Privatisation Projects

- i. Hospital Support Service (PSH);
- ii. Medical Equipment Enhancement Tenure (MEET)); and
- iii. Concession of *Makmal Ubat & dan Stor*.

Outsourcing Projects

- i. Foreign Workers Medical Examination Coordination & Surveillance System (FWMES) in Peninsular Malaysia and Federal Territories of Labuan; and
- ii. Supply and Delivery of Hologram Safety Labels for Registered Pharmaceutical Products under MOH.

These projects have provided various benefits to the government. The implementation of The PSH and MEET projects have enabled comprehensive maintenance on the facility and biomedical equipment. The concession of *Makmal Ubat dan Stor* has facilitated the supply of drugs and non-drugs to all MOH facilities. The FWMES project has assisted MOH in ensuring only healthy foreign workers are eligible to work in Malaysia. The Supply and Delivery of Hologram Safety Label project on the other hand has prevented unregistered pharmaceutical products from being sold in the market.

ACCOUNT DIVISION (BA)

BA is responsible for providing comprehensive government accounting to ensure all *Pusat Tanggungjawab* (PTJ) transactions are being accounted for accurately and completely within the time frame in accordance with vision and mission of BA as shown in **Figure 4.7**.

Figure 4.7
Vision and Mission of Account Division

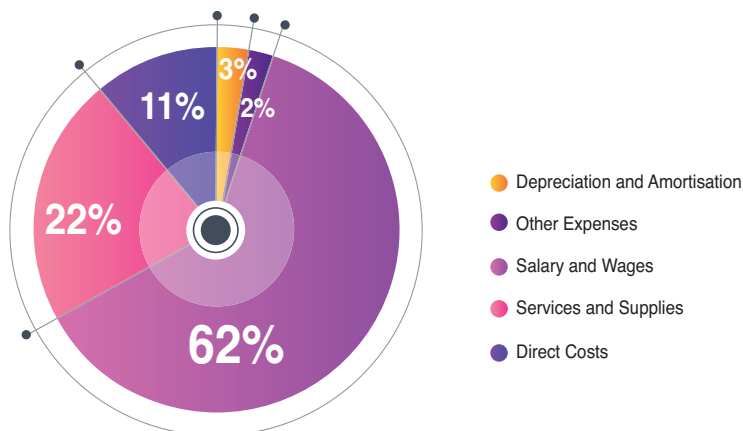


FINANCIAL MANAGEMENT

EXPENDITURES

MOH total expenditure from public and trust funds (Section 10) amounted to RM33.77 billion. Salary, wages and employees' benefits contributed to the highest portion of expenditure at RM21.08 billion (62.42 per cent) followed by supplies and services at RM7.46 billion (22.08 per cent). **Figure 4.8** shows MOH expenditure by category.

Figure 4.8
MOH Expenditure by Category for the Year 2022



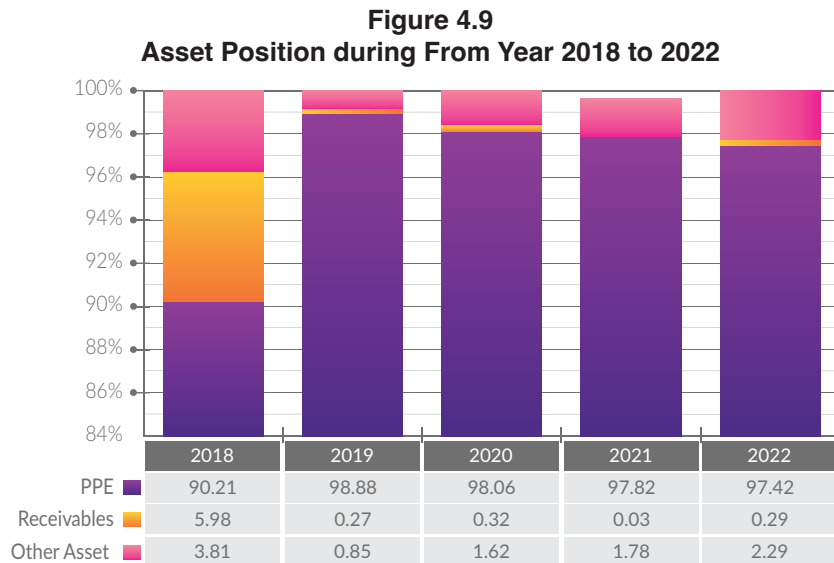
Source: Statement of Financial Performance for The Year Ended 31 December 2022 (Interim) Account Division, MOH

EMOLUMENT MANAGEMENT

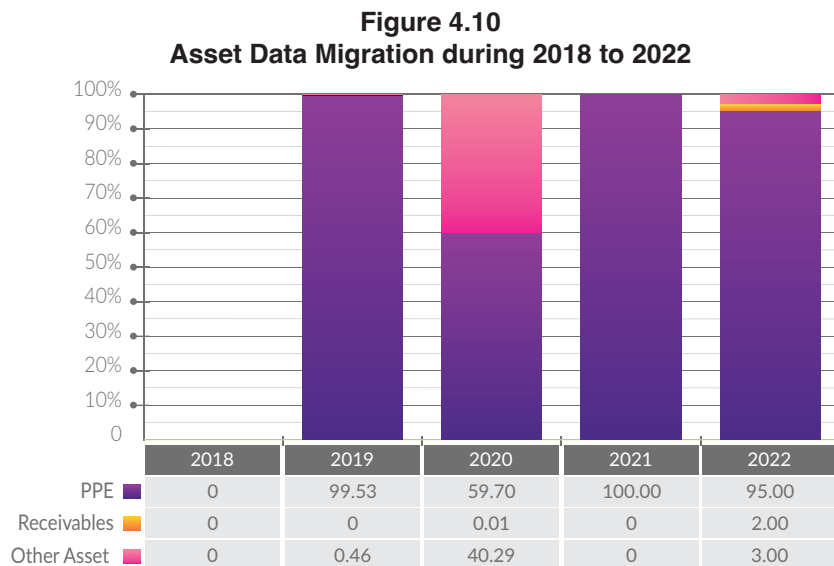
BA is entrusted to ensure that the monthly emoluments and remunerations for 33,516 headquarters personnel are paid as per scheduled and accordingly. In year 2022, a total of RM2.50 billion was paid. Included in this amount are payments for *Bantuan Khas Kewangan* and *Bantuan Khas Aidilfitri* amounting to RM20.95 million and RM15.59 million respectively.

ASSET ACCOUNTING

Ministry assets are significant elements in the Ministry's Statement of Financial Position. **Figure 4.9** shows the position of Property, Plant & Equipment (PPE) contributed the highest percentage compared to Receivables and Other Assets in the reporting from year 2018 to 2022. This was due to additional of asset data carried out through data migration activity and continuous programmes in the government's accrual system. **Figure 4.10** shows the position of asset data migration from year 2018 to 2022.



Source: Account Division, MOH

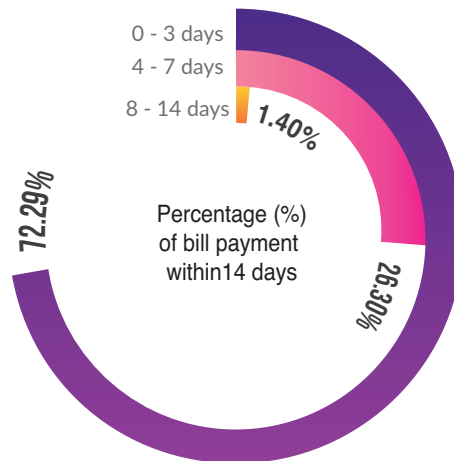


Source: Account Division, MOH

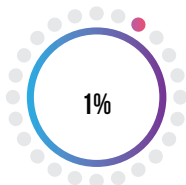
BILL PERFORMANCE MANAGEMENT

A total of 2,161,199 bills amounted to RM14.14 billion were processed by MOH PTJs. The performance of bills payment within 14 days for MOH was 99.99 per cent (2,160,909 bills) amounted to RM14.13 billion for 370 PTJs. The overall performance of 99.99 per cent in 2022 have met the requirement of *Arahan Perbendaharaan* 103(a) for bills settlement within 14 days and surpassed the KPI of the Chief Secretary to the Government(KSN) as well as the MOH's KPI. The performance of bills payment within 14 days for the year 2021 and 2022 are shown in the **Figure 4.11** and **4.12**.

Figure 4.11
Performance of Bill Payment within 14 days for the Year 2022

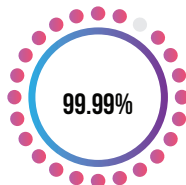


A. More than 14 hari



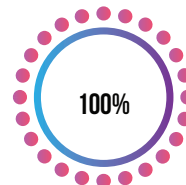
RM 10,414,480.51
290 bills

B. Within 14 hari



RM 14,128,385,381.39
2,160,909 bills

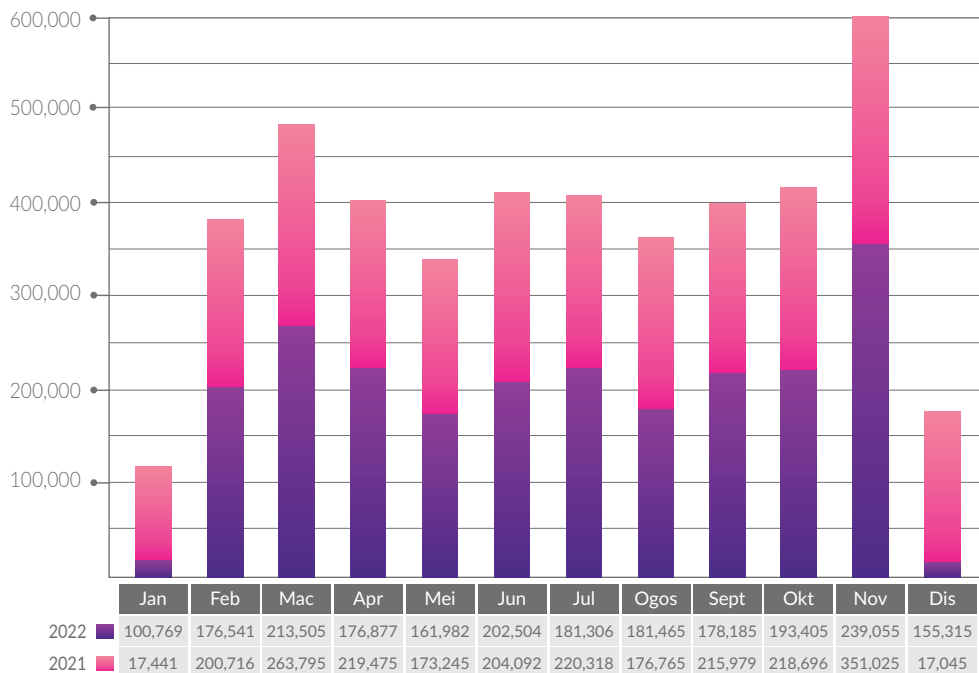
Total A + B



RM 14,138,799,861.90
2,161,199 bills

Source: Account Division, MOH

Figure 4.12
Comparison of Performance of Bill Payment Within 14 Days for The Year 2021 and 2022



Year	% Bill > 14 days
2022	0.01
2021	0.02
2020	0.03
2019	0.19
2018	0.88

Number of show cause letter Issued for 14 days late bill	2022	2021	2020	2019
	81	26	66	13

PERFORMANCE 2021
 2,278,592 bills
 RM16 billion
 99.98%

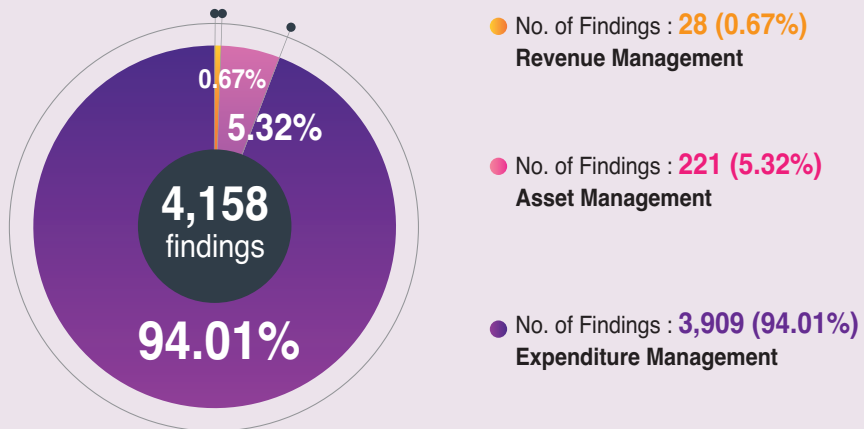
PERFORMANCE 2022
 2,160,909 bills
 RM14 billion
 99.99%

Source: Account Division, MOH

GOVERNANCE AND COMPLIANCE

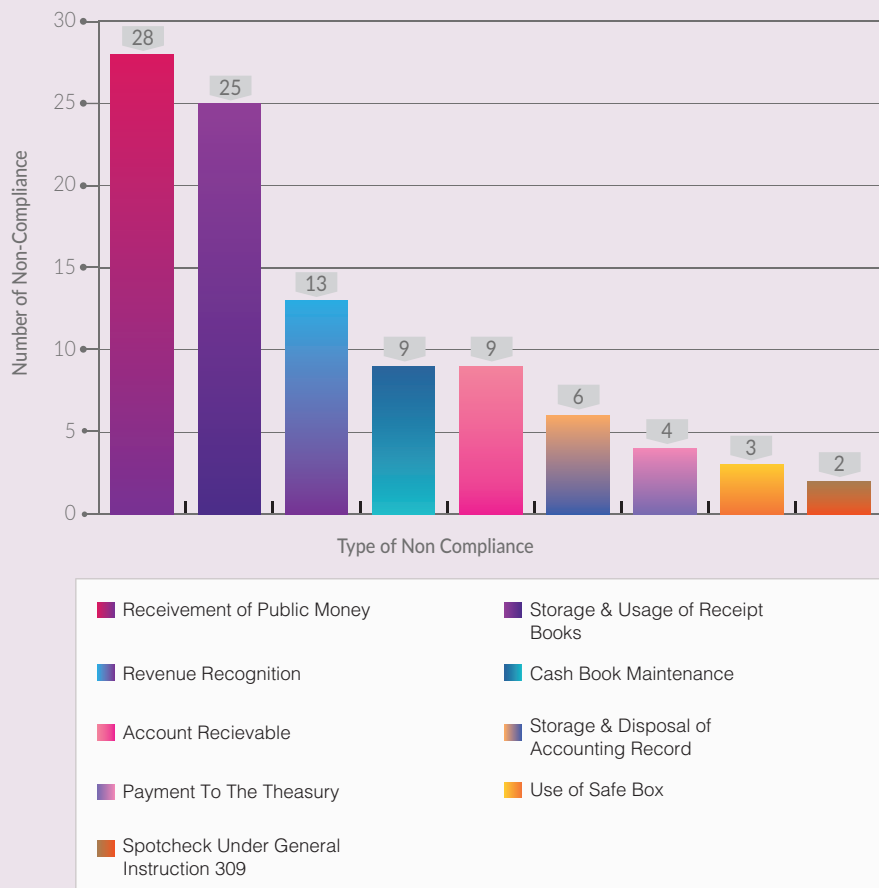
Inspection visits were carried out on 225 PTJs out of 450 PTJs under MOH throughout Malaysia. Verification of monthly revenue receipt documents was carried out at 429 MOH Main Collector's Offices. Monitoring activities were carried out to ensure existing procedures comply with accounting policies and standards. The results of inspection findings are shown in **Figure 4.13** and **4.14** while the non-compliance findings of cash receipts documents are shown in **Figure 4.15**.

Figure 4.13
Number of Findings on Auditing of Accrual Accounting Compliance Year 2022



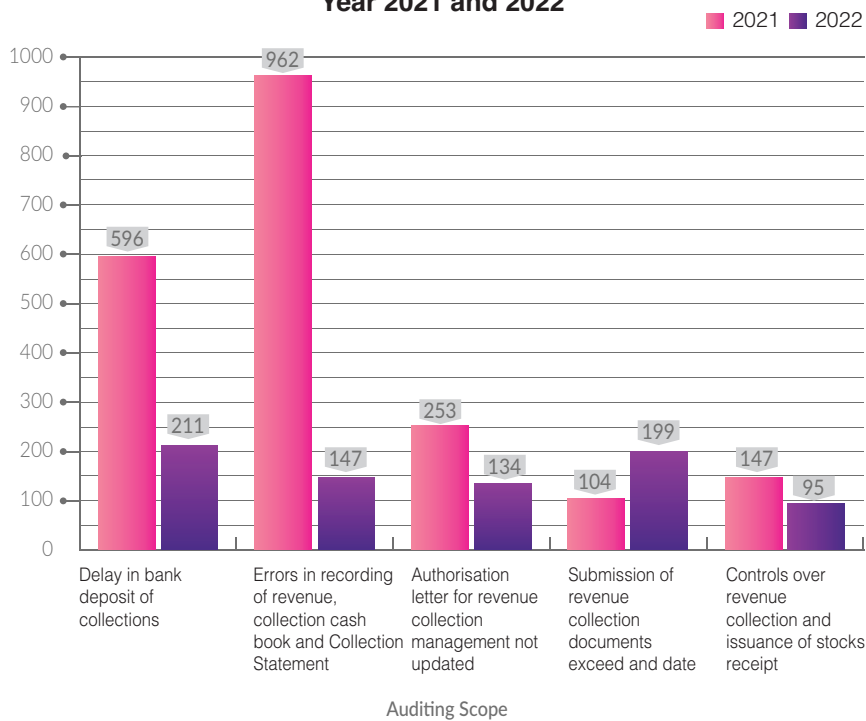
Source: Account Division, MOH

Figure 4.14
Number of Findings on Auditing of Revenue Collection Year 2022



Source: Account Division, MOH

Figure 4.15
Findings of Revenue Collection Documents for
Year 2021 and 2022

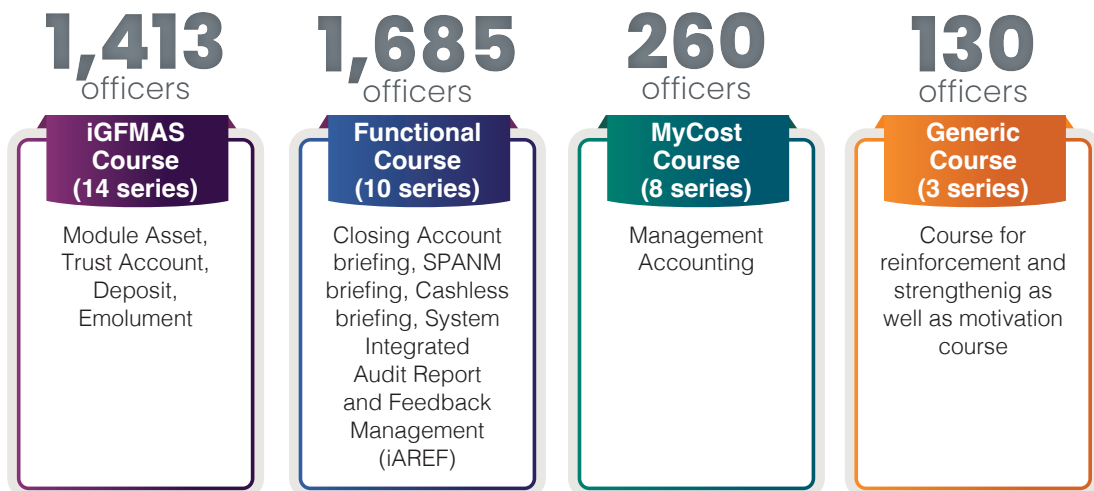


Source: Account Division, MOH

CONSULTATION AND TRAINING

A total of 35 training courses attended by 3,488 officers were held throughout the year 2022 as shown in **Figure 4.16**. BA has issued five (5) guidelines for the year 2022 as **Figure 4.17**.

Figure 4.16
Training Courses in Year 2022



Source: Account Division, MOH

Figure 4.17
List of Guidelines in Year 2022



Source: Account Division, MOH



Chapter 5

PUBLIC HEALTH



PUBLIC HEALTH PROGRAMME

Public Health Programme is responsible for helping individuals and communities to achieve and maintain optimal health through the provision of basic healthcare. To achieve such mission, Public Health Programme provides disease prevention and control services, curative and rehabilitative care in an integrated manner services at all levels of health services and encourages health promotion so that it becomes a practice among every individual and community. Public Health Programme consists of five (5) divisions:

- i. Disease Control Division;
- ii. Family Health Development Division (BPKK);
- iii. Public Health Development Division (BPKA);
- iv. Nutrition Division; and
- v. Health Education Division (HEC).

PUBLIC HEALTH DEVELOPMENT DIVISION (BPKA)

SPECIAL PROGRAMME SECTOR

The establishment of Flying Doctor Services (FDS) for the Orang Asli (OA) in the rural area of Peninsular Malaysia back in year 2013 had become one of the main measures addressing healthcare accessibility issues for the population. It links efforts to address communicable diseases and maternal, infant and child health to the Universal Health Coverage (UHC) agenda among marginalised populations including the OA.

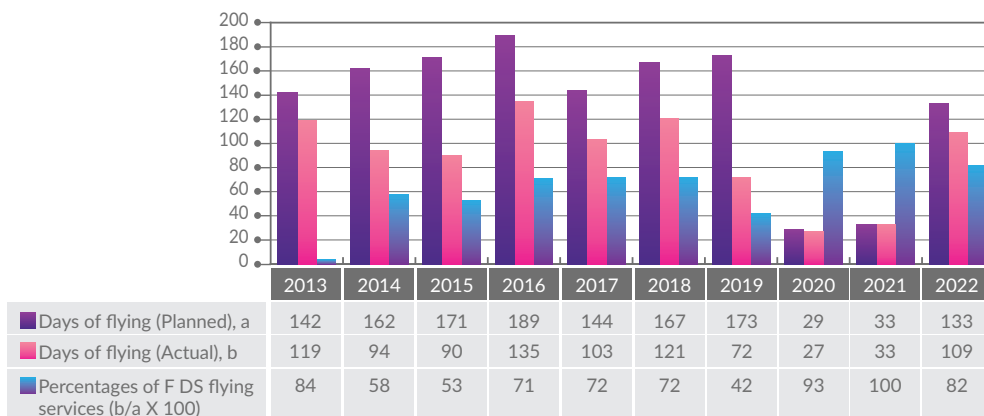
Ever since the first flight in the year 2013 until current years, the FDS unit which is based at Hospital Bahagia Ulu Kinta under Kinta District Health Office (PKD) in Perak operations, continued to provide health services for marginalised people in 17 remote OA villages which are difficult to reach by land or water as showed in the following **Table 5.1**. Data has recorded fluctuation in percentages of FDS number of visits to the OA villages proxy by the number of flying days by the FDS team as projected in the following **Figure 5.1**. There was a good response received from the local OA population for each clinic session run by the FDS team as portrayed in **Image 5.1**.

Table 5.1
FDS Population Coverage from Year 2013 to 2022

Year	District	Number of Villages	Number of Orang Asli Population
2013 - 2017	Kuala Kangsar	12	2,240
	Cameron Highlands	5	707
	Gua Musang	45	4,085
2018 - 2020	Hulu Perak	2	84
	Gua Musang	15	1,630
2021 -2022	Hulu Perak	2	80
	Gua Musang	15	997

Source: Public Health Development Division, MOH

Figure 5.1
FDS Performance from Year 2013 to 2022



Source: Public Health Development Division, MOH

Image 5.1
Health Services by FDS PKD Kinta



The long-term planning is to reduce dependency on this FDS service which involves major financial implications. With the progress of infrastructure in terms of land road facilities, health services for the OA inland will be focused on the OA Mobile Team (Land) which is more cost-effective with longer contact time with patients than via FDS visits.

Source: Public Health Development Division, MOH

RESOURCE PLANNING SECTOR

REPLACEMENT OF DISPOSED NON-AMBULANCE VEHICLES UNDER THE PUBLIC HEALTH PROGRAMME

Non-ambulance vehicle is one of the main assets of the public health field team for the implementation of disease prevention and control functions which are among the main contributors to the population well-being. As of 31 December 2022, there are 3,731 non-ambulance vehicle assets in the PKDs across Malaysia (**Table 5.2**), of which 499 have been disposed of and require immediate replacement.

Table 5.2
Number of Non-Ambulance Vehicle Assets Under Public Health Programmes Including Total Disposed, BER and Replacement in Year 2022

State	Total Non-Ambulance Vehicle	Disposed Vehicle	BER	Replacement of Disposed Vehicle Year 2022
Perlis	49	15	1	1
Kedah	305	49	0	9
Pulau Pinang	155	12	4	1
Perak	346	61	8	12
Selangor	333	58	13	4
FT Kuala Lumpur & Putrajaya	79	1	1	0
Negeri Sembilan	230	42	7	4
Melaka	116	7	0	2
Johor	347	45	4	6
Pahang	370	42	17	8
Terengganu	270	40	3	7
Kelantan	319	47	8	9
Sabah	379	35	25	5
Sarawak	422	45	4	5
FT Labuan	11	0	0	0
Total	3,731	499	95	75

Note: BER – beyond economic repair

Source: Resource Planning Sector, Public Health Development Division, MOH

In the year 2022, BPKA's Resource Planning Sector has coordinated the application of development expenditure (BP01100) for the replacement of non-ambulance vehicles that have been decommissioned at PKD. Subsequently, a total of RM10,551,000 development expenditure (BP01100) has been approved for the replacement of 79 vehicles. Notwithstanding, 75 vehicles were successfully procured, which is 15 per cent of the total number of vehicles that have been decommissioned. Hence, a remainder of 424 vehicles are needed for replacement in the following years.

PUBLIC HEALTH PROFESSION DEVELOPMENT SECTION

The Public Health Profession Development Section is responsible for the development and the advancement of the profession in the Public Health Programme. The section ensures that staffs in the Public Health Programme meet the competency standard in delivering services to citizens. This section has carried out several activities including:

- i. Public Health Medicine Specialty Services Development;
- ii. Public Health Professions Development;
- iii. Training and Continuous Professional Development (CPD); and
- iv. Monitoring of Public Health Facilities Usage for Training.

This section monitors the training planning and implementation of the staff in the Public Health Programme. In year 2022, a total of 3,470 courses were conducted throughout the country with a cost of RM4,473,928.94 as compared to 1,592 courses with cost of RM1,700,493.56 in year 2021. There was no staff sent abroad to attend Short-term Training Courses in year 2022. The overall achievement for In-service Training Programme carried out in year 2021 and 2022 are shown in **Table 5.3**.

Table 5.3
In-service Training Achievement for Public Health Programme in Year 2021 and 2022

Training	ACHIEVEMENT			
	2021		2022	
	No. of Course Attended	Expenditure (RM) (Per cent from annual allocation)	No. of Course Attended	Expenditure (RM) (Per cent from annual allocation)
Local	1,592	1,700,493.56 (97.3%)	3,470	4,473,928.94 (99.5%)
Oversea	0	0.00 (0%)	0	0.00 (0%)

Source: Public Health Development Division, MOH

This section processes the application and monitoring of the usage of public health facilities such as the District Health Offices, Health Clinics and Public Health Laboratories for training purposes. In year 2022, 22 applications were approved either for renewal of Memorandum of Agreement (MoA) or additional facilities application involving six (6) for Medical Programme, nine (9) for the Allied Health Sciences Programme and seven (7) for the Nursing Programme.

GLOBAL HEALTH SECTION

WORLD HEALTH DAY 2022

In conjunction with World Health Day 2022, MOH and World Health Organization (WHO) Representative Office to Malaysia, Brunei Darussalam and Singapore partnered with public and private sectors to celebrate World Health Day 2022 through a virtual forum with the focus on *Our Planet, Our Health*. Expert panellists from WHO, Sunway Centre for Planetary Health, academician from School of Food Science & Nutrition, Universiti Sabah Malaysia and Public Health Physician from the Institute of Health Research raised awareness on the urgent actions needed to keep the population and the planet healthy while fostering a movement to create societies focused on well-being.

75TH WORLD HEALTH ASSEMBLY, STRATEGIC DIALOGUE FOR BEHAVIORAL SCIENCE FOR BETTER HEALTH AND 151ST WHO EXECUTIVE BOARD MEETING

Malaysian Delegation was led by the Minister of Health accompanied by the Director-General of Health. The theme for the assembly was *Health for Peace, Peace for Health*, with the importance of building a healthy and peaceful planet by harnessing science, data, technology and innovation. During the session, Malaysia had intervened on several global health areas of concerns namely; Strengthening WHO preparedness for and response to health emergencies and implementation of International Health Regulations 2005, Non-communicable Diseases, Prevention of sexual exploitation, abuse and harassment, Neglected Tropical Diseases, TB, HIV, Viral Hepatitis, Poliomyelitis, Maternal and Child Nutrition. Malaysia also participated in a strategic dialogue for *Behavioural Science For Better Health* at the assembly. The Minister of Health shared experience on how Malaysia incorporated behavioural science approaches in deriving policies and programmes during the COVID-19 pandemic. Following the 75th WHA, the 151st WHO Executive Board meeting convened on 30 May 2022 to discuss the implementation of the decisions and policies agreed upon at the health assembly. At this session, Malaysia was elected as the 1st Vice Chair for the Executive Board from 2022 to 2023 to represent the Western Pacific Region.

25TH BRUNEI DARUSSALAM-INDONESIA-MALAYSIA-SINGAPORE-THAILAND (BIMST) PUBLIC HEALTH CONFERENCE

The meeting was attended by technical officers from the Institute for Health Systems Research and Disease Control Division. BIMST member countries discussed health and border issues pertaining to the theme *The Future beyond COVID-19*. Malaysia also shared experiences in managing pandemic and how to prepare for the next pandemic, *Disease X*. Malaysia outlined its strategy for Health System Integration and highlighted its importance for addressing the rising prevalence of non-communicable diseases (NCD) and an ageing population.

73RD REGIONAL COMMITTEE MEETING WESTERN PACIFIC REGIONAL OFFICE WHO

The Malaysian delegation was led by the Minister of Health along side the Director-General of Health, the Deputy Director-General of Health (Public Health) and senior officers from Disease Control Division and Family Health Development Division. Malaysia had delivered 10 interventions on various regional matters of concerns and endorsed seven (7) resolutions particularly on the Prevention and Control of Non-Communicable Diseases, Primary Healthcare, Cervical Cancer, Mental Health and Reaching the Unreached.

14TH MEETING OF ORGANISATION OF ISLAMIC COOPERATION (OIC) STEERING COMMITTEE ON HEALTH (SCH)

The Malaysian delegation was led by the Director of the Public Health Development Division and a representative from the Policy and International Relations Division, MOH. Malaysia is one of the members of the SCH as we are the Lead Country Coordinator for Thematic 3: Maternal, New-born and Child Health & Nutrition. This 14th SCH Meeting had discussed in general the current situation of pandemic COVID-19 among the OIC members and specifically discussed on matters pertaining to COVID-19 vaccination.

15TH ASEAN HEALTH MINISTERS MEETING (AHMM) AND RELATED MEETINGS

The 15th AHMM's theme was *Advancing the Achievements of ASEAN Health Development*. Malaysian delegation was presented by the Deputy Minister of Health II alongside Senior Officials' Meeting on Health Development (SOMHD) Head of Delegates as the SOMHD Focal Point Malaysia and senior officials from MOH. Malaysia alongside the other Member States had delivered interventions which highlighted on the topic *Building Regional Health System Resilience and Accelerating COVID-19 Recovery*. Indonesia had handed over the AHMM and SOMHD chairmanship to Lao PDR. Lao PDR will be the SOMHD Chair and Malaysia as the SOMHD Vice Chair for the year 2022 to 2025. The progress and updates of the previous ASEAN Post 2015 Health Development Agenda (APHDA) and the upcoming 2021 to 2025 work programmes were among the agenda discussed during the Preparatory SOMHD for the AHMM.

WORKSHOP ON DRAFTING WHO RESOLUTION - BEHAVIORAL SCIENCE FOR BETTER HEALTH

The Global Health team and the Institute for Health Behavioral Research (IHBR) of MOH Malaysia jointly organised a workshop entitled *WHO Resolution for Behavioral Science*. The Opening Remarks were delivered by the WHO Representative to Malaysia, Brunei Darussalam and Singapore, the Director of Public Health Development Division and the Director of IHBR. The objectives of this workshop were accomplished whereby the text for the draft Resolution was fine tuned along with focal points from the various divisions of MOH. This draft document was used for the Informal Consultations with Member States prior to endorsement at the 152nd Session of the WHO Executive.

INSPECTORATE AND LEGISLATIVE SECTOR

DRAFTING, REVISION AND AMENDMENT OF LAWS AND DEVELOPMENT OF STANDARD OPERATING PROCEDURE (SOP)

Inspectorate and Legislative Sector (SIP) has its roles in drafting, revising and amending the public health law. There are three (3) amended laws which were; Prevention and Control of Infectious Diseases Act 1988 [Act 342], Prevention and Control of Infectious Diseases (Importation and Exportation of Human Remains, Human Tissues and Pathogenic Organisms and Substances) Regulation 2008 and Food Hygiene Regulations 2009. One (1) legislative review involving the Second-hand Dealers Act 1946 [Act 189], a bill of the Tobacco Products Control Act also been drafted for the parliamentary approval. To strengthen and empowerment of the enforcement procedures and activities, SIP has developed two (2) Standard Operating Procedure (SOP) in the year 2022, namely the Enforcement Procedures for Digital HSO Violations (UIP-APPPB-01-22) and Procedure for Management and Implementation the Use of Body Worn Cameras (UIP-UMUM-01-22).

In year 2022, the development of Procedure for Management and Implementation the Use of Body Worn Cameras following the procurement of 110 units of body cameras. The body cameras were utilised in public health enforcement activities by the MOH enforcement officers in the field. There were five (5) JKNs namely JKN Selangor, JKN Pahang, JKN Negeri Sembilan, JKN Melaka and the Federal Territories Health Department Kuala Lumpur & Putrajaya have received the distributed of body cameras. The launch of body cameras for Public Health enforcement officers of the MOH was completed by the Minister of Health on 12 December 2022.

APPOINTMENT OF AUTHORISED OFFICERS AND DELEGATION OF AUTHORITY

Appointment of authorised officers under the Public Health Act and Regulations is to ensure that all enforcement activities were carried out according to Standard Operating Procedures. The number of authorised officers appointed under the Public Health Act and Regulations were shown in **Table 5.4**.

Table 5.4
Appointment of Authorised Officers for Year 2019 to 2022

Authorised Officers	2019	2020	2021	2022
Authorised Officers under Prevention and Control of Infectious Disease Act 1988	327	793	940	1,523
Authority for Issuing Compound under Prevention and Control of Infectious Disease Act 1988	46	247	34	26
Authorised Officers under Food Act 1983	547	651	926	1,535
Authority for Issuing Compound under Food Act 1983	391	380	800	1,387
Authority of Premise Closure under Food Act 1983	114	80	91	70
Identification Card for Enforcement Officers	324	291	322	311
Total	1,749	2,442	3,113	4,852

Source: Public Health Development Division, MOH

ENFORCEMENT OF PREVENTION AND CONTROL OF INFECTIOUS DISEASES ACT 1988 [ACT 342]

In year 2022, this sector focused on strengthening enforcement activities for the Prevention and Control of Infectious Diseases Act 1988 [Act 342] including the Regulations for the Prevention and Control of Infectious Diseases (Measures within Infectious Local Areas) in preventing and controlling COVID-19.

Overall, enforcement activities under Act 342 showed a decrease trend compared to the previous year (**Table 5.5**). This decrease occurred considering the transition from the COVID-19 pandemic phase to the endemic phase and the enforcement activities carried out mainly involved educational enforcement.

Table 5.5
Enforcement of Prevention and Control of Infectious Disease Act 1988 for
Year 2019 to 2022

Year	Number of Inspected Premises under Section 18(1)	Number of Premises Closed under Section 18(1)	Number of Compounds Issued	Total compound amount paid (RM)
2019	2,619	731	34	15,100
2020	471,449	2,907	54,021	2,180,500
2021	451,476	6,741	141,922	42,900,000
2022	177,742	2,890	2,613	2,404,600

Source: Public Health Development Division, MOH

ENFORCEMENT OF DISEASE DESTRUCTION OF BEARING INSECTS ACT (DDBIA) 1975 [ACT 154]

A total of 11 series of *Ops Gempur Aedes* at the national level has been conducted throughout the year 2022. The achievements of the DDBIA 1975 enforcement activities are as in **Table 5.6**.

Table 5.6
Enforcement of Disease Destruction of Bearing Insects Act 1975 for Year 2019 to 2022

Year	Number of Inspected Premises	Number of Premises with Positive Breeding	Number of Compounds Issued	Number of Premises Closed	Number of Cases Registered in Court	Total fine Imposed By Court (RM)
2019	4,877,369	161,506	24,869	117	2,665	1,037,231
2020	4,685,063	175,642	21,748	71	1,418	836,460
2021	3,953,480	140,415	21,976	52	862	536,450
2022	5,054,076	165,505	28,889	59	2,953	923,350

Source: Public Health Development Division, MOH

ENFORCEMENT OF CONTROL OF TOBACCO PRODUCT REGULATIONS 2004

Control of Tobacco Product Regulations 2004 is a subsidiary law under Food Act 1983 [Act 281] that encompasses enforcement on smoking at prohibited places, sale of cigarettes in open packs, online selling of tobacco products and others. Achievements of enforcement activities under Control of Tobacco Product Regulations 2004 are as shown in **Table 5.7**.

Table 5.7
Enforcement of Control of Tobacco Product Regulations 2004 for Year 2019 to 2022

Year	Number of Notices Issued Under Section 32B	Number of Compounds Issued	Total Amount of Paid Compounds (RM)
2019	50,946	29,819	3,653,774
2020	34,338	19,433	2,615,814
2021	15,163	12,012	1,493,617
2022	81,431	49,889	5,762,956

Source: Public Health Development Division, MOH

INVESTIGATION AND PROSECUTION

The SIP has roles in the investigation and prosecution for contravention of public health laws. The trend showed an increase compared to the previous year. The details of the activities are in **Table 5.8**.

Table 5.8
Investigation and Prosecution under Public Health Act and Regulations for Year 2019 to 2022

Year	Number of Investigation Papers	Number of Consent for Prosecutions	Number of NFA
2019	102,122	20,385	680
2020	80,144	10,515	309
2021	38,146	6,309	436
2022	140,690	16,721	2,974

Source: Public Health Development Division, MOH

FUMIGATION

The issuance of a fumigation license is in line with the requirements of the Hydrogen Cyanide (Fumigation) Act 1953, where fumigation operators must have a license before carrying out any fumigation activities. Assessment of the fumigation operator's competence is done through written and practical examinations before being granted a license while fumigation audits are also carried out to ensure compliance of fumigation activities in accordance with the SOP. The activities related to fumigation are as in **Table 5.9**

Table 5.9
Activities for the Fumigation Year 2022

Activities	2019	2020	2021	2022
The number of candidates for the fumigation exam	53	55	-	70
Fumigation license Application (New)	22	23	-	1
Fumigation License Application (Renewal)	229	240	256	247
Fumigation audit	10	3	-	11
Total	314	321	256	329

Source: Public Health Development Division, MOH

Image 5.2
Audit Activities of Fumigation Work on a Sea Vessel at the Maritime Transport Training Institute (MATRAIN)



Source: Public Health Development Division, MOH

Image 5.3
Fumigation Operator Competency Assessment Activity for Year 2022



Source: Public Health Development Division, MOH

PUBLIC HEALTH PHARMACY SECTOR

PROCUREMENT AND SUPPLY OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is an equipment worn to minimise exposure to hazards and for protection against infectious materials that caused serious workplace injuries and illnesses. The supply of suitable and sufficient PPE is very important especially in the implementation of disease prevention, control and treatment activities in the hospitals and health clinics. Malaysia has entered the transition to endemic phase following the effectiveness of public health preventive and control measures in managing transmission of COVID-19 infection in the country since 1 April 2022. However, all MOH facilities still need to ensure the healthcare system's preparedness is always strengthened to face any risk of COVID-19 resurgence cases or threat of another epidemic in the future.

A total of 18 types of PPE items were required by healthcare personnel for the management of COVID-19 outbreak. In year 2022, total of RM85.4 million allocated under the COVID-19 Fund had been distributed for PPE procurement and supplies to all MOH facilities. Until 31 December 2022, all State Health Departments including Hospital Kuala Lumpur managed to keep at least one (1) month stock for all types of PPE. Continuous monitoring of PPE stock is always implemented to ensure continuity of supply for healthcare workers, especially frontliners.

Figure 5.2
Type of PPE for COVID-19 Management



Sources: i. MOH Strategic Plan KPI 2022

ii. Public Health Development Division, MOH

DISEASE CONTROL DIVISION

NON-COMMUNICABLE DISEASE (NCD) SECTION

NCD INTERVENTION SECTOR

KOMUNITI SIHAT PEMBINA NEGARA (KOSPEN) PROGRAMME

Prevalence of NCD had been increasing from year to year, KOSPEN programme aims to create a healthy and productive community free from NCDs by practicing healthy lifestyle which is one of the major public health issues in Malaysia. By adopting a healthy lifestyle, the risk of NCD diseases can be reduced and indirectly improved the body's immune system.

KOSPEN consists of seven (7) main scopes, which are Healthy Eating, Active Lifestyle, No Smoking, Healthy Mind, Alcohol Harm Prevention, Health Screening and Weight Management.

In 2022, a total of 1,117,636 adults have been screened for NCD risk factors with 92 per cent of localities have 10,000 steps track, 97 per cent met the requirements of the Healthy Menu Policy and 86 per cent localities able to achieve the target for number of houses joining the Smoke-Free-House (RBAR) programme.

Table 5.10
KOSPEN Achievement for Year 2022

KPI KOSPEN	2015	2016	2017	2018	2019	2020	2021	2022
Total number of adults age 18 years old and above who had been screened at the KOSPEN localities across the country	190,667	222,101	725,625	821,675	996,077	1,045,274	1,046,016	1,117,636
Percentage of KOSPEN localities nationwide reaching the 10,000-step track target	58	33	84	85	85	85	93	92
Healthy Menu Policy during official events Percentage of KOSPEN localities nationwide achieved the target of separating sugar from hot drinks	32	29	68	63	64	73	85	91
Healthy Menu Policy during official events Percentage of KOSPEN localities nationwide achieved the target of preparing fruits and vegetables during lunch	44	44	76	72	72	71	85	99

KPI KOSPEN	2015	2016	2017	2018	2019	2020	2021	2022
Healthy Menu Policy during official events								
Percentage of KOSPEN localities nationwide achieved the target of preparing fruits and vegetables during dinner	43	39	71	69	70	73	85	100
Percentage of KOSPEN localities nationwide achieved the target for number of houses joining the smoke-free-house (RBAR) programme	59	59	48	36	62	69	76	86

Source: KOSPEN Achievement Report from January to December 2022

PREVENTION AND CONTROL OF CARDIOVASCULAR/DIABETES/CANCER SECTOR

COLORECTAL CANCER SCREENING PROGRAMME

The Colorectal Cancer Screening Programme targets asymptomatic individuals, aged between 50 to 75 years. Individuals were screened using Immunological Fecal Occult Blood Test (iFOBT) followed by colonoscopy. From January to September 2022, a total of 48,578 clients were screened as compared to 38,409 in 2021 (26.5 per cent increment). The positive rate for positive iFOBT tests was 12.9 per cent and 90.5 per cent of them agreed to be referred for colonoscopy. Of those who agreed to be referred, 59.8 per cent underwent colonoscopy. Out of these, 3.7 per cent were diagnosed with cancer and 25.2 per cent were positive for colon polyps.

A total of 815 individuals were presented with signs and symptoms for colorectal cancer. 79.8 per cent of them were agreed to be referred for colonoscopy whereby 76.8 per cent underwent colonoscopy. From this figure, 11.5 per cent were diagnosed for colorectal cancer and 26.2 per cent were positive for colonic polyps. A total of 477 individuals were identified to have a close family diagnosed with colorectal cancer and 75.3 per cent agreed to be referred for colonoscopy. A total 65.8 per cent underwent colonoscopy, 6.5 per cent of them were diagnosed for colorectal cancer and 22.2 per cent were positive for colonic polyps.

DATA VERIFICATION FOR NON-MEDICALLY CERTIFIED DEATH (NMCD) PROGRAMME

In year 2022, from a total of 87,897 NMCD or Verbal Autopsy (VA) cases registered at the National Registration Department in 2021, 81.8 per cent were able to be investigated. 58.9 per cent were able to be verified and given a new Cause of Death. The Statistics on Causes of Death Malaysia 2022 from the Department of Statistics Malaysia (DOSM) has reported an increase in percentage of Medically Certified Death (MCD) in 2021, 70.0 per cent as compared to 2020, which was 65.6 per cent.

CARDIOVASCULAR AND DIABETES UNIT

NATIONAL DIABETES REGISTRY (NDR)

In year 2022, 1.9 million diabetes patients were registered in the NDR and 933,148 were on active follow-up. Only 31.9 per cent of diabetes patients achieved HbA1C \leq 6.5%. Despite COVID-19 pandemic for the past two (2) years, most states had achieved the target of at least 30 per cent of clients having HbA1C \leq 6.5% except Johor, Kedah, Pulau Pinang and Selangor.

MONITORING, AWARENESS AND PRODUCT (MAP) STRATEGY

With the end of the Salt Reduction Strategy to Prevent and Control NCDs in Malaysia in year 2020, the MOH has extended this strategy from year 2021 to 2025 through MAP strategy. The main focus of the strategy for five (5) years period is to give awareness to the general public and school students in year 2023 through the implementation of the strategic communication plan that has been developed as well as the enforcement of the salt content label for pre-packaged food in January 2025.

AUDIT ON VENDING MACHINES

For the year 2022, 296 self-service machines (vending machines) out of a total of 343 units have been audited in health facilities across the country. The number of vending machines that were successfully audited increased significantly from 60.9 per cent in year 2021 to 86.3 per cent in year 2022. It was discovered that there was a 5 per cent increase in the percentage of vending machines that comply with the existing guidelines, which is 23.4 per cent in year 2021 as compared to 28.4 per cent in year 2022.

MENTAL HEALTH, INJURY AND VIOLENCE PREVENTION, AND SUBSTANCE ABUSE SECTOR

OFFICIATION OF NATIONAL CENTRE OF EXCELLENCE FOR MENTAL HEALTH (NCEMH)

On 21 October of 2022, the officiation ceremony of NCEMH took place at Quill 18, Cyberjaya in conjunction with The World Mental Health Day 2022. The establishment of The National Centre of Excellence for Mental Health was in accordance with the vision to make Malaysia a contented, resilient and productive nation with social, emotional and spiritual well-being within a supportive family and community environment.

The centre's function is to lead and coordinate mental health of the nation by outlining five (5) main scopes which includes Promotion of Mental Health and Prevention of Mental Illness, Intervention and National Mental Health Crisis Helpline, Training and Education, Mental Health Surveillance and Research and Innovation. This centre acts as a platform in planning and carrying out mental health services activities through strategic collaboration with government and private agencies, universities and NGOs.



MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT SERVICE (MHPSS)

The objective of MHPSS is to provide emotional support to the public in general. MHPSS team is mobilised during disaster or tragedy such as during the landslide tragedy at Jalan Genting Highland-Batang Kali, Selangor and during flood disaster to provide Psychological First Aid (PFA) to the victims and family members involved. Among PFA activities conducted includes relaxation technique, art therapy and psychoeducation. MHPSS has also been given to the Search and Rescue (SAR) Operation team and the frontliners involved through debriefing and mental health alert card distribution.

HEAL HELPLINE 15555 (HELP WITH EMPATHY AND LOVE)

HEAL Helpline 15555 is a helpline for mental health crisis that offers tele-counselling services with the aim of providing emotional and psychosocial support, including early crisis intervention. This helpline is a continuation from the Mental Health and Psychosocial Support service that was started since 25 March 2020. This helpline is handled by a Psychology Officer (Counselling) who is trained, certified and registered under the Counsellor Board (subjected to Counsellor Act 1998 - Act 580). This helpline operates from 8:00 am to 12:00 am daily, including public holidays. Examples of mental health crisis handled were suicidal behaviour, depression, panic attack, anxiety, and stress. Moreover, consultation to family members and caregivers of the mentally ill patient including postvention support was also offered.



Until 31 December 2022 (72 days of operation), a cumulative of 5,483 calls had received help in the form of emotional and psychological support. A total of 2,061 clients have been given specific intervention by the Psychology Officer (Counselling). From this number, 74 cases had suicidal behaviours, 32 cases identified having suicidal ideation and all were given intervention. Remaining 42 cases who had suicide attempts were brought to hospital for treatment via MERS999 activation, with the cooperation of the Royal Malaysian Police (PDRM) and the Emergency Department.

TOBACCO CONTROL SECTOR AND FRAMEWORK CONVENTION ON TOBACCO CONTROL (FCTC) SECRETARIAT

IMPLEMENTATION OF GENERATIONAL ENDGAME (GEG)

A productive nation starts from a healthy generation. Tobacco products have been proven to cause the death of more than 27,000 Malaysians every year and cause various complications of NCDs such as lung cancer, heart problems, and chronic lung problems. Therefore, in the MOH efforts to curb the problem of NCD the control over tobacco and smoking products use must start from a young age.

The MOH had introduced the proposal for the implementation of GEG. This initiative is a lifelong protection for the generation born from 1 January 2007, onwards, from the dangers of any tobacco and smoking products, including electronic cigarettes or vaping under the new MOH Act. This proposal was announced by the Minister of Health, at the 150th World Health Organization Conference in Geneva, Switzerland on 27 January 2022. It had received support from many societies and NGOs in Malaysia. This noble effort is also supported and will be continued by the current Minister of Health.

In line with that, the Generational Endgame Advocacy Roadshow (GEGAR) campaign has been mobilised throughout the country from April 2022 to explain about the implementation and the implications of this GEG proposal. The GEGAR-18 programme targeted students in primary and secondary schools, was launched on 25 April 2022 by the Minister of Education and the Minister of Health. During the ceremony, a survey was commenced to assess the support by school students. Until 30 July 2022, more than 47,145 secondary school students aged 16 to 17 years old surveyed, supported the implementation of GEG.

Recognising the great role of women as housewives and initiators of the no-smoking culture at home, the GEGAR Wanita programme was also launched with the support of the Ministry of Women, Family, and Community Development on 9 July 2022. In addition, the GEGAR Kampus and GEGAR Belia programmes were also launched throughout Malaysia with the involvement of various ministries, agencies and NGOs. The implementation of this GEG can be realised soon towards achieving the goal of a Smoke-Free Malaysia in 2040 and maintaining the health and well-being of Malaysians.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH SECTOR

OCCUPATIONAL HEALTH PROGRAMME

For the period of 2022, the Occupational Health Unit (OHU) has been involved in the management of COVID-19 among the working population which involved updating of policies and guidelines, data analysis of workers as well as information and advice on managing COVID-19 at the workplace. Apart from that, other occupational health activities were still carried out which comprised of prevention activities, notification and investigation of occupational injuries and diseases. Under the Sharps Injury Surveillance (SIS) programme in MOH, a total of 1,173 cases of sharps injuries were notified to the OHU, MOH from the 1 January 2022 to 14 January 2023 whereby the number of cases reported showed an increase of 16.1 per cent compared to the 984 cases in year 2021.

As for the Accidents and Injuries, Dangerous Occurrence, Occupational Poisoning and Occupational Diseases Surveillance Programme, there was an increase of 22.5 per cent in the number of cases of accidents and injuries (not including sharp injuries) reported among healthcare workers and 85.7 per cent reduction in the number of occupational poisonings reported as compared to the year 2021. Meanwhile, there were 116 cases of occupational lung diseases notified in year 2021 compared to 59 cases in year 2021. The Unit also conducted the Occupational Health Doctor (OHD) course for 51 MOH doctors.

REVISION OF STANDARD OPERATING PROCEDURES (SOPS) RELATED TO COVID-19

The Environmental Health Unit (EHU) was involved in assisting the Crisis Preparedness and Response Centre (CPRC) in dealing with the COVID-19 pandemic situation in year 2022 in terms of information coordination, risk communication to the public and revision of related SOPs, specifically the COVID-19 Management Guidelines on Cleaning and Disinfection Procedures in Public Places (Annex 36: updated on 25 March 2022) and Guidelines for the Temporary Evacuation Centre (PPS) for Disaster Victims to Avoid COVID-19 (Annex 41: updated on 20 September 2022).

NATIONAL FLOOD MANAGEMENT AND ENVIRONMENTAL IMPACT ASSESSMENT

In addition, EHU had opened the national flood operation room for the management of the Northeast Monsoon 2022/2023 from 19 to 29 December 2022. The EHU as the technical agency to offset development impacts had reviewed and commented on 68 reports of the proposed development projects subjected to Environmental Impact Assessment (EIA) under the Environmental Quality Act 1974 in different categories and attended 65 EIA Technical Review Committee meetings, providing technical input related to the health impact of the proposed development projects. Besides that, the EHU is involved in the preparation of the Fourth National Communication and Biennial Update Report (BUR) for the fulfilment of the obligations under the United Nations Framework Convention on Climate Change (UNFCCC). The meeting also discussed on the public health issues related to climate change.

HEALTH INSPECTIONS OF PRISONS, TEMPORARY DETENTION DEPOTS (DTS) AND DAYCARE CENTRES (PJH)

Routine environmental health inspections of prisons, DTS and PJH were conducted throughout the year. All 19 DTS, 1,078 out of 1,375 (82.5 per cent) PJH and 36 out of 42 (85.7 per cent) prisons were inspected in the first cycle as well as 40 out of 42 (95.2 per cent) prisons were inspected in the second cycle of year 2022.

KOSPEN WOW PROGRAMME

Previously known as KOSPEN Plus, the KOSPEN WOW programme is a comprehensive workplace health intervention programme developed by the MOH aimed at reducing the burden of NCD and related risk factors among employees by empowering employers and employees to the direction of a healthy lifestyle. It is a platform that targets employees and environmental change to support behaviour modification of health in the workplace both in the public or private sector with the motto of *Towards Wellness of Workers*. The KOSPEN WOW programme commenced seven (7) years ago and has encompassed 84,547 workers from 1,298 agencies.

In year 2022, 185 new agencies have successfully enrolled into the programme and acting as a platform for health screening of the National Health Screening Initiative (under the Agenda National Malaysia Sihat), a total of 12,002 (91 per cent) workers were screened for NCD risk factors through the KOSPEN WOW programme this years. Despite the challenges faced during the COVID-19 pandemic, this programme managed to sustain and remained relevant in continuing to provide health intervention and prevention activities at the workplace. The official KOSPEN WOW portal (www.moh.gov.my/kospenwow) was updated and improvised to be the one-stop source to obtain the relevant information related to the programme. The data reporting mechanism was updated to facilitate the data collection process. Several training sessions were conducted that involved programme coordinators from various staffing categories.

COMMUNICABLE DISEASE SECTION

TB AND LEPROSY CONTROL SECTORS

NATIONAL TUBERCULOSIS (TB) PREVENTION AND CONTROL PROGRAMME

Malaysia is classified as an upper moderate TB burden country with an incidence rate of TB in 2022 was 75 per 100,000 population. WHO estimated TB incidence for Malaysia in 2022 was 97 per 100,000 population that was higher than our achievement. Therefore, Malaysia needs to increase Active Case Detection (ACD) activities, which include enhancing high risk group screening and out-reach screening at the high prevalence TB area in order to achieve this target.

Contact tracing is one of the core activities and has been implemented in Malaysia to control TB transmission. The identified contact will be screened for latent TB infection (LTBI) and active TB disease. For 2022, a total of 60,396 (59 per cent) of contacts of pulmonary TB smear positive were screened for LTBI and 167,659 (81.6 per cent) contacts of all TB cases were screened for active TB disease. Total of 852 cases were detected TB positive. Initiatives to increase TB case detection were as below:

Image 5.4
TB Screening Activities for Year 2022



Collaboration with other agencies and NGOs



Active screening of TB at elderly nursing homes



Active case detection activities among OA village remote area



Active TB Screening in High-Risk Institutions

Source: Disease Control Division, MOH

PILOT PROJECT ON POST EXPOSURE PROPHYLAXIS – SINGLE DOSE RIFAMPICIN

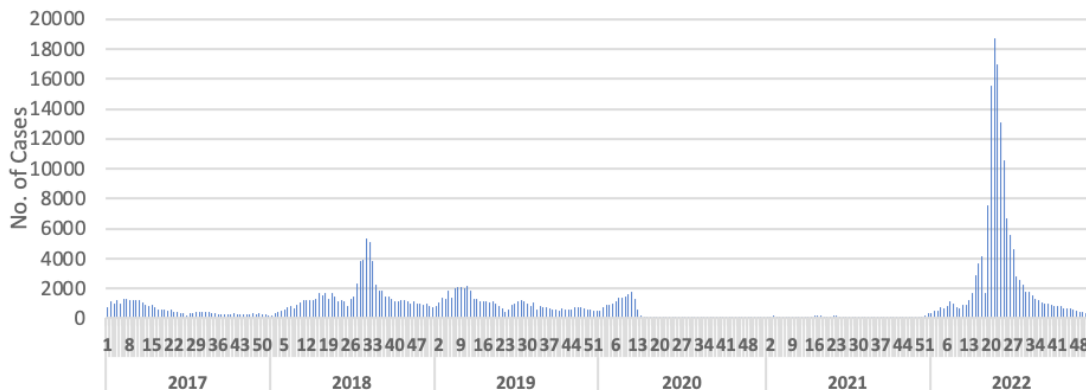
In July 2022, Pahang State Health Department conducted its first pilot project on Post Exposure Prophylaxis – Single Dose Rifampicin (PEP - SDR) for the high-risk community at Kampung Sawah Batu in Pekan district, Pahang. The OA village is one of the endemic localities with a population of 688 people. The prophylaxis treatment was given to 484 (70 per cent) villagers who fulfilled the criteria. They then will be monitored for signs and symptoms of leprosy as per schedule. Based on a study (COLEP Study), PEP - SDR treatment is associated with a reduction in risk of leprosy of 57 per cent over two (2) years and of 30 per cent over 5 to 6 years. Administration of PEP - SDR by blanket approach is a prevention method especially among communities living in endemic locality with high burden of leprosy. Beginning in 2023, PEP - SDR will be a programme under the leprosy preventive activity for closed contacts and identified high-risk groups.

ZOONOSIS CONTROL SECTOR

HAND FOOT MOUTH DISEASE (HFMD) SURVEILLANCE

In year 2022, HFMD cases were reported the highest number ever since it was included as a notifiable disease under the Prevention and Control of Infectious Disease Act [Act 342]. A total of 149,578 cases have been reported with 88 per cent were among children under the age of seven (7) years old.

Figure 5.3
Total Cases of HFMD from Year 2017 to 2022

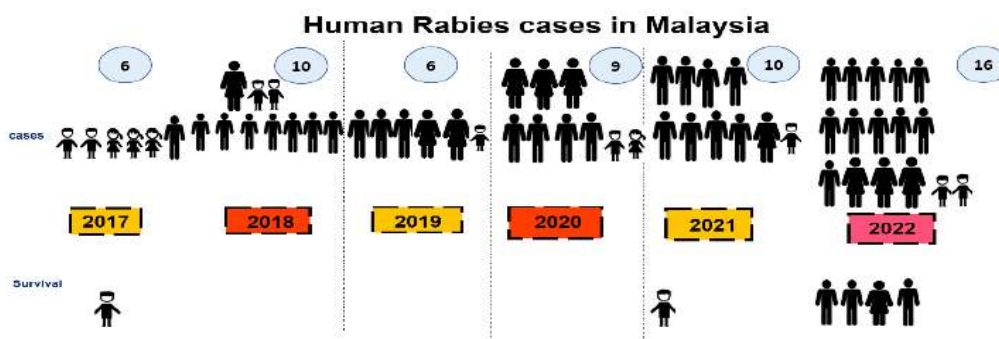


Source: e-Notification System, MOH

RABIES SURVEILLANCE

A total of 16 rabies cases including 12 deaths were reported in year 2022, with 14 cases in Sarawak and two (2) in Selangor. The joint control activities of MOH and Department Of Veterinary Services (DVS) are still continuing in both states. For the incident in Selangor, active case detection and surveillance activities carried out by DVS did not detect any positive dog or other animal with rabies.

Figure 5.4
Total Cases of Rabies from Year 2017 to 2022

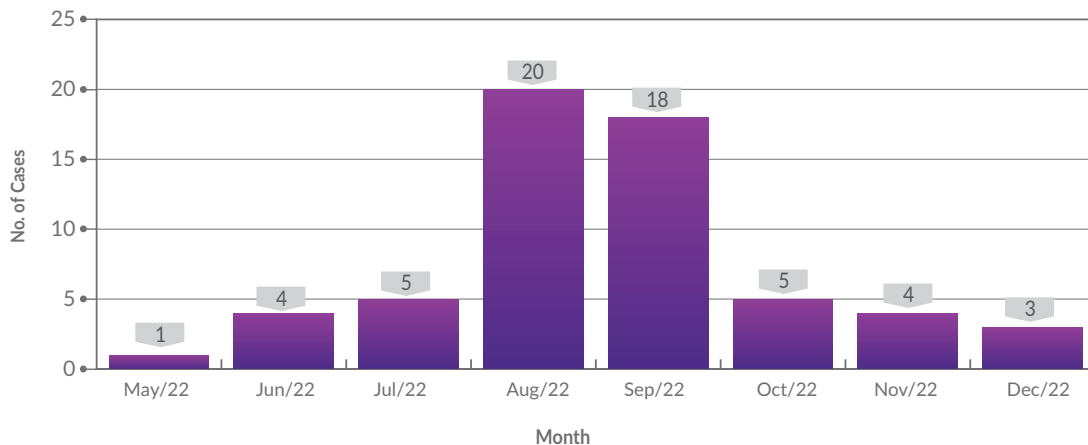


Source: e-Notification System, MOH

MONKEYPOX SURVEILLANCE

Monkeypox or mpox is a zoonotic disease but in year 2022, cases of mpox involving the whole world have been reported related to the sexual activity of risk groups. Surveillance from July to December 2022 showed 60 suspected mpox cases in Malaysia. However, through laboratory confirmation tests, none were positive for mpox.

Figure 5.5
Mpox Suspected Cases Trend for Year 2022



Source: e-Notification System, MOH

NATIONAL AVIAN INFLUENZA AND EBOLA FIELD EXERCISE

The 2022 National Avian Influenza Field Simulation was held in Kapit and Sibu districts, Sarawak on 26 to 28 July 2022. A total of 226 participants from the MOH, DVS and other agencies such as Malaysia One Health University Network (MyOHUN) and Sarawak Disaster Management Committee participated. The objective was to test the agencies' preparedness and response to an infectious disease outbreak. The exercise was based on scenarios related to Avian Influenza and Ebola outbreaks.

Image 5.5
The 2022 National Avian Influenza Field Simulation



Source: Disease Control Division, MOH

SEASONAL INFLUENZA VACCINATION PROGRAMME

Annual quadrivalent seasonal influenza vaccination 2022 for the frontliners working at MOH Headquarters was conducted on 19 and 21 October 2022. A total of 1,300 staff were identified as frontliners.

Image 5.6
Seasonal Influenza Vaccination Programme for Year 2022



Source: Disease Control Division, MOH

CONTINUING MEDICAL EDUCATION (CME) PROGRAMME ON NEGLECTED TROPICAL DISEASE (NTD)

A CME programme on NTD was held virtually on 24 February 2022. The programme focused on common NTDs in Malaysia including their elimination and eradication activities.



VACCINE PREVENTABLE DISEASES (VPD) AND FOOD WATER BORNE DISEASES (FWBD) CONTROL SECTOR

SURVEILLANCE ON VACCINE PREVENTABLE DISEASES

Since the successful closure of Circulating Vaccine-Derived Poliovirus Type 1 (cVDPV1) and Type 2 (cVDPV2) outbreak in Sabah and Federal Territory (FT) Labuan in September 2021, no polio cases nor polioviruses were identified by the Acute Flaccid Paralysis (AFP) surveillance and environmental surveillance for poliovirus. Under the National Immunisation Programme for

children, polio vaccine in the form of hexavalent combination vaccine Diphtheria-Tetanus-Acellular Pertussis-Polio-Hepatitis B-Haemophilus Influenzae Type B (DTaP-Hep B-Hib) is given free of charge to all non-citizen children aged seven (7) years old and below from January 2022 onwards, to optimise polio vaccination coverage in the country.

Malaysia remains measles endemic in 2022 with a rise in cases reported following the opening of all economic sectors. An increase in Rubella, Pertussis, Diphtheria, and Hepatitis B cases were also reported. However, a downtrend number of neonatal tetanus was recorded in year 2022.

THE NATIONAL COVID-19 IMMUNISATION PROGRAMME (PICK)

PICK which commenced on 24 February 2021 is one of the most important milestones in controlling the COVID-19 pandemic in this country. Along with other public health interventions, PICK succeeded in reducing the COVID-19 cases, especially the severe cases including death and subsequently restored the public health burden of the country. In year 2022, the scope of PICK was extended to children aged five (5) to under 12 years old which started on 2 February 2022. The first booster dose started on 14 April 2021 while the second booster dose started on 18 July 2022. By the end of year 2022, all residents aged 12 years and older are eligible to receive the second booster dose, while residents aged five (5) to under 12 years are eligible to receive the first booster dose. As of 31 December 2022, 85.3 per cent of the population have completed primary dose, 49.8 per cent have received the first booster dose while 1.9 per cent of the population received second booster dose.

SURVEILLANCE ON FOOD AND WATER-BORNE DISEASES

In year 2022, we have seen the increase in the incidence rate by 100 per cent and episodes of food poisoning from 202 in 2021 to 392 in 2022 (94 per cent increment) after the opening of schools and workplaces in April 2022. Out of these 392 episodes, 137 (35.9 per cent) episodes occurred in MOE schools, 43 episodes (10.9 per cent) occurred in Non-MOE schools, 55 episodes (14 per cent) in institutions besides schools, 83 episodes (21.2 per cent) occurred at homes and 74 episodes (18.9 per cent) occurred in other localities.

Since 2016, the annual IR for Typhoid, Cholera, Dysentery, Hepatitis A was lower than 1.0 per 100,000 population. However, there were no significant changes between 2017 and 2022.

VECTOR BORNE DISEASE SECTOR

NATIONAL DENGUE CONTROL PROGRAMME

In year 2022, Malaysia has reported a total of 66,102 dengue cases with 56 deaths compared to 26,365 cases with 20 deaths in the same period of 2021. This shows there is an increase of 150.7 per cent of dengue cases and an increase of 180.0 per cent of deaths this year.

Dengue remains a public health threat at both national and global level which requires commitment from various stakeholders to deliver strategic measures in handling this dynamic vector borne disease. In view of this, the National Strategy Plan for Dengue Prevention and Control (NSPDPC) has been introduced in year 2022 to outline the national dengue plan for five (5) years until 2026. The formulation of this strategic plan is based on three (3) main thrusts and two (2) supporting elements which entails 22 strategies with a total 41 initiatives and 54 indicators.

The three (3) thrusts are set to focus on consolidation of existing dengue surveillance systems, to emphasise the accessibility to dengue detection, diagnosis, treatment as well as to priorities dengue prevention and control efforts. In addition, the two supporting elements to these three (3) thrusts aim to strengthen catalytical factors of sustainable health systems and dengue related research. Overall, this NSPDPC serves to empower the implementation of field dengue prevention and control activities to reduce dengue burden, including death in Malaysia.

Until year 2022, Wolbachia Mosquito Operation (WMO) has been introduced in 28 localities with high dengue burden across seven (7) states. Initial analysis shows dengue case reduction between 33 per cent to 100 per cent among localities that have implemented WMO for at least two (2) years.

ZERO INDIGENOUS MALARIA INFECTION

In year 2022, Malaysia had successfully maintained zero indigenous human malaria for the fifth consecutive year. However, there were 286 cases of imported and 15 introduced human malaria reported in 2022. Zoonotic malaria remained the main malaria species in Malaysia with 2,514 cases reported, giving the total of malaria reported in the country to 2,815 cases. Importation of human malaria remains a challenge to the malaria elimination programme which is contributed by either an influx of foreign workers or Malaysian workers returning from endemic countries.

Zoonotic malaria has become the main malaria burden as human infections with *P. knowlesi* now account for the majority of malaria-related morbidity and mortality in Malaysia. The programme has introduced a new vector control strategy for zoonotic malaria by implementing Outdoor Residual Spray (ORS) using a new insecticide formulation which is weather resistant namely the K-othrine Polyzone. In year 2022, 39 localities in Sabah were selected to implement ORS and all localities reported significant reduction of zoonotic malaria cases.

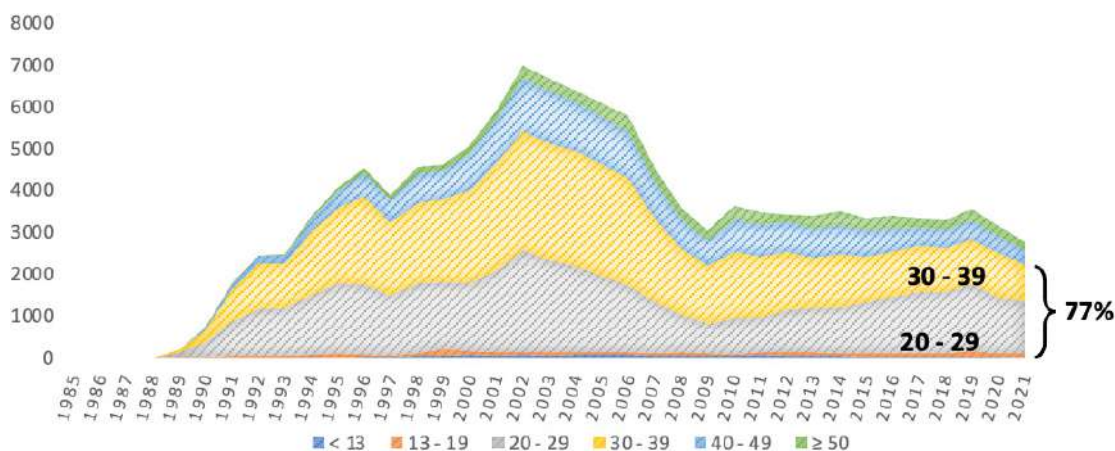
Currently, the malaria elimination programme has entered the Prevention of Malaria Re-establishment (POR) phase and it continues to strengthen strategies that have proven to be effective during the elimination phase. Under this phase, the malaria stratification strategy is based on malaria foci classification and malariogenic potential of localities. Apart from proactive case detection, populations living in active foci, residual non-active foci and cleared foci with high or medium malariogenic potential are given protection with Long Lasting Insecticide Net (LLIN) and Indoor Residual Spraying (IRS).

HUMAN IMMUNODEFICIENCY VIRUS (HIV)/SEXUAL TRANSMITTED INFECTION (STI)/HEPATITIS C SECTOR

HIV AND YOUNG ADULTS: A CALL TO ACTION

Since year 1986, HIV transmission has occurred mainly among young adults. In year 2021, 77 per cent HIV new infections were reported among people aged 20 to 39 years old, where 90 per cent were males, and 97 per cent were infected through sexual transmission.

Figure 5.6
HIV Cases by Age Group in Malaysia for Year 1986 to 2021



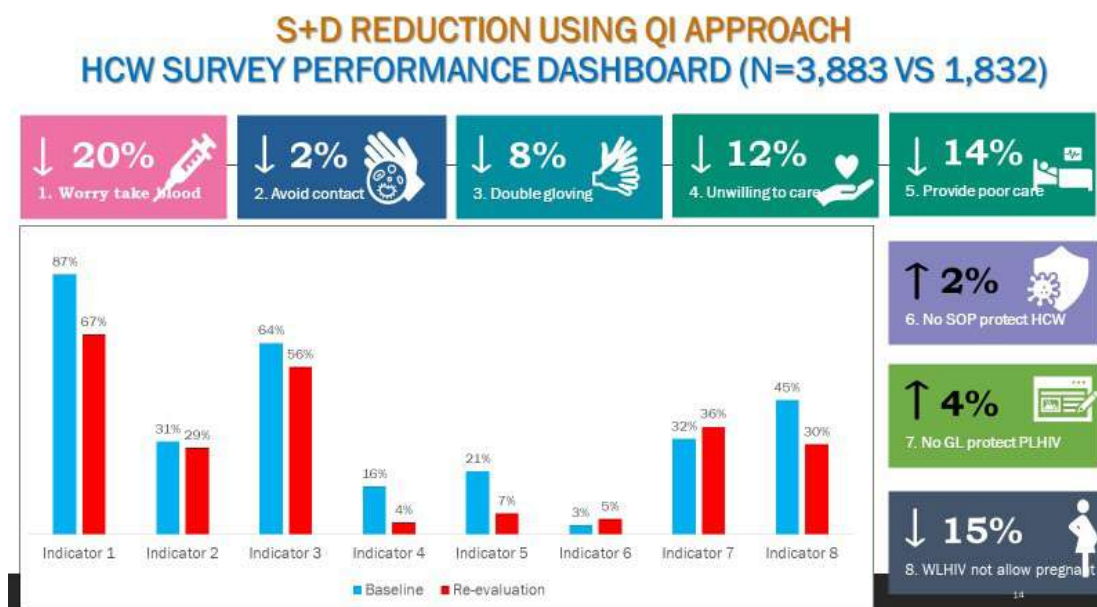
Source: Disease Control Division, MOH

The MOH has renewed prevention strategies across multiple sectors which are educational, social and healthcare systems. The PROSTAR 2.0 programme is a school-based programme to increase teenagers resilience and awareness about HIV, sexually-transmitted infections and effective preventive options. The PROSTAR 2.0 module was launched in year 2022. Training of trainers workshop had been conducted for 42 representatives from all state health departments from 11 to 13 October 2022.

The young people who are sexually active and at-risk of HIV infection would benefit from improved access to sexual health services, including HIV testing. In year 2022, the MOH Public Health Programme Policy and Exco Committee had approved the HIV Self-Testing Guideline for national implementation.

MOH had rolled out Quality Improvement (QI) interventions to reduce stigma and discrimination experienced by People Living with HIV (PLHIVs) in health settings. The intervention package includes improved quality of care via: people-centred care delivery, knowledge management, decision support. After implementing the QI strategies, reevaluation showed general reduction in discrimination against PLHIV in participating health facilities. The programme has expanded since year 2020, from 11 MOH facilities to 55 MOH facilities in year 2022.

Figure 5.7
Outcome of Stigma and Discrimination Reduction Quality Improvement Programme



Source: Disease Control Division, MOH

PREPAREDNESS, SURVEILLANCE AND RESPONSE SECTION

DISEASE SURVEILLANCE SECTOR

COVID-19 IN MALAYSIA

As of 31 December 2022, a cumulative of 5,026,677 COVID-19 cases with 36,853 deaths were reported in Malaysia. In year 2022, 2,268,591 COVID-19 cases have been reported with 5,366 deaths (0.2 per cent). This represents a reduction in 15.2 per cent COVID-19 cases and 82.7 per cent death cases respectively compared to year 2021.

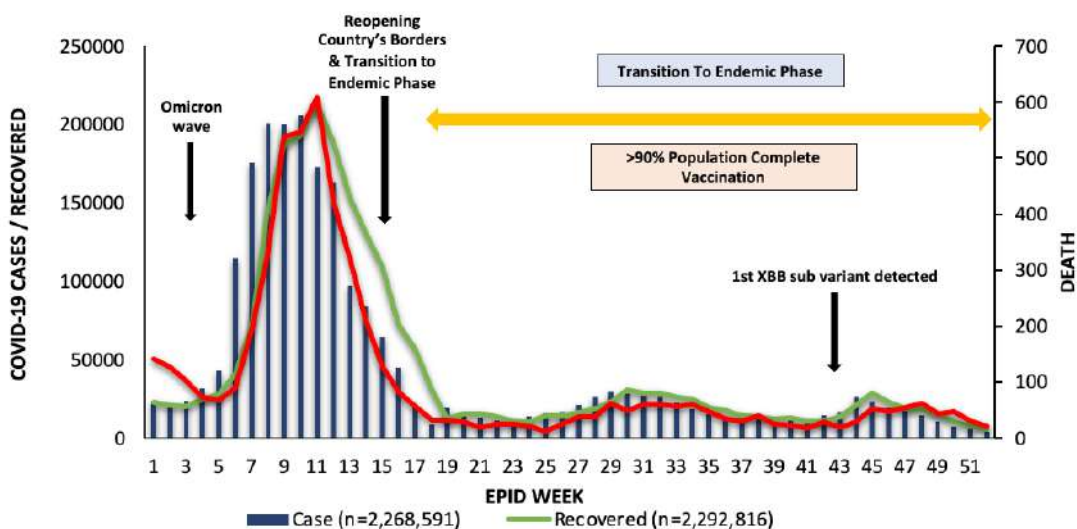
Three (3) peaks were observed throughout year 2022 which was during Epidemiological Week (EW) 10/2022, EW 29/2022 and EW 44/2022. The first peak is an extension after Malaysia first detected the Omicron variant in December 2021, which led to sharp increase of COVID-19 cases in the beginning of year 2022. With the widely transmitted Omicron variant of SARS-CoV-2 virus, Malaysia reported the highest number of daily new cases, which was 33,406 cases on 5 March 2022. To address the surge number of cases, the National COVID-19 Rapid Response Task Force (RRTF 2.0) was reactivated, jointly led by the Deputy Director General of Health (Public Health) and the Deputy Director General of Health (Medical). Among the strategies implemented were:

- i. Ensuring the availability of essential infrastructure and facilities;
- ii. Strengthening the PICK by focusing on vaccinating children aged five (5) to below 12 years old and booster doses administration;

- iii. Ensuring the management and distribution of resources and assets at optimal level; and
- iv. Delivering effective strategic communication to reduce and ease anxiety among the general public.

Later, following the relaxation of measures implemented during the *Transition to the Endemic Phase*; and re-opening of our international borders in April 2022, the peak of the second wave was observed in July 2022. Meanwhile, the third wave was observed starting from EW 42/2022 following detection of the new subvariant of Omicron, which is known as XBB. The overall Malaysia COVID-19 incidence rate for year 2022 is 6,626 per 100,000 population. Age group between 20 to 29 years old has recorded the highest incidence rate with 9,492 per 100,000 while the lowest was from the age group of five (5) to 19 years old with 4,492 per 100,000 population. In view of this, the campaign for COVID-19 booster dose among those eligible aged 18 and above, has been intensified to prevent severe complications of infection of COVID-19.

Figure 5.8
Daily Reported COVID-19 Cases, Recovery and Deaths in Malaysia for Year 2022



Source: Disease Control Division, MOH

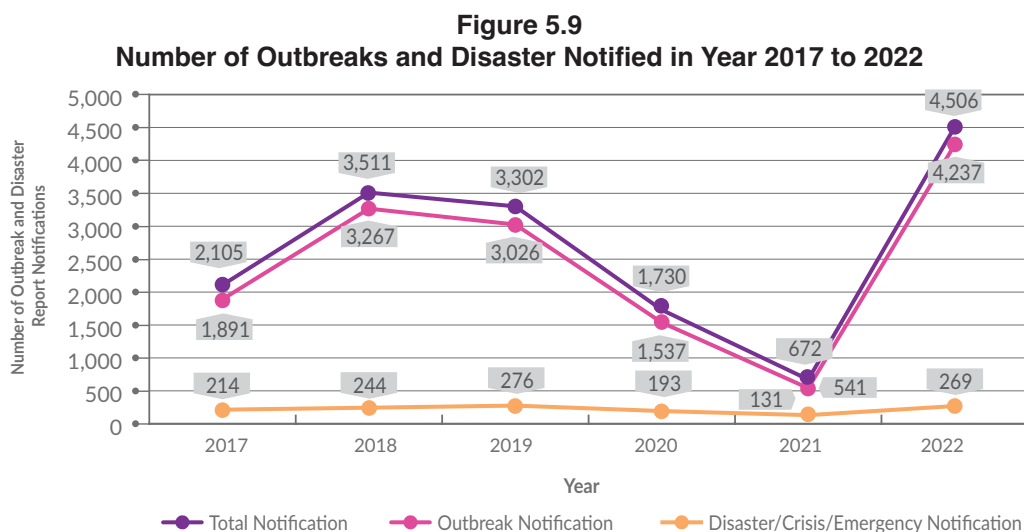
DISASTER, OUTBREAK CRISIS AND EMERGENCY MANAGEMENT SECTOR

OUTBREAK AND DISASTER SURVEILLANCE

The requirement to report any outbreak of infectious diseases and catastrophic events, especially those that have the potential to cause concern among the public and become of media interest, need to be managed in an organised and systematic manner.

Total of 4,506 notifications were reported in the eWabak System in year 2022. A total of 4,237 outbreak notifications and 269 disaster notifications were reported to the Disaster, Outbreak, Crisis & Emergency Management Sector as shown in **Figure 5.9**.

Some of the major outbreaks reported were HFMD, Food Poisoning, Influenza-Like-Illness (ILI), Chickenpox and Acute Gastroenteritis (AGE). Events such as floods, fire, storms, road accidents and gas leaks were some of the main disaster events reported as shown in **Table 5.11**. All notification reports received have been managed according to outbreak and disaster management procedures outlined.



Source: National CPRC, MOH

Table 5.11
Five (5) Major Outbreaks and Disasters Reported in Year 2022

Disease	No. of Outbreaks Reported	Disaster	No. of Events Reported
HFMD	3,123	Flood	135
Food Poisoning	396	Fire	57
ILI	233	Storm	19
Chickenpox	140	Road Accident	12
AGE	75	Gas Leak	7

Source: National CPRC, MOH

INTERNATIONAL HEALTH REGULATIONS AND TRAVEL HEALTH SECTOR

SCREENING AT INTERNATIONAL POINTS OF ENTRY

In year 2022, one of the main activities of the International Health Regulations & Travel Health Sector (SPKAKP) was COVID-19 screening at the country's International Points of Entry (POE). With the border opening starting 1 April 2022, there was an increase in travellers arriving in the PMA. The COVID-19 screening activities are summarised in **Table 5.12**.

Table 5.12
Total COVID-19 Screening of Travellers at POE in 2022

POE	Total
Total arrivals	18,746,173
Total Screening	18,652,797
Total Referrals to Hospital	29
Total referral to Quarantine station	65,837
Sign On / Sign Off of crew	13,048
Home Quarantine	235,128
Periodic Commuting Arrangement (PCA)	1,881
Reciprocal Green Lane (RGL)	0
Malaysia Healthcare Travel Council (MHTC)	242
Death and Critically Ill Emergency Visits (DCEV)	6
Post COVID-19 Travellers	24,122

Source: National CPRC, MOH

Apart from that, screening of travellers from countries with a risk of yellow fever is carried out based on the requirements of the International Health Regulations 2005 (IHR 2005); as illustrated in **Table 5.13**.

Table 5.13
Yellow Fever Screening at International Borders

Year	Total Travellers Screened	Travellers With Valid Vaccine Certificate	Travellers Quarantined	Travellers Under Medical Surveillance
2017	31,184	31,056 (99.6%)	72 (0.4%)	6 (0.02%)
2018	39,187	39,060 (99.7%)	117 (0.3%)	10 (0.02%)
2019	67,530	67,421 (99.8%)	45 (0.1%)	2 (0.002%)
2020	6,030	6,027 (99.9%)	3 (0.1%)	0 (0.0%)
2021	4,865	4,803 (98.7%)	56 (1.2%)	6 (0.12%)
2022	11,408	11,281 (98.9%)	125 (1.1%)	2 (0.02%)

Source: International Health Regulations and Travel Health Sector, MOH

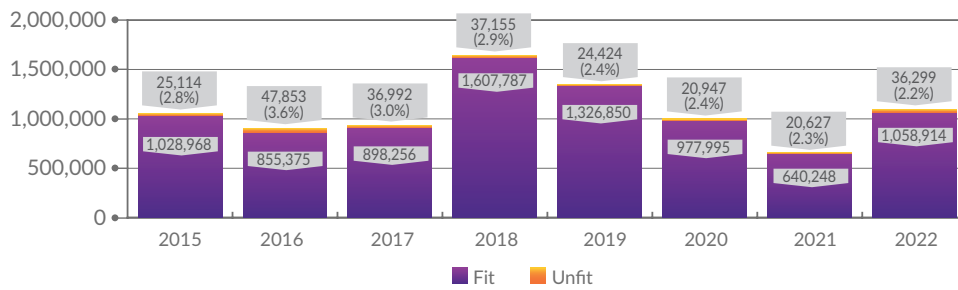
MONITORING OF YELLOW FEVER VACCINATION CENTRES

This sector also evaluates private health facilities that apply for Yellow Fever Vaccination Centres and monitors these approved facilities regularly to ensure they meet the set criteria. In year 2022, nine (9) private health facilities were approved as Yellow Fever Vaccination Centres. As of 31 December 2022, 64 private health facilities have been approved as yellow fever vaccination centres by the MOH.

FOREIGN WORKERS MEDICAL EXAMINATION

The medical examination of foreign workers in Malaysia except for Sabah and Sarawak, is monitored by FOMEMA. The FOMEMA will ensure that medical examinations carried out on all legal foreign workers are done according to the standard set by the MOH. Medical examination trends are as in **Figure 5.10**.

Figure 5.10
Trend of Foreign Workers Medical Examination by FOMEMA for Year 2015 to 2022



Sources: FOMEMA Sdn. Bhd.

DEVELOPMENT OF ELECTRONIC NATIONAL CENTRE FOR DISEASE CONTROL (eNCDC)

eNCDC is being developed as an integrated and comprehensive Public Health Information System. This project was approved under 12th Malaysian Plan (12MP) as a part of National Centre for Disease Control (NCDC) project. Development of eNCDC is very crucial to support main functions of NCDC, as Public Health Emergency Operation Centre (EOC) and Public Health Reference Laboratory (PHRL). There are two (2) main objectives for this project which are:

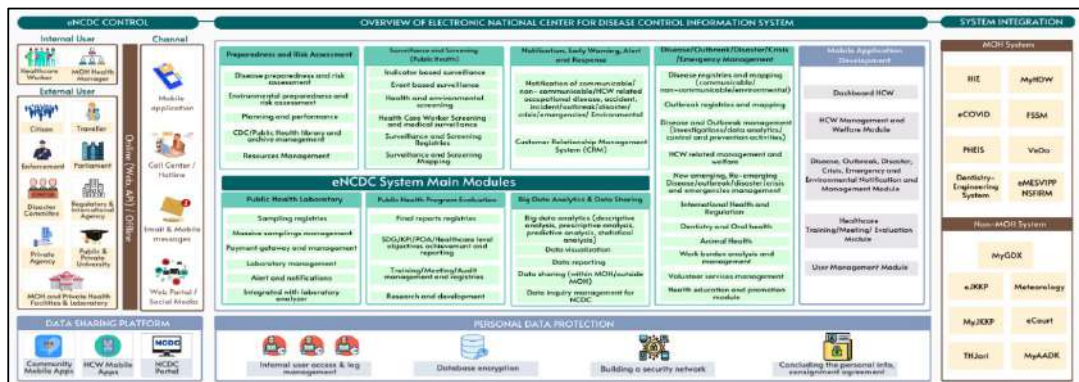
- Development of comprehensive Public Health Information System integrated with MOH, non MOH related system, laboratory analyser, health, and surveillance devices; and
- Development of mobile application of eNCDC for health managers and healthcare workers.

There were three (3) main activities held by eNCDC team during the year of 2022, which are:

- Completion of EA document for Disease Control Division (**Figure 5.11**);
- eNCDC Market Survey activities; and
- eNCDC budget application submission via Rolling Plan 4, 12MP.

The Planning Phase of eNCDC will start in 2023 with the advice and consultation from MAMPU ICT team.

Figure 5.11
eNCDC Architecture Overview



Source: eNCDC Project Management Office

FAMILY HEALTH DEVELOPMENT DIVISION (BPKK)

APPOINTMENT SYSTEM USING MYSEJAHTERA IN PRIMARY HEALTH CARE

BPKK is always committed to support efforts towards the digitalisation of the health system, in line with the PSP KKM 2021-2025 and MOH agenda to make MySejahtera application as a public health application. In relation to that, for the standardisation of the appointment system at health facilities, the appointment system using the MySejahtera has been introduced and will gradually replace other existing online appointment systems. The direction for this change considers the current situation where there are multiple appointment systems in primary healthcare facilities with limited numbers of facilities that have access to the online appointment system.

This appointment system aims to improve service efficiency and facilitate client access to services provided at primary health facilities. Initially, the system was opened for appointments booking at primary health facilities for the National Health Screening Initiative (NHSI) and *Skim Peduli Kesehatan untuk Kumpulan B40* (PeKa B40) Health Screening. The Quit Smoking Service (KBM) was also added and can be booked from October 2022.

On 28 December 2022, additional health services were added to the list following the demand and traffic usage data analysis of the MySejahtera appointment function. Currently, there are eight (8) types of main health services displayed in the MySejahtera as follows:

- i. Outpatient Treatment;
- ii. National Health Screening Initiative (NHSI);
- iii. PeKa B40 Health Screening;
- iv. Pre-Employment and Education Medical Screening;
- v. Pre-Marital Screening;
- vi. Quit Smoking Service (KBM);
- vii. Family Planning Services; and
- viii. Procedure.

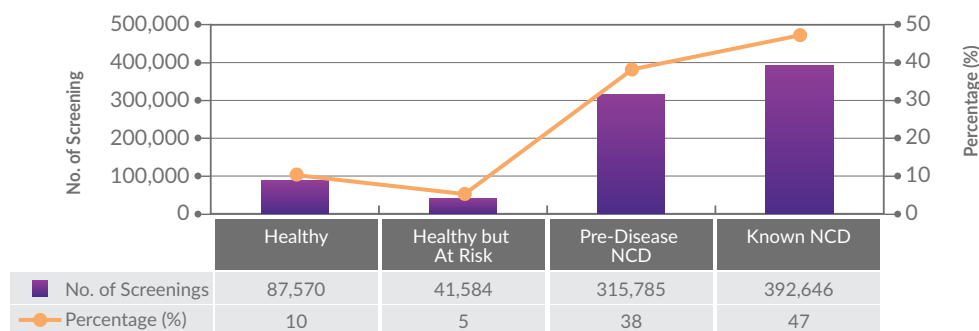
There is also an additional function in the MySejahtera appointment system whereby follow-up appointments can be allocated following the assessment by medical officers at the clinics, for more than 50 types of health services such as Diabetic Treatment, Asthma Treatment, Geriatrics Services, Physiotherapy and others. This appointment system also helps the healthcare facilities to arrange service schedules based on their respective capacities to avoid congestion at the registration counter and waiting area. However, for emergency cases, patients can walk-in to the health facility as usual and do not need to make an appointment.

NATIONAL HEALTH SCREENING INITIATIVE (NHSI)

NHSI was launched on 16 July 2022 by the Minister of Health under the third pillar of *Agenda Nasional Malaysia Sihat* (ANMS) to empower individual self-health control. This initiative was aimed to increase public awareness of the importance of regular health screening, to increase the number of Malaysians getting regular health screening and to establish a population screening database through MySejahtera.

From July to 31 Disember 2022, a total of 893,519 screenings were conducted in public health clinics under NHSI with 801,864 clients screened using basic NCD screening with Point of Care Testing (POCT) and 91,655 clients received Benefit Package 1: PeKa B40 Health Screening. 47 per cent of individuals screened were known to have NCD diseases, 38 per cent were in the pre-disease stage of NCD, 5 per cent were at risk of developing NCD and 10 per cent were healthy.

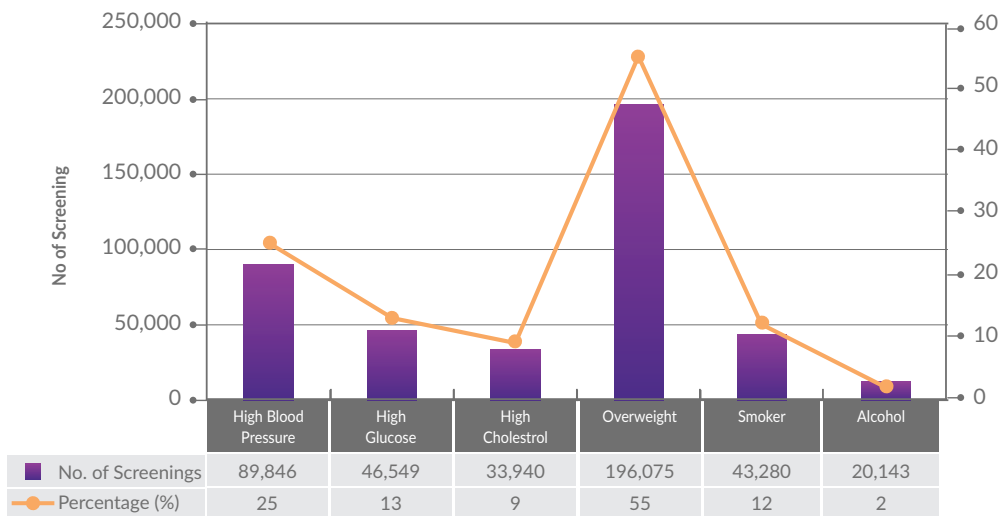
Figure 5.12
NHSI Risk Screening According to Risk Classification from July to December 2022



Source: Disease Control Division, MOH

Among individuals at risk of developing NCDs, the highest risk factor identified was overweight with a total of 187,377 individuals. Result also showed that 85,776 (25 per cent) individuals were identified as having high blood pressure during screening, 44,372 (13 per cent) individuals had high glucose levels. While 33,265 (10 per cent) individuals were detected as having high cholesterol levels, 12 per cent of those at risk developing NCDs were smoker and two (2) per cent consume alcohol.

Figure 5.13
Risk Factors Identified Among Individuals at Risk of Developing NCDs for Year 2022

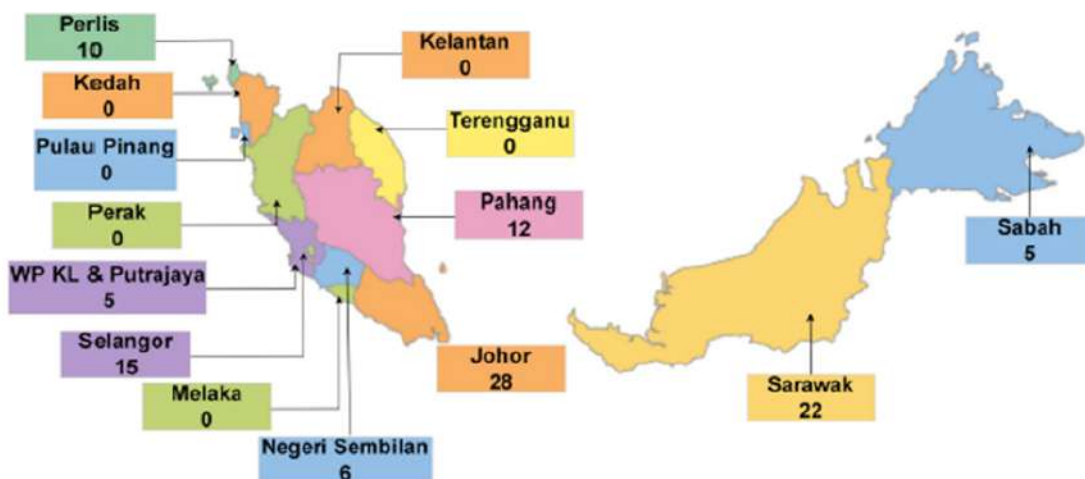


Source: Disease Control Division, MOH

MIGRATION OF TELEPRIMARY CARE (TPC) TO TELEPRIMARY CARE ORAL HEALTH CLINICAL INFORMATION SYSTEM (TPC-OHCIS)

TPC-OHCIS is an EMR for health clinics (KK) and its expansion as part of the PSP KKM 2021-2025. The system migration of 96 KKs from TPC to TPC-OHCIS was kicked-off on 24 August 2020. The implementation of this project involved coordination from the Information Management Division, JKNS, PKDs, KKs and contractor. Among the implementation challenges were COVID-19 pandemic, delays in hardware supplies, infrastructure readiness and others. For year 2022, there were 103 TPC-OHCIS KKs in Malaysia as shown in **Figure 5.14**.

Figure 5.14
TPC-OHCIS KKs for Year 2022



Source: Family Health Development Division, MOH

EXPANSION OF VIRTUAL CONSULTATION SERVICES

Virtual Consultation Services at KKs have been outlined under the National Health Reform Agenda initiative in year 2019 and in the 12MP. This service was formerly known as Virtual Clinic and has now been rebranded to Virtual Consultation Services. This virtual service is an interactive health service that includes clinical consultation, treatment plans for the clients by the healthcare provider.

The scope of virtual consultation services are:

- i. Outpatients - stable chronic diseases, screening services, smoking cessation services, Direct Observed Treatment Short-Course (DOTS) for TB patients and many more;
- ii. Maternal and Child Health - antenatal such as taking initial history for new cases (booking), follow-up visits for antenatal cases and family planning services;
- iii. Pharmacy Services - Medication Counselling, Medication Therapy Adherence Clinic (MTAC) Counseling and Smoking Cessation Services Counselling;
- iv. Occupational Therapy Services - Training and guidance for caregivers and patients;
- v. Dietetic Services - Group and individual consultations, education classes as well as Multi-Disciplinary Team (MDT); and
- vi. Physiotherapy Services through MDT group consultation.

There are 270 KKs that provide this service which benefited 24,449 patients. Another 106 KKs will be starting these services in year 2023.

INFECTION PREVENTION AND CONTROL

A total of 707 Standard Precautions Practice Compliance Audits were done in year 2022. The overall compliance percentage was 96.4 per cent, a slight decrease of 0.6 per cent compared to 2021 but still met the target of equal or more than 95 per cent. Hand Hygiene Compliance Survey was implemented in 358 KKs, by which 148,841 (92 per cent) hand hygiene practices were observed out of 161,000 opportunities for hand hygiene practices.

ANTIMICROBIAL STEWARDSHIP (AMS)

AMS Clinical Audit was carried out in 825 primary health facilities in year 2022. 80 per cent of antibiotic prescriptions, an increase of 5.4 per cent compared to previous year, successfully complied to the established standards. Audit elements that showed the lowest percentage of achievement were the implementation and documentation of health education (compliance and side effects of antibiotics) and history of drug allergies.

PATIENT SAFETY

A total of 425 incidents were reported in year 2022. Perak reported the highest incidents, followed by Selangor and Sarawak. Medication error is documented as the highest incidents, followed by patient falls and incidents related to clinical procedures while receiving services in primary healthcare facilities.

CLIENT EXPERIENCE

The Client Experience Questionnaire (SSPP) was first introduced in year 2022. A total of 965 KKs (91.2 per cent) implemented SSPP with a total of 120,615 respondents. The median score of client experience for the year 2022 was 92.31 per cent.

ASTHMA CLINICAL AUDIT

The Asthma Clinical Audit was also introduced in year 2022. A total of 773 KKKs had implemented this audit with an overall audit score of 80.7 per cent. Health education and optimising management showed the lowest score percentage, achieving only 74.0 and 62.4 per cent respectively.

NEWBORN AND CHILD HEALTH

CHILD HEALTH ACTION PLAN 2021-2030

In year 2022, Newborn and Child Health Sector, BPKK has carried out activities outlined in the National Child Health Action Plan 2021-2030: A National Framework to Reduce Under 5 Mortality and Support Child Growth and Development. Monitoring of the implementation of the various activities and strategies is through the National Technical Committee for Child Health chaired by the Director-General of Health. The three (3) objectives of this action plan includes:

- i. To reduce preventable deaths among children under 5 years;
- ii. To promote supportive environment for optimum child growth and development; and
- iii. To provide accessible, affordable, integrated, comprehensive and quality child health services.

The implementation of activities and strategies in this action plan requires the commitment and cooperation of various agencies and ministries involved in child healthcare.

ADOLESCENT HEALTH

In year 2022, a total of 199,033 adolescents (3.7 per cent) were screened from the adolescent population (age 10 to 19 years old) in Malaysia which was 5,388,700 (16.5 per cent). The five (5) main health problems detected among adolescents screened were nutritional problems 17,663 (8.9 per cent), high-risk behaviour 4,179 (2.1 per cent), physical health problems 2,350 (1.2 per cent), mental health problems 1,482 (0.7 per cent), and sexual reproductive health problems 1,435 (0.7 per cent).

New antenatal cases among adolescents registered in the MOH primary healthcare facilities declined from 11,024 (2017) to 6,056 (January to September 2022), with 2,152 (35.5 per cent) unmarried and 5,025 (83.0 per cent) no longer in school. In year 2022, Sarawak recorded the highest number (1,173 cases) of teenage pregnancy registered in the MOH primary healthcare facilities, followed by Sabah (893 cases) and Pahang (593 cases).

In year 2021 to 2022, additional 38 KKKs were nominated for Best Practice Adolescent Friendly Health Services (AFHS) and assessment is conducted based on WHO criteria and MOH SOP. A review of the *Garis Panduan Pelaksanaan Perkhidmatan Kesihatan Remaja di Peringkat Kesihatan Primer* was conducted. Conference on Understanding and Shaping Adolescents Towards Excellence and Engaging the Adolescents using Home, Education/Employment, Peer Group Activities, Drugs, Sexuality and Suicide/Depression (HEADSS) were organised for healthcare providers throughout the country. Malaysia also participates in the WHO Feasibility Study of the Priority Indicators for Adolescent Health Measurement as proposed by the Global Action for Measurement of Adolescent Health (GAMA) Advisory Group.

SCHOOL HEALTH

SCHOOL HEALTH SERVICE

School Health Services comprised of mainly health education, screening, health appraisal, immunisation, treatment, referral and others. During COVID-19 pandemic, school health services were implemented by following the new norm practice. In general, the school health services coverage for Year 1, Year 6 and Form 3 school children was more than 97 per cent except during Movement Control Order (MCO) due to school closure.

As for the nutritional status in year 2022, Pulau Pinang showed the highest percentage of overweight among Year 1, Year 6 and Form 3 school children with 15.0 per cent, 23.8 per cent and 13.8 per cent respectively. Sarawak showed the highest percentage of obesity among Year 1 with 12.8 per cent. Perlis showed the highest percentage of obesity among Year 6 school children with 17.2 per cent and the highest percentage of obesity among Form 3 school children with 18.0 per cent.

School health immunisation services are given to school children in Year 1, Form 1 and Form 3. Measles & Rubella (MR) and Diphtheria & Tetanus (DT) vaccines are given to Year 1 school children. Form 1 female school children and Form 3 school children are given Human Papilloma Virus (HPV) vaccine and Tetanus toxoid (ATT) vaccine respectively. Coverage for DT and ATT vaccinations were more than 95 per cent from the school children enrolment in year 2022. MR vaccination coverage was 70 per cent from the enrolment as there would be no more MR vaccination given starting July 2022 due to a change in the immunisation policy. However, no HPV vaccination was given in year 2022 as there was no HPV vaccination supply due to inadequate HPV vaccine stock worldwide including Malaysia.

FORM 4 THALASSAEMIA SCREENING PROGRAMME

In year 2022, 224,864 form 4 students were offered Thalassaemia screening where 202,333 students (90 per cent) had parental or guardian permission to undergo screening and 193,920 students (96 per cent) underwent Thalassaemia screening. There was a significant increase of 22.7 per cent for students who underwent screening compared to last year. A total of 65,301 students (61.0 per cent) who underwent screening were found not to be carriers of Thalassaemia. Meanwhile, 26,956 students (25.9 per cent) are suspected carriers. There were also 13,798 students (12.9 per cent) who were found to have anaemia due to iron deficiency and 947 students (0.9 per cent) have other causes of anaemia.

ADULT HEALTH

CERVICAL CANCER SCREENING AND BREAST CANCER EARLY DETECTION PROGRAMME YEAR 2022

The women's reproductive cancer screening programme includes screening for cervical and breast cancer. Currently, Pap smear or liquid-based cytology test and HPV test are the main screening methods in the MOH. The cervical cancer screening is targeted at women between the age of 30 to 65 who are sexually active. For the breast cancer prevention programme, the early detection through clinical breast examination and mammogram were implemented in the primary healthcare. Women aged 20 and over are eligible to undergo clinical breast examination at all health facilities whereas mammogram test is recommended for every two (2) years for women over 40 years old whose mammogram results are normal.

A total of 323,035 women have undergone cervical cancer screening tests in 13 states (except Perak, Pahang and FT of Labuan) up to September 2022. This amount contributes to 15.4 per cent coverage of women who have been screened. From this number, a total of 49,616 (15.4 per cent of the total screened) underwent an HPV test while 273,419 (85.6 per cent) were screened using the cytology method. From the HPV screening test, a total of 3,461 (4.0 per cent) were detected positive for high-risk HPV which referred for follow-up and further intervention. A total of 775 cases were referred for colposcopy where 183 cases (45.3 per cent) were found to have precancer and seven (7) cases (1.7 per cent) had cancer.

For breast cancer screening programme, a total of 1,222,596 (20.6 per cent) women aged 20 and over have undergone clinical breast examination until September 2022. A total of 29,113 women aged 40 who are at high risk for breast cancer have been registered for mammogram screening. Out of these, a total of 10,658 (36.6 per cent) women have undergone this screening. Mammogram results found that 85 (0.8 per cent) women had breast cancer who were referred for further treatment.

MATERNAL HEALTH

In year 2022, activities continued to emphasize on COVID-19-related activities among pregnant women; creating public awareness on its complications and importance of booster dose of COVID-19 vaccine. Specific sessions of enquiry into death related to COVID-19 were conducted to determine the cause of death and remedial actions. The task force has compiled selected content in relation to pregnancy and COVID-19 infection to form a special report on COVID-19 in Pregnancy and Puerperium: Lessons from The Malaysia Confidential Enquiry Maternal Death Report 2021. The targeted approach of Pre-Pregnancy Care (PPC) aiming at high-risk women was implemented in KKs in year 2019.

In July 2022, BPKK initiated a discussion and consensus with the Medical Development Division, Obstetrics & Gynaecology (O&G) fraternity and other relevant specialties, with the development of PPC guidelines in hospitals. BPKK has also shared this concept during the training programme with member countries of OIC for Thematic Area 3: Maternal Health, New-Born & Child Health and Nutrition. The online training was conducted on 23 to 24 November 2022 in collaboration with the Policy and International Relations Division (BDHA). In tandem with amendment to the postnatal visit schedule, BPKK has revisited the reporting format for Postnatal Care Nursing (PNN). A virtual briefing was conducted to key health personnels at the state and clinic on 22 February 2022.

ELDERLY HEALTH

In year 2022, priority was given to the preparation of the Elderly Health Service Action Plan 2023-2030 (PTPKWE 2023-2030), the Dementia Action Plan 2023-2030 and the Programme for Expanding the Role of Community Nurses (JM) in Elderly Healthcare in the Rural Clinics (KD).

PTPKWE 2023-2030 was revised to ensure it remains relevant in facing the country's ageing challenges, in line with the concept of Healthy Aging in the Life Cycle (From Womb to Tomb) and the 10 Decade of Healthy Aging. The Dementia Action Plan 2023-2030 has been prepared to ensure dementia patients can lead optimal lives. The JM role expansion programme at KD is a strategy to expand services through Community Based Primary Healthcare. It was implemented in stages involving 10 states where Johor, FT of Labuan, Sabah and Sarawak will be implemented in year 2023.

HEALTHCARE FOR PERSON WITH DISABILITIES (PWD)

STRENGTHENING OF DOMICILIARY HEALTHCARE SERVICES (DHC)

The planning and implementation of DHC in primary healthcare is carried out comprehensively which includes the scope of palliative care medicine. The implementation of the scope of palliative care medicine which was started in four (4) states with residential Palliative Medicine Specialists from year 2016, was expanded to five (5) more states in year 2022. Currently, a total of 94 KAs in 11 states are providing palliative care medicine services for patients in the community. The DHC programme was further strengthened with the addition of 177 KAs, making it a total of 337 healthcare throughout Malaysia.

For year 2022, a total of 7,500 patients and their family members have benefited from the DHC programme in which 70 per cent of the patients were the elderly. Meanwhile, 120 patients have been enrolled in the palliative care medicine programme. Holistic health services delivered by multi-disciplinary health personnel in the community are fully supported by the medical specialists at the hospital. This collaboration facilitates the implementation and improves the quality of services for the patient.

EARLY DETECTION OF DISABILITY IN CHILDREN AND EARLY INTERVENTION PROGRAMME

Early detection of disability in children is a crucial element in health services which indicates that more children are screened at an early age and subsequently given holistic intervention as early as possible. This is one of the initiatives to identify the risk of disability among children and thus planning of intensive care to reduce severe complications due to disability.

To ensure that this initiative is prioritised, the outcome indicator for the early childhood intervention programme namely the Percentage of Detection of Disability Among Children Aged 0-1 Years is used as one of the main key performance indicators of MOH. The achievement of this indicator shows an upward trend yearly following the consistent screening of every child by health personnel.

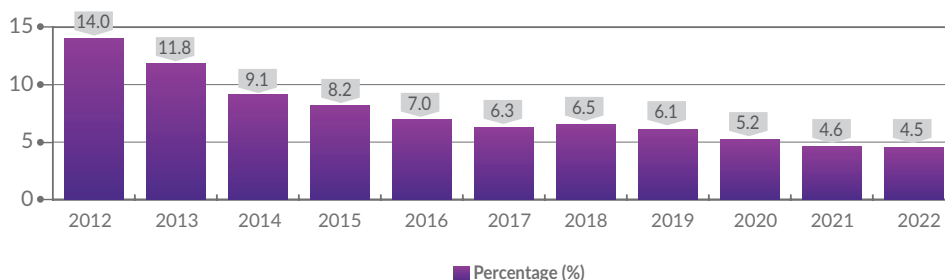
For year 2022, 650 (0.1 per cent) children aged 0 - 1 year old from 470,195 estimated live births were identified with disabilities in Malaysia. Those children were given appropriate treatment, early intervention and were referred to the respective multidisciplinary team for further evaluation and rehabilitation.

NUTRITION DIVISION

PREVENTION AND CONTROL PROGRAMME FOR ANAEMIA AMONG PREGNANT MOTHERS

Iron deficiency anaemia (IDA) is the common cause of anaemia among pregnant mothers. It occurs due to the increment of iron and other vitamin requirement for the development of foetus and maternal physiological changes during pregnancy. The percentage of anaemia with Haemoglobin (Hb) less than 11 gm/dL among pregnant mothers who attended government health clinics at 36 weeks of gestation decreased from 15.0 per cent in year 2012 to 5.5 per cent in September 2022. The trend of achievement is as shown in **Figure 5.15**.

Figure 5.15
Percentage of Anaemia with Hb < 11 gm/dL among Pregnant Mother Attending Government Health Clinic at 36 Weeks of Pregnancy for 2012 to September 2022



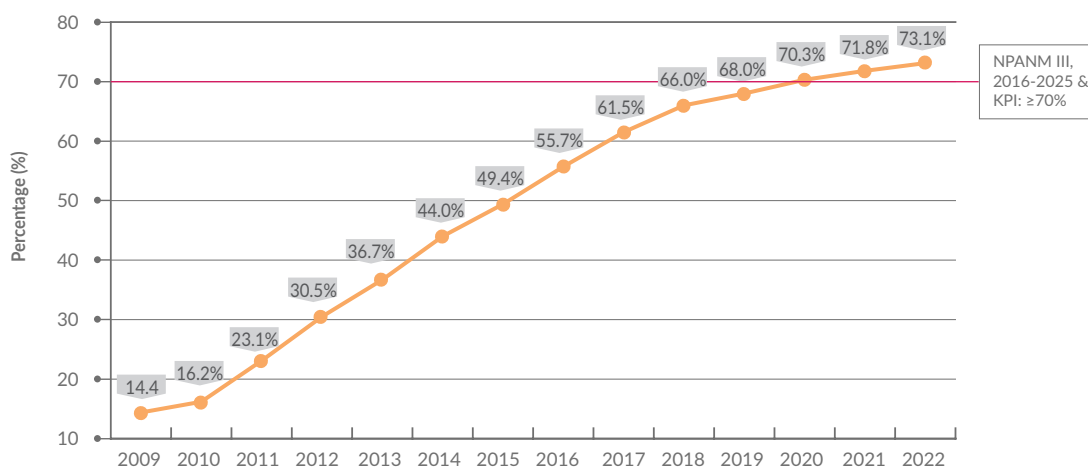
Source: Health Informatic Centre, MOH

PERCENTAGE OF EXCLUSIVELY BREASTFED SIX-MONTH-OLD INFANTS THAT ATTENDED HEALTH CLINIC

Exclusive breastfeeding referring to the baby who is given only breast milk. Babies are not given any other food or drink except Oral Rehydration Salt (ORS), vitamins, minerals and medicine in the form of drops or syrup on doctor’s advice or due to medical necessity. In order to identify breastfeeding practices among mothers who attend health clinics, the MOH monitors the percentage of breastfeeding exclusively for babies aged six (6) months up to six (6) months a week.

The achievement trend of exclusively breastfed babies from birth to the age of six (6) months in Malaysia is increasing every year starting from year 2009 until now as shown in **Figure 5.16**. In year 2022, 73.1 per cent of babies are exclusively breastfed. This achievement has already met the target of the KPI 2022 and the National Plan of Action for Nutrition in Malaysia, NPANM III 2016 – 2025, which is ≥ 70 per cent of babies were exclusively breastfed from birth up to six (6) months of age. This increasing trend shows a positive achievement of promotion, protection, and support of breastfeeding activities in Malaysia.

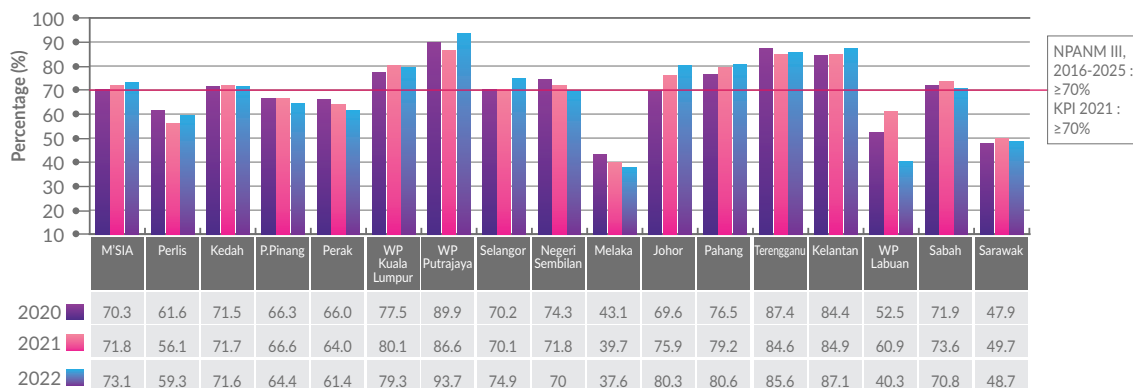
Figure 5.16
Percentage of Exclusive Breastfeeding in Malaysia for Year 2009 to 2022



Source: Exclusively Breastfed Six-Month-Old Infants report (PSI201B), JKN, Year 2009 to 2022

Figure 5.17 showed the achievement trend by the state for three consecutive years, 2020, 2021, and 2022. Based on the figure, almost all states have achieved the NPANM II and KPI 2022 targets except for six (6) states which were Perlis, Pulau Pinang, Perak, Melaka, FT Labuan and Sarawak. Overall, the trend of exclusive breastfeeding for the last three (3) years in most states experienced a relatively slow increase in the percentage and there was a decrease in some states such as Pulau Pinang, Perak, Melaka, FT Labuan and Sarawak. This situation is particularly noticeable in the FT Labuan where there was a significant decrease in the percentage of babies who are exclusively breastfed from year 2021 (60.9 per cent) to 2022 (40.3 per cent) which is 20.6 per cent.

Figure 5.17
Percentage of Exclusively Breastfed Babies from Birth up to 6 Months of Age by State in Malaysia for Year 2020 to 2022



Source: Exclusively Breastfed Six-Month-Old Infants report (PSI201B), State Health Department, 2020 till 2022 (PSI 201B)

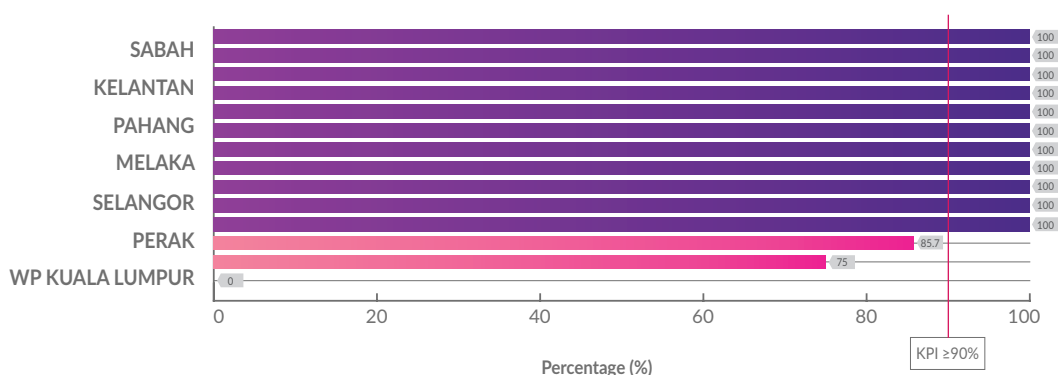
State-specific and strategic action plans need to be developed especially for states that experience a slow decrease or increase in the percentage of exclusive breastfeeding. This is important to organise activities and planning actions according to the factors that have been identified as the main problem to achieve the target that has been set.

PERCENTAGE OF HOSPITALS MAINTAINING BABY-FRIENDLY HOSPITAL INITIATIVE (BFHI) STATUS

The WHO and United Nations Children's Fund (UNICEF) had launched the BFHI, a global initiative that aims to provide every baby the greatest start in life by creating a hospital environment that supports breastfeeding. The hospital must comply with standards given by WHO and UNICEF to be recognised as a Baby-Friendly Hospital. Every three (3) years, Baby-Friendly Hospital will be reassessed. The percentage of Baby-Friendly Hospitals successfully to be recertified as BFHI is used as an indicator to evaluate the management of this initiative at the operational level.

In year 2022, a total of 53 hospitals from 14 states except for Perlis and the FT Putrajaya have been reassessed. The national achievement for this indicator is 95.3 per cent exceeding the set target which is ≥ 90 per cent. Three (3) states FT of Kuala Lumpur, Perak, and Kedah. The achievement of year 2022 by the state is shown in **Figure 5.18**.

Figure 5.18
Achievement of Baby-Friendly Hospital Initiative by State for Year 2022



Source: Nutrition Division, MOH

Overall, until December 2022, 160 hospitals that provide mother and child services in Malaysia are certified and maintaining their status as Baby-Friendly Hospitals (**Table 5.14**). It is shown that this indicator helps to sustain the initiative and fulfil the objective.

Table 5.14
Numbers of Baby-Friendly Hospitals in Malaysia Year 2022

Hospital	Number of Hospitals
Ministry of Health Malaysia Hospitals	131/131 (100%)
Ministry of Higher Education Malaysia Hospitals	4/4 (100%)
Ministry of Defence Malaysia Hospitals	3/3 (100%)
Private Hospitals	22/175 (12.6%)
Total	160/313 (51.1%)

Source: Nutrition Division, MOH

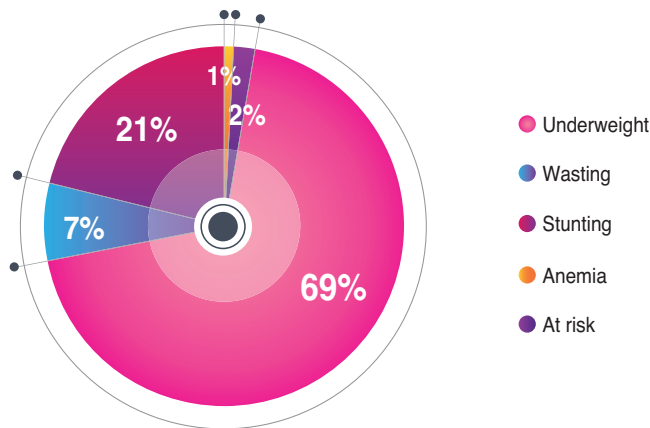
The coordinators at the state and hospital levels will continuously evaluate the Baby-Friendly Hospital's recognition status to ensure that the 10 Steps to Successful Breastfeeding are followed. The percentage of private hospitals designated as Baby Friendly Hospitals is utilised for this purpose as a gauge of the profession's performance at the level of MOH.

NUMBER OF NEW CASES REGISTERED UNDER REHABILITATION PROGRAMME FOR UNDERNOURISHED CHILDREN (PPKZM)

PPKZM aims to improve the nutritional status of children aged six (6) months to six (6) years old from low-income families who attend government health clinics. Interventions under this programme involve special monitoring where registered children will be given basic food aid on monthly basis and education related to children's and nutrition, personal as well as environment hygiene and home visit done by health personnel. Progress of nutritional status of these children is assessed monthly using weight, length/height measurements. In addition, family of the children who received food aid under this programme also being referred to other relevant agencies for other support services that outside the jurisdiction of MOH. In year 2022, children with undernutrition other than underweight such as children with wasting, stunting, at risk of undernutrition and anaemia has been registered to the programme.

The number of new cases under this extended scope were based on cases registered from April to December 2022. During that particular period, total of 4,245 cases has been registered. The largest portion of new cases registered was children with underweight problem which were 2,925 cases (68.9 per cent) followed by stunting, 901 cases (21.2 per cent) and wasting, 310 cases (7.3 per cent). The percentage of new cases according to nutritional problems is as **Figure 5.19**.

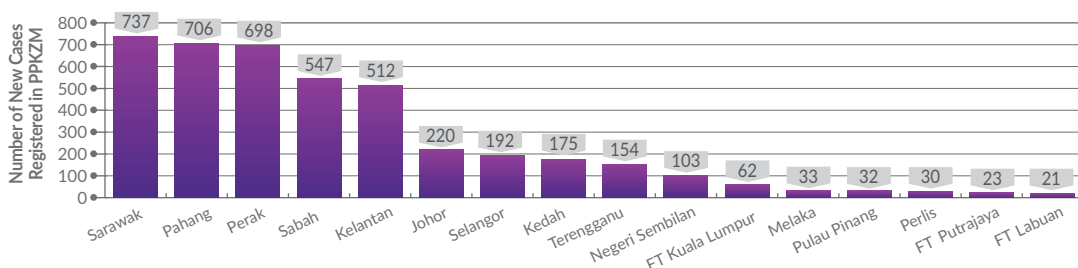
Figure 5.19
The Percentage of New Cases According to Nutritional Problems in 2022



Source: State Health Department, 2022

Analysis by state showed that Sarawak has recorded the highest number of new cases at 737 cases followed by Pahang at 706 cases and Perak at 698 cases. The breakdown of new cases by state is as shown in **Figure 5.20**.

Figure 5.20
Number of New Cases Registered in PPKZM by State for Year 2022



Source: State Health Department, 2022

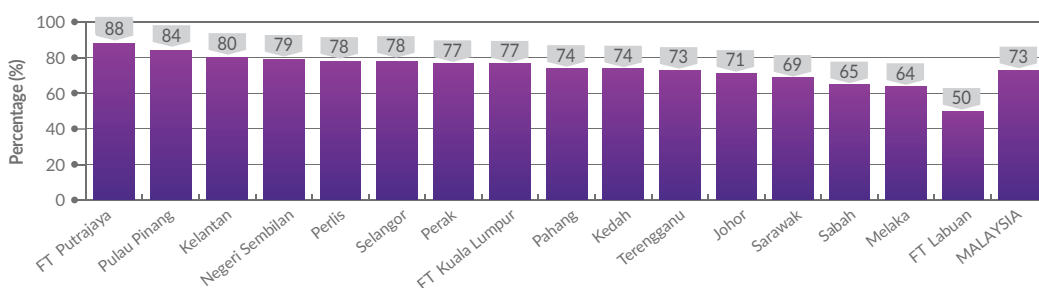
This initiative also aims to achieve the Sustainable Development Goals (SDG) target to end all forms of malnutrition by 2030, in line with National Policy which is National Children Policy and National Nutrition Policy of Malaysia 2.0.

PERCENTAGE OF UNDERWEIGHT CHILDREN WITH WEIGHT INCREMENT IN PPKZM BASED ON WHO GROWTH STANDARD 2006

Early monitoring and effective case management in PPKZM will help to speed up the case recovery period. Therefore, every new registered case with moderate underweight problem will be assessed for weight gain in the first three (3) months while children with severe underweight problem will be assessed for weight gain in the first six (6) months. This indicator is used as a performance indicator for case management at the field and national level.

In year 2022, national achievement for this indicator was recorded at 73.2 per cent, exceeding the set target of ≥ 70 per cent. At state level, all states have achieved the set target except Sarawak, Sabah, Melaka and FT Labuan. The achievement for year 2022 by state is as shown in **Figure 5.21**.

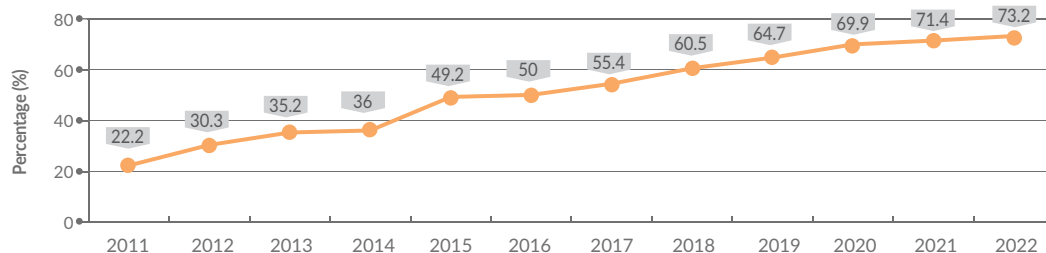
Figure 5.21
Achievement for Percentage of Underweight Children with Weight Increment in PPKZM Based on WHO Growth Standard 2006 by State for Year 2022



Source: State Health Department

Over the course of 10 years, from year 2012 to 2022, trend for Percentage of Underweight Children with Weight Increment in PPKZM Based on WHO Growth Standard 2006 has increased by 69.6 per cent (**Figure 5.22**). This shows that the establishment of this initial monitoring indicator is able to give and impact on effective case management.

Figure 5.22
National Achievement Trends for the Percentage of Underweight Children in PPKZM who Gain Weight Based on the 2006 WHO Growth Standards from Year 2011 to 2022



Source: State Health Department

URBAN COMMUNITY FEEDING PROGRAMME (PCF)

The Urban PCF is a nutrition programme that aims to secure the availability of nutritious food among children aged one (1) to six (6) years old and as an intervention to overcome the problem of undernutrition among children under six (6) years.

Children enrolled in this programme will receive cooked food, multivitamins or fish oil, and milk five (5) times a week. Local volunteers will be trained and help out with the implementation of scheduled activities under this programme. In triannual, community health empowerment activities such as talks, nutrition, health status screening, cooking demonstrations, and personal and environmental hygiene will be scheduled.

In year 2022, a total of five (5) Urban PCF have been developed benefiting nearly 1,275 children under six (6) years of age. The five (5) Urban PCF are:

- i. PCF Programme Perumahan Rakyat (PPR) Ampangan, Pulau Pinang;
- ii. PCF Kampung Pahit, Perak;
- ii. PCF Perumahan Semula Nelayan (PSN) Pangkor, Perak;
- iv. PCF Programme Perumahan Rakyat (PPR) Desa Tun Razak, Kuala Lumpur; and
- v. PCF Kampung Baru HICOM, Selangor.

PROGRAMME TO COMBAT STUNTING AMONG CHILDREN UNDER 5

The Programme to Combat Stunting Among Children Under 5 begins in year 2019 following the findings of the National Health and Morbidity Survey (NHMS) 2019 that 1:5 (21.8 per cent) children suffer from stunting. The interventions implemented are training teachers and caregivers at TASKA on the growth and nutrition of babies and children, conducting dialogue sessions with parents who send children to TASKA and community advocacy on the importance of 1,000 days of a child's life held in various settings.

Throughout the year 2022, a total of 99 training sessions for instructors and caregivers were conducted and involved 1,304 private TASKAs at workplaces, communities, homes, and institutions throughout Malaysia. A total of 2,328 (78.1 per cent) private TASKA cumulatively, have been trained from year 2021 to 2022. While a total of 159 dialogue sessions were conducted with the participation of 6,611 parents or guardians throughout Malaysia. In addition, community advocacy on the first 1,000 days of life for example exhibitions, talks, live sharing sessions on social media, cooking demonstrations, and active screening of children's nutritional status is carried out in all states. The summary of training sessions, dialogue sessions, and community advocacy are as in **Table 5.15 - 5.17**.

Table 5.15
Number of Growth Monitoring and Infant and Young Child Feeding at Private TASKA by State for Year 2022

State	Training on Growth Monitoring and Infant and Child Feeding					
	No. of Training	No. of TASKA				
		Workplace	Community	Home	Institution	Total
Perlis	1	0	0	0	15	15
Kedah	16	13	57	4	73	147
Pulau Pinang	5	10	21	9	53	93
Perak	9	1	30	0	0	31
Selangor	7	158	20	41	69	288
FT KL & Putrajaya	7	3	139	3	44	189
N. Sembilan	16	5	18	14	108	145
Melaka	3	0	2	0	1	3
Johor	2	0	0	0	92	92
Pahang	5	5	65	2	7	79
Terengganu	2	1	2	2	22	27
Kelantan	6	0	176	0	14	190
Sabah	4	0	64	0	19	83
Sarawak	21	6	79	17	9	111
FT Labuan	1	0	1	0	0	1
Total	105	202	674	92	526	1,494

Source: Nutrition Division, MOH

Table 5.16
Number of Dialogue Sessions at Private TASKA by State for Year 2022

State	Dialogue Sessions with Parents/Guardians					
	No. of Dialogue Session	No. of Parents/Guardians				
		Workplace	Community	Home	Institution	Total
Perlis	1	0	100	0	15	115
Kedah	23	0	478	0	270	748
Pulau Pinang	7	0	117	2	79	198
Perak	8	37	516	0	0	601
Selangor	11	4	226	143	198	571
FT KL & Putrajaya	8	53	129	3	108	293
N. Sembilan	18	0	166	1	342	509
Melaka	7	0	183	0	98	281
Johor	18	0	518	0	25	562
Pahang	1	4	105	3	9	121
Terengganu	8	0	270	0	30	300
Kelantan	19	0	510	0	674	1,203
Sabah	2	0	0	0	19	19
Sarawak	27	82	881	22	35	1,020
FT Labuan	1	0	0	0	70	70
Total	159	180	4,199	174	1,972	6,611

Source: Nutrition Division, MOH

Table 5.17
Number of Advocacy Activities in the First 1,000 Days of Life In 2022 by State

State	No. of Activity			Total	No. of Participant
	Exhibition	Talk	Others		
Perlis	3	8	2	12	450
Kedah	29	41	20	90	2,904
Pulau Pinang	12	16	31	57	1,765
Perak	5	11	10	26	1,032
Selangor	18	30	23	71	1,750

State	No. of Activity			Total	No. of Participant
	Exhibition	Talk	Others		
FT Kuala Lumpur & Putrajaya	50	25	58	131	2,391
Negeri Sembilan	7	24	2	35	1,384
Melaka	6	69	19	103	1,872
Johor	30	69	138	237	5,473
Pahang	20	37	16	80	2,737
Terengganu	44	47	13	95	4,201
Kelantan	14	9	10	33	1,214
Sabah	5	38	5	48	1,145
Sarawak	53	78	99	228	6,287
FT Labuan	3	9	4	16	1,519
Total	299	511	450	1,262	36,124

Source: Nutrition Division, MOH

EMPOWERMENT OF PIBG/PIBKS TO COMBAT OBESITY IN SCHOOL - INISIATIF CARA HIDUP ANDA TERBAIK (C-HAT) 2022

The C-HAT initiative is a smart collaboration between the MOH and MOE as one of the strategies to combat obesity among school students by using PIBG/PIBKS who are trained as ambassadors or agents to implement C-HAT activities towards healthy eating and lifestyle at school. Health knowledge and awareness among parents and teachers is very important to create behavioral changes towards school students. Schools are also the best place to implement health intervention programmes with a multidisciplinary approach, including nutrition education, behavior modification and training. This is because the children have started to be independent with their own food and activity selection.

The C-HAT initiative becomes the KPI of the Director of the Nutrition Division in year 2022, the percentage of PIBG that have a C-HAT Lead Trainer (JU) (*Cara Hidup Anda Terbaik*) implement nutrition and health activities with a target of 50 per cent. Until December 2022, a total of 87 JU C-HAT from 72 PIBG schools throughout Malaysia. A total of 48 JU C-HAT from 37 schools have implemented various C-HAT activities in 2022.

Table 5.18
Implementation Achievement of C-HAT Activities by JU C-HAT for Year 2022

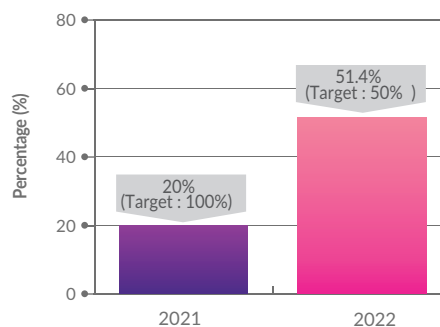
State	No. of JU	C-HAT Activities Accomplished	No. of PIBG (with JU)	Per centage (%)
Perlis	0	0	0	0
Kedah	5	3	5	60
Pulau Pinang	9	4	8	50
Perak	3	1	3	33.3
Selangor	1	1	1	100
FT KL & Putrajaya	13	6	11	55.5
N. Sembilan	1	1	1	50
Melaka	3	1	2	50
Johor	23	7	17	41.2
Pahang	2	2	2	100
Terengganu	1	1	1	100
Kelantan	4	1	4	25
Sarawak	4	0	4	0
FT Labuan	4	4	4	100
Sabah	14	5	10	50
Total	87	37	72	51.4

Source: Nutrition Division, MOH

C-HAT ACTIVITY ACHIEVEMENT TRENDS

Because the C-HAT Initiative's KPIs have been changed since its implementation, the 3-year achievement trends cannot be compared. The KPI of the C-HAT Initiative in 2019 and 2020 is the Percent of Districts Implementing At Least 1 C-HAT Activity, with the target of 100 percent of districts implementing this activity. The KPI of the C-HAT Initiative in 2021 and 2022 is the Percentage of PIBG JU C-HAT Implementing Nutrition and Health Activities. The target for 2021 is 100 per cent while in 2022, the target is lowered to 50 per cent. **Figure 5.23** showed the trend of achievement for year 2021 and 2022.

Figure 5.23
Trend of Achievement Percentage of PIBG JU C-HAT Implementing Nutrition and Health Activities for year 2021 and 2022



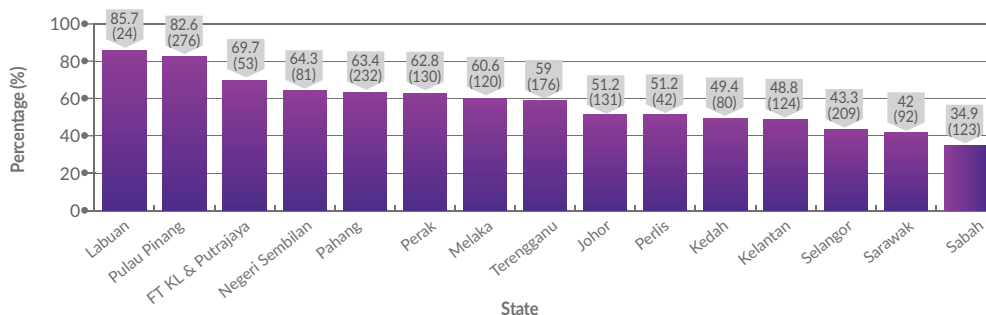
Source: Nutrition Division, MOH

SALE ON FOODS AND BEVERAGES AT SCHOOL CANTEEN

In year 2022, monitoring activities at school canteens were continued to ensure the compliance of foods and beverages sold based on The Healthy School Canteen Management Guide published by the MOE. This activity was reported to Nutrition Division twice a year in June and December. The KPI target for this activity was set at 50 per cent of schools complied with the school canteen guideline in year 2022.

Figure 5.24 shows the percentage of schools compliance with the school canteen guideline by state in year 2022. There were 55.0 per cent (1,893 schools out of a total of 3,441 schools) of schools complied with the school canteen guideline and achieved the set KPI targets. FT Labuan showed the highest compliance with 24 schools (85.7 per cent) out of 28 schools. Meanwhile, five (5) states with compliance coverage below 50 per cent which were Kedah, Kelantan, Selangor, Sarawak and Sabah. In addition, certificates of appreciation have also been issued to 1,391 compliant schools in year 2022.

Figure 5.24
Percentage of Schools Compliance for Sale on Food and Beverages at School Canteens by State for Year 2022



Source: Nutrition Division, MOH

EXPANSION OF EXCISE DUTY IMPOSITION ON SUGAR SWEETENED BEVERAGES

Overweight and obesity had become a major public health concern. In year 2019, NHMS conducted by the MOH indicates that half of Malaysian adults (50.1 per cent) were overweight (30.4 per cent) and obese (19.7 per cent). The prevalence of overweight and obesity among adults was increased over the years from 21 per cent in year 1996 to 43.5 per cent in year 2006, 45.5 per cent in year 2011 and 47.7 per cent in year 2015. In the same study, 29.8 per cent of children aged five (5) to 17 years were overweight (15.0 per cent) and obese (15.8 per cent). Prevalence of overweight and obesity in both adults and children were rising at alarming rate.

The excise tax on Sugar Sweetened Beverages (SSB) tax has been enforced in 1 July 2019. In Malaysia, RM0.40 excise tax was subjected to every liter of sugar sweetened beverage includes carbonated and non-carbonated drink with sugar content >5g/100ml, flavored UHT milk-based drinks with sugar content >7g/100ml and fruit and vegetable juices with sugar content >12g/100ml.

The SSBs tax encourages the beverage companies to carry out more research and development on their products in order to meet the sugar threshold level. Manufacturers still can produce the same products but with better nutritional value or small portion size. To date, 344 ready to drink

products had been reformulated to less sugar products to avoid from paying the tax. Therefore, healthier or less sugar products are more available at the market and perhaps, sugar consumption among the consumers is declined.

HEALTH EDUCATION DIVISION (HED)

The Health Education Division (HED) has been a leading organization in the implementation of national health promotion activities since 1991. For three (3) decades of its establishment, the HED has undergone series of evolutions in the delivery of health promotion services aimed at improving the health literacy of Malaysians through the dissemination of health information across various media platforms, modification of health behaviour, advocacy, and community empowerment. Health literacy is a skill to obtain, understand, evaluate, and use the information for the decision-making process in the daily life. Sufficient population-based health literacy can improve the health and quality of life of the people. The National Agenda for Healthy Malaysia (ANMS) focuses four (4) Thrusts namely (1) Strengthening the Promotion of Healthy Living Culture (2) Strengthening Health Wellness Services, (3) Empowering Self-Health Control and (4) Strengthening Environmental cleanliness. Among the ANMS initiatives implemented by HED throughout 2022 are as follows.

STRENGTHENING PROMOTION OF HEALTHY LIVING CULTURE

Healthy living culture and supportive environment are essential to health and well-being. To promote healthy living in order to improve accessibility to health information, various media platforms used and health promotion activities are implemented to ensure that people benefited from accurate and fast health messages.

PROMOTION OF HEALTHY LIVING CULTURE ON SOCIAL MEDIA, CONVENTIONAL MEDIA AND EXTERNAL MEDIA

The HED implemented Healthy Living Culture Campaign as one of the strategies to enhance awareness and understanding as well as to empower the people to adopt a healthy living culture. During 2022, a total of 6,643 health promotion and education materials related to healthy living culture were published and 23,107 materials were distributed consisting of various materials such as infographics, e-magazines, videos, books, posters, brochures and more (**Image 5.7**). Various social media channels are also used to promote healthy living culture to social media such as (Facebook, Twitter, Telegram, YouTube, TikTok and Instagram: 7,605 posts and 34,285,140 reach), conventional media (television and radio: 816 slots) and external media and advertising in public transport (**Image 5.8**).

Image 5.7 Publication Materials on Healthy Living Culture Promotion Materials



Source: Health Education Division, MOH

Image 5.8 Promotions on Various Media Channels

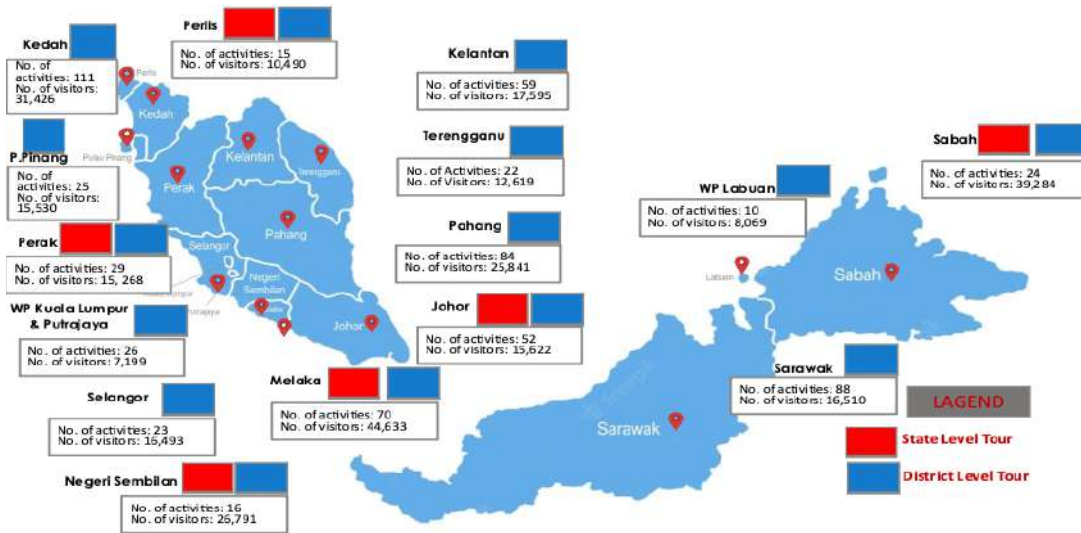


Source: Health Education Division, MOH

JELAJAH AGENDA NASIONAL MALAYSIA SIHAT (ANMS)

Jelajah ANMS and outreach activities are health communication marketing approach in strengthening the ANMS brand to the public with the aim of enhancing health literacy towards development of healthy living and environmental hygiene; empowering public to adopt self-health control and strengthening strategic partners in achieving health well-being. During 2022, a total of 654 ANMS outdoor and outreach activities were carried out with the participation of 303,010 of the public in various activities and services such as health risk screening, interactive games, and competitions, MyCHAMPION registration, services and exhibitions by strategic partners and many others. The state-level ANMS Outreach Program has also been successfully implemented in six (6) states namely Malacca, Perlis, Perak, Johor, Sabah, and Negeri Sembilan. However, the program implemented at regional level throughout Malaysia. Survey conducted during the program involving 5,562 visitors found that 98 percent of visitors exposed and understood the main messages of healthy living culture through participation in the activities.

Figure 5.24
Jelajah ANMS 2022



Source: Health Education Division, MOH

CELEBRATION OF **BULAN MALAYSIA SIHAT SEJAHTERA (BMSS)**

BMSS was introduced in 2022 and is a government initiative towards creating a healthy and prosperous Malaysia through the healthy living culture. The BMSS was launched by the Prime Minister of Malaysia 8 October 2022 in conjunction with the *Jelajah ANMS*. A total of 319 activities implemented at various levels such as *BMSS Healthy Steps* in Jempol, Negeri Sembilan and in Batu Caves, Selangor, *Peraduan Online Gerak Geri Sihat* and *Dua Sihat*, Healthy Cycling, High-Five Challenge, *ZumBatik* (Batik-themed Zumba), Creative Run. Throughout the *BMSS* Celebration there were 124,300 physical entries and 3.6 million digital entries with 4,191,130 reach and 9,495,585 impressions.

Image 5.9
BMSS Celebration Activities



Source: Health Education Division, MOH

LET'S BE HEALTHY OUTREACH ACTIVITY IN CONJUNCTION WITH BMSS

This activity was carried out from 3 to 17 October 2022 involving 10 selected schools in three (3) states namely Negeri Sembilan, Selangor and the FT Kuala Lumpur with the participation of a total of 6,268 students. Various activities offered through the Let's Get Healthy Tour Truck (activities such as Juice Bike, Jump and Stick and Mini Archery) and the Wellness on Wheel Truck (activities such as Interactive Exhibition, Shoot Out Challenge, Dart Throwing, Puzzle, Trampoline Jumping, Aerobics, Know the Benefits of Fruit, Get to know Malaysian Healthy Plates, Health Talks and Health Risk Factor Screening).

Image 5.10
Let's Be Healthy Outreach Activity in Conjunction with BMSS Activities



Source: Health Education Division, MOH

KEMBARA UNI-SIHAT IN CONJUNCTION WITH BMSS

Kembara Uni-Sihat is a health promotion activity through collaboration with eight (8) selected Higher Education Institutions in four (4) states namely Selangor, Kedah, Johor and Kelantan. The program which started on 13 October 2022 until 29 October 2022 successfully attracted 1,909 students to participate in Uni-Sihat Adventure Truck activities such as Mini Archery, Jump and Stick, Mini Futsal, Juice Bike and Jump Rope, while the Wellness on Wheel Truck with Kettle Bell activities Hold, Medicine Ball, Skipping Hula Hoop, Battle Rope, 1,000 steps challenge, 1 minute push-up challenge, 1 minute skipping challenge and the 5-Level Push Up Challenge.

Image 5.11
Kembara Uni-Sihat in Conjunction with (BMSS) Activities



Source: Health Education Division, MOH

WORLD PHYSICAL ACTIVITY DAY (WOPAD) CELEBRATION

Every Step Counts is the theme of World Physical Activity Day (WOPAD) which is celebrated globally every April 6. This theme means that, the effort is to always be active, in any way, no matter how small, is very meaningful for health. In conjunction with WOPAD, the MOH implemented a virtual step challenge, the ANMS Steps Challenge. This challenge was launched through the BookDoc application. The national WOPAD celebration was officiated by the Minister of Health on 1 April 2022. Overall total participation of WOPAD 2022 is 4,784 participants with a total of 1,315,508,409 steps.

Image 5.12
WOPAD Launching Ceremony 2022



Source: Health Education Division, MOH

ASEAN DENGUE DAY CELEBRATION AND NATIONAL LEVEL GOTONG ROYONG MEGA 1.0 2022

The ASEAN Dengue Day celebration was held in conjunction with the Melaka State ANMS Tour on 5 June 2022 at the Declaration of Independence Memorial Square, Bandar Hilir. The objective of the celebration is to strengthen the sense of belonging and love for healthy living culture and environmental sustainability. The launch ceremony was completed by the Chief Minister of Malacca and the Minister of Health involving 1,000 visitors. Among the activities carried out are the *COMBI Bersih Ceria* Locality Competition, Public Speaking Competition, Casual Chat, Musical Competition, Explorace and Tik Tok Competition. National Level *Gotong-Royong Mega 1.0* was also conducted at Kg. Lapan Tengker and was officiated by the State Health and Anti-Drug Exco involving 200 MyCHAMPION volunteers. In addition to community *gotong-royong*, Dengue Walkabout activities together with COMBI as well as caring pilgrimages to the homes of the elderly and homeless patients were also conducted.

Image 5.13
Asean Dengue Day Celebration and
Gotong Royong Mega 1.0 2022

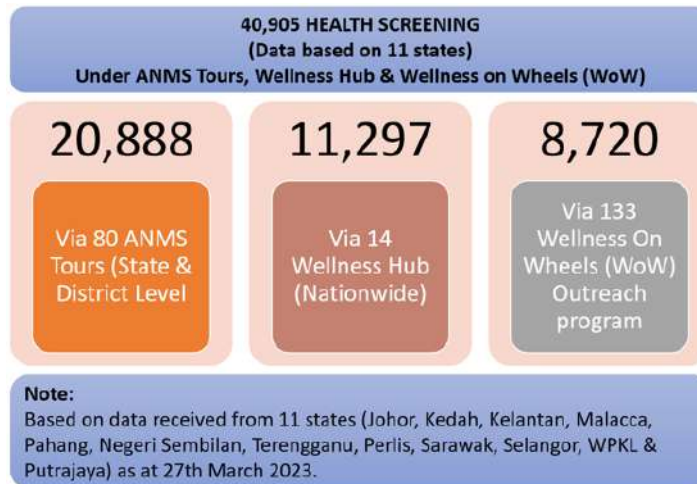


Source: Health Education Division, MOH

LAUNCHING OF THE NATIONAL HEALTH SCREENING INITIATIVE (NHSI)

NHSI is one of the ANMS initiatives in Thrust three (3) with aims to empower individuals, families and communities on health and the environment cleanliness to create healthy and well community. The main strategic partners in this NHSI are ProtectHealth Corporation (PeKa B40), PERKESO (Health Screening Program) and Board of Resident and National Family Development (LPPKN).

Figure 5.25
Screening Activities Through the Health Promotion Initiative



Source: Health Education Division, MOH

HEPILI GO DIGITAL LAUNCHING CEREMONY @DELIMA

The Ceremony of HePiLI Go Digital @DELIMa was officiated by the Deputy Director General of Health (Public Health) on 12 October 2022 at Sekolah Jenis Kebangsaan (Chinese) Dengkil, Selangor. This launch was to improve health literacy by educating and empowering communities in educational institutions using the DELIMa Portal, in addition to provide easy and fast access to obtain information, messages and health educational materials virtually. A total of 850 guests consisting of officials from the MOH and MOE, headmasters, teachers and students attended this event. The FBLive broadcast on Facebook Portal MyHealth has reached 3,299 views.

Image 5.14
HePiLI Go Digital Launching Ceremony @ DELIMA

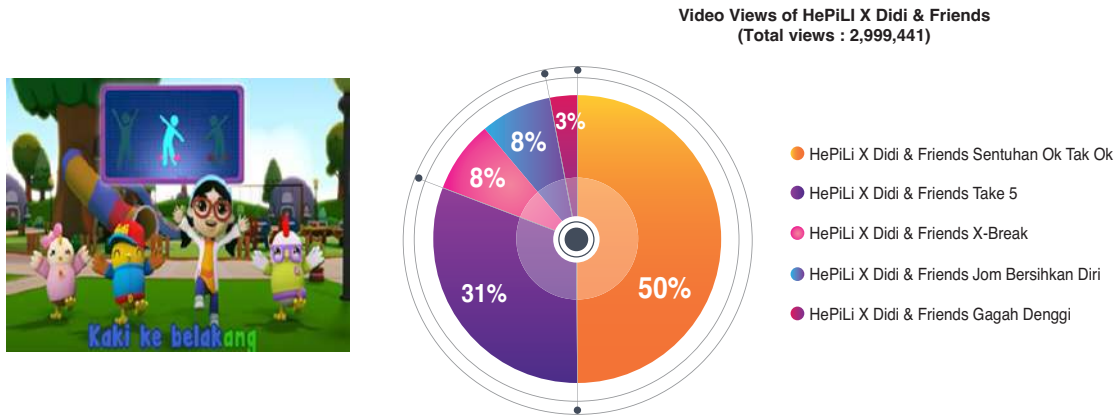


Source: Health Education Division, MOH

HEPILI X DIDI & FRIENDS COLLABORATION

This HePiLi X Didi & Friends collaboration is to support teaching and learning at home in addition to promote a healthy living culture in line with the Agenda Nasional Malaysia Sihat (ANMS). This collaboration in conjunction with the HePiLi Healthy Week Celebration 2022 includes promoting the celebration theme which is Take 5 through seven (7) infographics and five (5) videos as well as the organization of the Take 5 Collage Competition (preschool category), the Take 5 Little Journalist Video Competition (primary school category) and Take 5 Speech Video Competition (secondary school category) through social media of KKM, BPK and Didi & Friends.

Figure 5.26
Infographics and Total Video Views of HePiLi X Didi & Friends

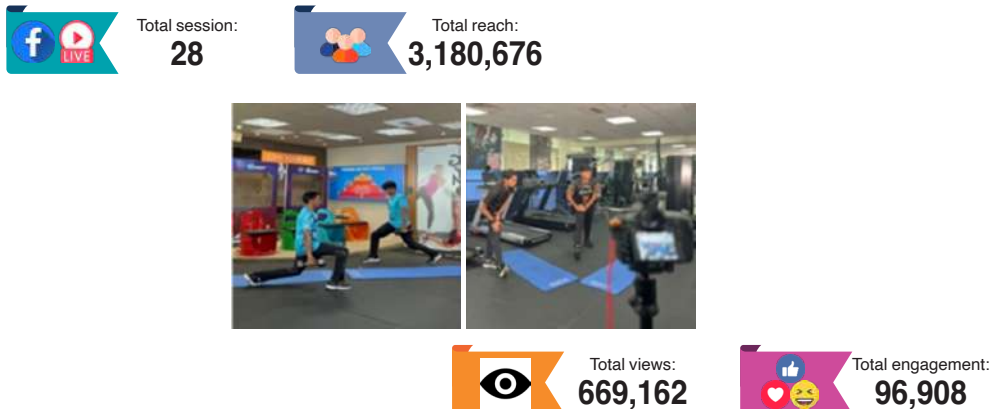


Source: Health Education Division, MOH dan Didi & Friends

FACEBOOK LIVE WORKOUT

A total of 28 FBLive Workout sessions have been implemented throughout 2022 involving 40 fitness trainers/coaches and also collaborating with Wellness Hub throughout Malaysia. The FBLive session started on 8 January to 19 November 2022 with 3,180,676 hits, 669,162 views and 96,908 engagements.

Figure 5.27
FBLive Workout Sessions and FBLive Workout 2022 Achievements



Source: Health Education Division, MOH

STRENGTHENING HEALTH AND WELLNESS SERVICES

Health and wellness services are enabling factor in creating environment that supports healthy living culture of the people through the strengthening of health and wellness services of the Wellness Hub and Wellness on Wheels (WoW).

WELLNESS HUB AND WELLNESS ON WHEELS (WoW) SERVICES

Wellness Hub is a facility that provides integrated services to the local community. The Wellness Hub service focuses on health and wellness services to support healthy living and environmental sustainability that support health and well-being towards transformation of the national healthcare system from patient care to healthcare. The Wellness Hub service is also enhanced by the Wellness on Wheel initiative (WoW), a mobile health wellness service that brings packages offered at the Wellness Hub to the community through the outreach program. As of 2022, there are 30 Wellness Hubs nationwide while WoW numbers are 18. In 2022, the total attendance for services performed by the Wellness Hub through physical, virtual and outreach is 209,712. On the other hand, for WoW services covered a total number of outreach implementation of 623.

Image 5.15

Wellness Hub dan Wellness on Wheels (WoW)



Source: Health Education Division, MOH

EXPANSION OF WELLNESS HUB

The expansion and upgrading of the Wellness Hub in the state is carried out in stages and phases. The upgrade and repair project at the Wellness Hub in 2022 involves seven (7) Wellness Hub namely Wellness Majid Tanah (Melaka), Wellness Hub Pekan (Pahang), Wellness Hub Kerayong (Pahang), Wellness Hub Kota Bharu (Kelantan), Wellness Hub Hospital Sultanah Aminah (Johor), Wellness Hub Labuan (FT Labuan) and Wellness Hub Telok Datok (Selangor). Wellness Hub Hospital Sultanah Aminah (HSA) is a pilot project in the hospital setting and the HSA Department of Education has been upgraded to the Wellness Hub in December 2022. Among the facilities provided are Fitness Zone, Hepili Zone, Non-Smoking Clinic Room, Wellness Studio and MyCHAMPION Zone.

Image 5.16
Upgrading Project of Wellness Hub Pekan, Pahang

WH Pekan : Tempat Letak Kereta (yang telah diturap)



WH Pekan : Penggantian Lantai Vinyl di Bilik Aerobik



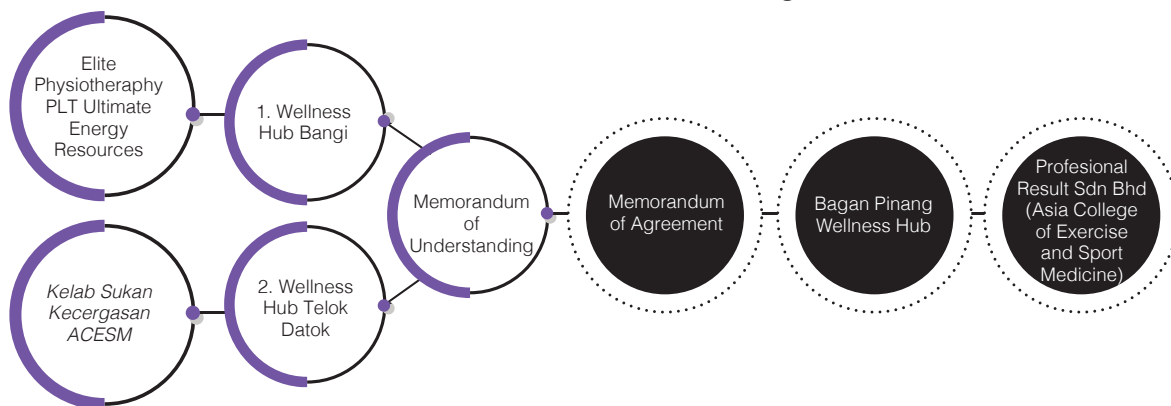
Source: Health Education Division, MOH

HEALTH PROMOTION COOPERATION BETWEEN MOH WELLNESS HUB AND STRATEGIC PARTNERS

The ceremony to sign off to mark the health promotion cooperation between the Wellness Hub MOH and Strategic Partners was held on 5 February 2022 at the Bagan Pinang Wellness Hub, Port Dickson. This smart partnership initiative is to offer healthy living culture services at the Wellness Hub by strategic partners to various target groups and added value to existing services.

Figure 5.27

Involvement of Strategic Partners in the Signing of Memorandum of Agreement and Memorandum of Understanding



Source: Health Education Division, MOH

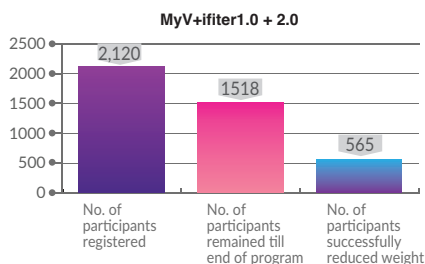
SELF-HEALTH CONTROL EMPOWERMENT

This an initiative to empower individuals, families, communities and strategic partners to embrace healthy living culture to enable them to manage their own health for well-being.

INTEGRATED NATIONAL WEIGHT LOSS MANAGEMENT PROGRAM (MYVIFITER) AND WEIGHT MANAGEMENT INTERVENTION (IFITER)

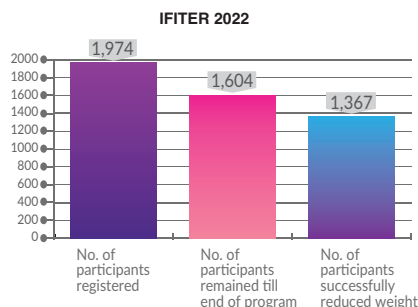
The MyVifiter and IFitEr programs are one (1) of the initiatives of the Ministry of Health of Malaysia to help communities with overweight and obesity to manage their weight and to improve their fitness levels through healthy lifestyle intervention and coaching. In 2022, the MyVifiter Program has been successfully implemented for six (6) weeks via face of face-to-face intervention. However due to COVID-19, MyV+IFitEr 1.0 was successfully implemented virtually in January and was officiated by Minister of Health, while MyV+IFitEr 2.0 in May and officiated by Secretary-General of MOH (Figure 5.28). At the same time, IFitEr is still physically implemented in the community despite face-to-face activities and the achievement of activities such as Figure 5.29.

Figure 5.28
Activity and Achievement Implementation
MyV+IFitEr 1.0 dan 2.0



Source: Health Education Division, MOH

Figure 5.29
Activity and Achievement Implementation of I Fit and Eat Right (IFitEr) 2022



Source: Health Education Division, MOH

ENGAGEMENT AND CAPACITY BUILDING OF ANMS' STRATEGIC PARTNERS

In 2022, BPK has conducted ANMS engagement sessions with strategic partners consisting of 14 ministries, 10 private agencies/statutory bodies/GLCs and 132 NGOs. Six (6) NGO capacity building sessions have also been implemented with the involvement of 124 NGOs consisting of 251 NGO representatives and the objective of this capacity building is to provide skills to NGOs in implementing healthy living culture activities and environmental sustainability in the community. One (1) book on Handbook for Implementing Health Promotion Projects by NGOs and GLCs was also published.

Image 5.17
Handbook, Engagement with ANMS Strategic Partners and NGO Capacity Building Sessions



Source: Health Education Division, MOH

CAPACITY BUILDING OF MALAYSIAN COMMUNITY HEALTH AGENT (MYCHAMPION)

One of the important components under ANMS is the capacity building of the Malaysian Community Health Agent or MyCHAMPION. MyCHAMPION consists of agents and community volunteers from various ministries, private organizations and NGOs who play a role not only in supporting the implementation of ANMS but as spokespersons and facilitators at the community level. As of December 2022, there are 27 volunteer teams from 11 ministries under MyCHAMPION and 18,233 volunteers have been trained with healthy lifestyle practice modules and environmental sustainability.

Image 5.18
MyCHAMPION Community Empowerment Guidelines Handbook and Activities

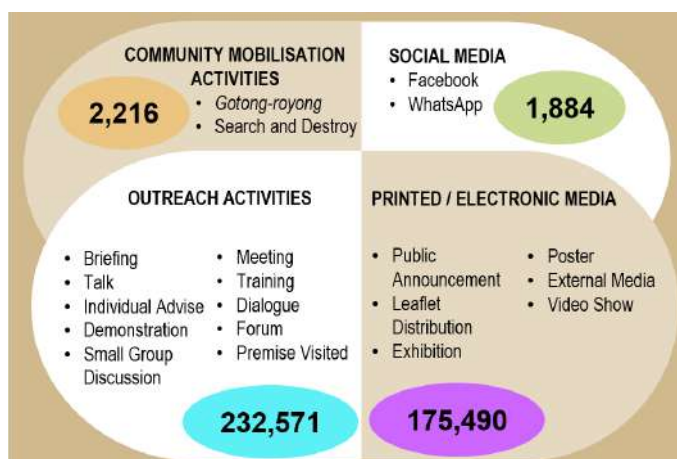


Source: Health Education Division, MOH

COMMUNITY EMPOWERMENT THROUGH MYCHAMPION COMBI

COMBI is a social mobilization and communication strategy to influence and empower individuals, families and communities towards a healthy lifestyle and environmental cleanliness. In 2022, MyCHAMPION COMBI has implemented various activities with the community involving education, promotion and empowerment of healthy lifestyle, new norm practices and encouraging vaccination in support of the implementation of the *Agenda Nasional Malaysia Sihat (ANMS)*.

Figure 5.30
Pelaksanaan Aktiviti MyCHAMPION COMBI 2022

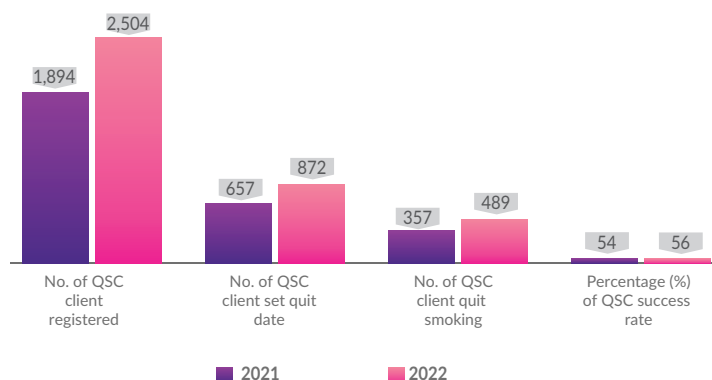


Source: COMBiS, KKM

QUIT SMOKING CESSATION IN THE HOSPITAL

The Quit Smoking Cessation which implements interventions through behavioural change is managed by Health Education Officers at 51 hospitals and institutions nationwide. PKBM Operations is one of the services offered by the Patient Education Unit led by a hospital or institution-based Health Education Officer. Comparison of PKBM achievements for 2021 and 2022 is as shown in **Figure 5.31**.

Figure 5.31
Comparison of Quit Smoking Cessation conducted by Health Education Officers for 2021 and 2022



Source: Health Education Division, MOH

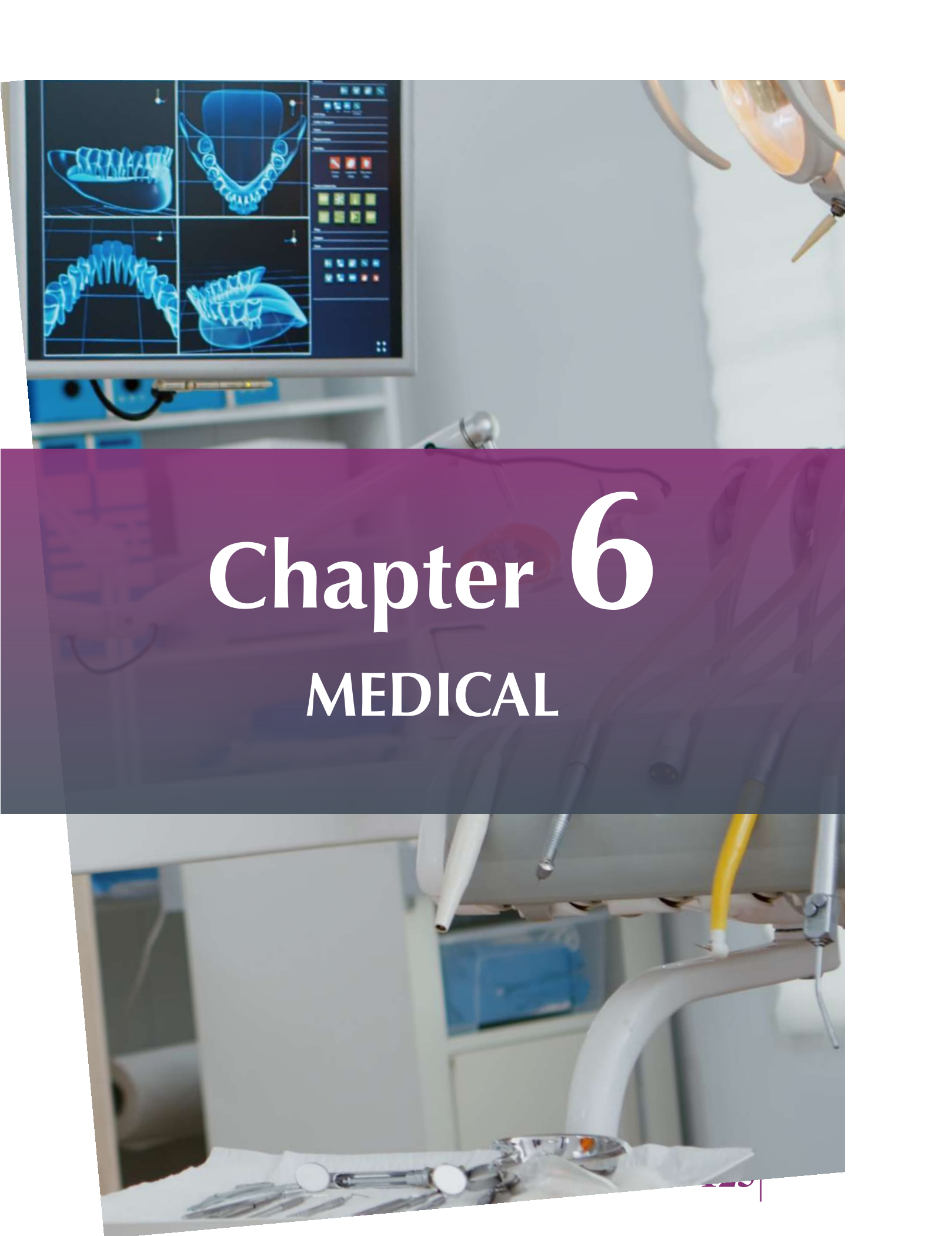
WAY FORWARD OF PUBLIC HEALTH PROGRAMME

Since the emergence of COVID-19 in 2020, the whole country has realized the importance of public health services as well as the need for comprehensive planning in reforming the public health system as preparation in facing challenges in the future.

The gaps and challenges in public health have been established for a long time and have become more apparent since the COVID-19 pandemic. More effective strategies need to be taken into account to determine the direction of public health such as:

- i. Re-strengthening the public health function through setting directions in the Health White Paper being developed by the Planning Division;
- ii. Ensuring effective health spending through potential services outsourcing;
- iii. Early detection and intervention of individual and family health and dental status;
- iv. Empowering intervention and person centred care oriented treatment for the whole life course (from womb to tomb);
- v. Effective coordination and cooperation between the private and public sectors, especially in handling epidemic; and
- vi. Expanding the use of digital technology.

A framework for the success of the healthy living culture has been developed to monitor and evaluate the improvement of the culture of healthy lifestyle among Malaysians. In addition, to strengthen the governance strategy in the healthy lifestyle culture initiative in Malaysia, the National Health Literacy Policy (DLKK) will also be develop.



Chapter 6

MEDICAL

MEDICAL DEVELOPMENT DIVISION (BPP)

BPP is responsible for policy making and planning, implementation and development of medical services. The ultimate aim is to prepare comprehensive medical services which support primary healthcare. This division consists of:

- i. Medical Services Development Section;
- ii. Medical Profession Development Section;
- iii. Medical Care Quality Section;
- iv. Malaysian Health Technology Assessment Section (MaHTAS);
- v. Medical Compensation Technical Evaluation Unit (Saraubat); and
- vi. Medical Aid Fund Technical Assessment Unit.

MEDICAL SERVICES DEVELOPMENT SECTION

CLINICAL SUPPORT SERVICES UNIT

In year 2022, the National Patient Blood Management Consensus Guidelines and National and Policy Point of Care Testing Guidelines for Pathology Services in MOH was published.

Rehabilitation Medicine Service has implemented the first phase of the Stroke Rehabilitation Continuum Programme involving six (6) hospitals namely Hospital Balik Pulau, Hospital Batu Gajah, Hospital Kuala Nerang, Hospital Pekan, Hospital Rembau dan Hospital Tengku Anis. This programme is one of the initiatives in the 12th Malaysia Plan (12MP) Strategic Plan for the Medical Programme involving the BPP, Allied Health Science Division (AHSD) and the Nursing Division.

For Dietetics and Food Services, the MOH Policy and Planning Committee (JDPKK) Meeting has approved expanding the privatization policy of food services in hospitals. The agreed decision involved a change in the existing policy's implementation method developed in the year 2000. The new method of outsourcing applies technologically enhanced food preparation systems. This concept will be piloted beforehand in a few hospitals in order to make possible the monitoring and review of the implementation leading to the development of a more comprehensive way forward service delivery policy decision.

EMERGENCY SERVICES & DISASTER MANAGEMENT UNIT

On 31 March 2022, a contractual agreement was signed between MOH, St. John Ambulance of Malaysia (SJAM) and Malaysian Red Crescent Society (MRCS) in the expansion of hotspot ambulance service covering 15 new areas throughout the country including Sabah & Sarawak. Under the initiative of the National Pre-Hospital Care & Disaster Medicine Institute, a pilot project for Central Region to study the effectiveness of the proposed new ambulance operational model was implemented in selected areas within the Klang Valley (FT of Kuala Lumpur, the FT of Putrajaya and selected part of Selangor).

Following the flood disaster in Kelantan and Terengganu at the end of 2022, monitoring and follow-up actions for the affected MOH facilities have been carried out. This is in line with the *Pelan Tindakan Insiden Kecemasan dan Bencana Dalaman* Guidelines for MOH Hospitals. Through Crisis Preparedness and Response Centre (CPRC) Hospital Services, all hospitals affected are monitored through the Flood Retention Format which to be updated by the State Medical Division.

The country was affected by the heart-breaking tragedy of the landslide incident at the Father's Organic Farm campsite, Batang Kali on 16 December 2022. MOH was involved in the relief operations by providing emergency medical services in the incident area. The medical team that was mobilised includes personnel from Hospital Selayang, Hospital Kuala Lumpur, Hospital Kuala Kubu Bharu and KK under the Hulu Selangor District Health Office (PKD).

MEDICAL RESOURCE UNIT (USP)

ALLOCATION AND BUDGET

In year 2022, the Development Division has approved a total of RM59.50 million to the Medical Programme for the procurement of medical devices. Of that amount, RM2.3 million was allocated to Medical Programme, while RM47.4 million was distributed directly to MOH hospitals.

PROCUREMENT

New Medical Devices

For year 2022, the central procurement of new medical devices was for Multi Detector Computed Tomography (MDCT) Scanner Hospital Slim River (RM2,227,240.00) and Extracorporeal Shockwave Lithotripsy (ESWL) Hospital Yan (RM3,798,688.00).

Upgrading of Existing Medical Devices

This unit also managed the procurement for existing medical devices upgrades in MOH hospitals such as Direct Digital Radiography (RM3,975,000.00), Fluoroscopy Hospital Selayang and Hospital Sultan Ismail (RM6,600,000.00) and Brachytherapy System Hospital Umum Sarawak (RM3,586,000.00).

Consumables, Reagents with Instrument Placement

In year 2022, USP has coordinated nine (9) central tenders for consumables, reagents and instrument placement. The estimated Total operation expenditure for consumables, reagents with instrument placement is about RM201 million.

Procurement of Consumables and Orthopaedic Implants through the Approved Product Purchased List (APPL) list under *Perjanjian Konsesi Perkhidmatan Logistik Bekalan Perubatan KKM*

The new concession contract will be known as *Perjanjian Konsesi Perkhidmatan Logistik Bekalan Perubatan Untuk Kementerian Kesihatan Malaysia oleh Pharmaniaga Logistics Sdn Bhd* replacing the old name (*Perjanjian Konsesi Penswastaan Makmal Ubat dan Stor Kementerian Kesihatan Malaysia*). To ensure the continuous supply of consumable products and orthopedic implants to MOH health facilities, the existing concession contract for year 2017 to 2019 shall continue on an interim basis until 30 June 2023. Preliminary preparations for product proposals and preparation of product specifications have been concluded for concession contract year 2023 to 2025.

HOSPITAL MANAGEMENT SERVICES UNIT

MOH Facility

The year 2022 saw the operationalisation of two (2) brand new hospitals (Hospital Cyberjaya and Hospital Bera) and two (2) replacement hospitals (Hospital Sri Aman II and Hospital Tanjung Karang). This increases the Total number of MOH hospitals to 148 hospitals consisting of 14 State Hospitals, 49 Specialist Hospitals, 74 Non-Specialist Hospitals and 11 Special Medical Institutions. The Serdang Hospital Cardiology Centre and Putrajaya Hospital Endocrine Institute are among the new clinical blocks completed in year 2022 but are yet to be fully operational.

MOH Diagnosis-Related Group Application

The MOH Diagnosis-Related Group, a database application that includes information on health management and the best estimation of costs of patient treatment in hospitals has been successfully implemented in all MOH hospitals and medical institutions. The ministry is also in the midst of preparing a policy paper for the distribution of its hospital budget allocations with Casemix adjustments. The implementation of this shadow budget policy will be carried out as a pilot project in Melaka by year 2024. The MOH is also collaborating with the Malaysian Productivity Corporation (MPC) through the Private Healthcare Productivity Nexus (PHPN) to develop a National Diagnosis-Related Group application.

Lean Healthcare Initiative

Hospital Tengku Ampuan Rahimah Klang became the first MOH hospital to receive recognition as a Lean Hospital by MPC. The Flying Squad pilot project for Lean Healthcare Initiative was launched this year involving four (4) states namely Selangor, Negeri Sembilan, Kelantan and Kedah to strengthen implementation at state level.

Cluster Hospital Initiative

This initiative has successfully formed 42 cluster hospitals nationwide. Hence, the expansion phase has ended and now the initiative has entered consolidation phase. The Cluster Hospital Report Card was introduced in the CPRC Hospital System starting this year, aimed at monitoring the initiative implementation and ensuring compliance with the existing guideline.

Outsourcing

Outsourcing of MOH patients to private healthcare facilities and services continued in year 2022 using the *Kumpulan Wang COVID-19* (KWC) allocation. Overall, a Total of 26,475 cases were referred with a Total expenditure of RM48,644,421.31.

Full Paying Patient (FPP) Service

Ten MOH facilities are providing the FPP service with a Total of 407 MOH specialists registered with FPP service as compared to 402 from the previous year.

Hospital Director Conference 2022

The conference with the theme Value-Based Healthcare, officiated by the Minister of Health was held from 20 to 22 June 2022. The biennial event is a great platform for MOH hospital directors to share issues and solutions, as well as best practices in effective hospital management.

Image 6.1
The 2022 MOH Hospital Director Conference



Source: Medical Development Division, MOH

Medical Record

HIS@KKM system has been successfully implemented in Rembau and Cyberjaya Hospital. Under the scope of the EMR Project, expansion and enhancement of HIS@KKM and TPC-OHCIS was rolled out in seven (7) hospitals in Negeri Sembilan, development of Health Information Exchange (HIE) is expected to be completed September 2023 and development of Virtual Clinic is expected to be completed June 2023. Guidelines for the Handling and Management of Medical Records at MOH facilities have been published while the Patient Medical Record Digitisation Project is in the planning phase.

CPRC Hospital System

CPRC Hospital System was developed as an online reporting tool to monitor hospital preparedness in facing the COVID-19 pandemic. Several modules such as Facility 360°, Medical Record, Asset and Human Resource Management have been developed and enable all MOH Hospitals to key in their hospital capacity, resources and workload. This database is useful for MOH to review and make plans for secondary and tertiary services, as well as for effective disaster and crisis management. This system is also being used as EMR system for patient management in MOH Hospitals as an interim system until the rollout of HIS@KKM.

O&G AND PAEDIATRIC SERVICES UNIT

The paediatric service had published the National Thalassaemia Registry Report 2021 and collaborated with the Family Health Development Division to integrate the National Immunisation Programme into the MySejahtera application. The National Training of Paediatric Palliative Provider (NTP) was conducted at three (3) hospitals namely Hospital Tuanku Jaafar Seremban, Hospital Tengku Ampuan Rahimah Klang and Hospital Ampang. Meanwhile, in an effort to increase the access to treatment for rare diseases, an *Akaun Amanah Penyakit Jarang Jumpa* was established in July 2022.

In response to WHO recommendation to increase access to essential surgery, this unit has collaborated with the Surgical Services Unit to initiate the global surgery initiative specifically for O&G surgeries in Sabah and Sarawak. In the field of Gender Mainstreaming activities, this unit has acted as a subfocal point representing the BPP.

Five (5) hospitals namely Hospital Seberang Jaya, Hospital Sultan Ismail, Hospital Sultanah Nur Zahirah, Hospital Umum Sarawak and Hospital Wanita dan Kanak-Kanak Sabah have been identified to start *Inisiatif Perkongsian Susu Ibu (Bank Susu) untuk Bayi Prematang di Neonatal Intensive Care Unit (NICU) Hospital KKM*. This initiative is expected to start in the year 2023.

This Unit have also acted as the secretariat for the National Cell Ethics Research and Therapy Committee (NCERT). Seven (7) protocol proposals were discussed and six (6) research study protocols were approved by the committee in the year 2022.

MEDICAL SERVICE UNIT

The Interim Guidelines for Evulsheld as Pre-Exposure Prophylaxis in COVID-19, Guidelines for the Implementation of the Employment Support Program for Mental Patients in Government Facilities and the COVID-19 Pandemic Report for Psychiatry and Mental Health Services at MOH Hospitals were developed. Several studies related to COVID-19, namely the Real-World Evaluation of COVID-19 Vaccines under PICK (RECoVaM) at the MOH facility has resulted in the publication of an international journal article entitled PICK-ing Malaysia's Epidemic Apart: COVID-19 Vaccine Effectiveness of a Diverse Vaccine Portfolio.

Table 6.1
Development of Medical Services

Subspecialty	Remarks
Psychiatry Services (MENTARI)	<p>There is three (3) Community Mental Health Centres (MENTARI) with the total of 34 MENTARI have officially started operating, namely:</p> <ul style="list-style-type: none"> (1) MENTARI Muar (2) MENTARI Pulau Pinang (3) MENTARI Kuala Lumpur. <p>Psychiatry services in hospitals were increased to 66 MOH hospitals. The Hulu Terengganu Psychiatric Nursing Home has started operating.</p>
Endocrinology Services	Expanded to 22 hospitals with a total of 57 specialists. Putrajaya Hospital Endocrine Institute has started operating in June 2022.
Peritoneal Dialysis (PD) Unit MOH	Expanded to 43 units in MOH hospitals throughout Malaysia.
Gastroenterology-Hepatology (GEH) services	Expanded to 21 KM hospitals with 39 GEH specialists.

Subspecialty	Remarks
Hepatitis C	Hepatitis C treatment has been extended to 457 MOH health facilities throughout Malaysia (61 MOH hospitals, 395 health clinics, 1 other facility).
Palliative Services	Extended to Hospital Melaka and Hospital Serdang, while on a visiting basis to seven (7) other MOH hospitals.
Seamless Geriatric Care (SGC) Service	The Seamless Geriatric Care (SGC) service has been developed on a pilot basis in nine (9) health clinics together with Hospital Tengku Ampuan Rahimah and Hospital Kuala Lumpur. Ten (10) MOH hospitals have provided ortho geriatric services.
Serdang Heart Center	Started operating in December 2022, with the addition of 163 beds for cardiology patients and four (4) invasive cardiology laboratories including one (1) laboratory in the Emergency Department.
Radiotherapy Services	A Memorandum of Understanding (MOU) between MOH and IHH Healthcare Malaysia has been signed for the treatment of 500 MOH patients to undergo radiotherapy using Gamma Knife or Linear Accelerator (LINAC) machines at seven (7) IHH Healthcare hospitals in Peninsular Malaysia.

Source: Medical Development Division, MOH

MEDICAL PROFESSIONAL DEVELOPMENT SECTION

PROFESSION POLICY AND PLANNING UNIT

The Profession Policy and Planning Unit is involved in planning the projected amount of health human resource requirements for new facilities and upgrading existing facilities in line with the development of specialist services. During the year 2022, eight (8) verification visits and projections of staffing requirements for Medical Officers and Medical Specialists have been carried out.

POSTGRADUATE MEDICAL SPECIALISATION AND SUB SPECIALISATION UNIT

Master of Medicine Programme

The Master of Medicine Programme is a basic specialist training programme conducted by eight (8) local public universities in collaboration with the MOH. In order to allow more medical officers to pursue the 23 areas of specialty training via the Master of Medicine Programme, *Hadiah Latihan Persekutuan* (HLP) slots have been increased periodically. In year 2022, a total of 1,371 HLP slots have been allocated compared to only 647 slots in year 2010. The number of medical officers graduating from the Master of Medicine Programme is between 700 and 800 each year. In year 2022, a total of 786 medical officers have completed the Master of Medicine Programme, while the number in year 2021 is 815.

The Parallel Pathway Specialty Training Programme

Apart from the Master of Medicine Programme, medical officers can pursue specialist training by enrolling into Parallel Pathway Specialist Training in MOH Malaysia. The training can be done locally or in combination with abroad attachment. There are 15 Parallel Pathway Specialist Training programmes for 14 disciplines, including two (2) specialist training programmes for Family Medicine. In year 2022, there were 331 medical officers who have completed their training from various specialties.

Subspecialty Programme

MOH Subspecialty Training Programme is a structured programmed conducted by MOH since year 2002. The training programme is conducted either fully local or combination of local and overseas. In year 2022, the number of HLP slots offered for this programme were 390 compared to 250 slots in year 2019.

SPECIALIST PROFESSION UNIT

Gazettement of Specialists and Subspecialists

Every doctor with recognised post-graduate qualification has to be gazetted by the Special Gazettement Committee which is chaired by Director-General of Health and 3 panel members; in accordance to Chapter F of the Public Service's General Order. In year 2022, 1,264 clinical specialists were gazetted which is an increment of 68.8 per cent as compared to 749 in year 2021.

Clinical Specialists in MOH Hospitals

The number of specialists and subspecialists in MOH hospitals are increasing in trend. In year 2022, the total number of specialists from various specialties and subspecialties were 8,059. This number has increased as compared to year 2021 when there were 7,005 specialists working in the MOH, and 5,820 specialists in year 2020. Despite that, this increase in the number of specialists is still not enough to cater to the needs of the country as we are moving towards a developed country.

CONTINUING PROFESSIONAL DEVELOPMENT (CPD) UNIT

CPD is an expanded form of continuing medical education, which has been implemented in a more comprehensive nature. It is a systematic planned process of lifelong learning and professional development. It enables health professionals to maintain and enhance knowledge, skills and competency. MyCPD version 2.0 system was launched in 2017, the usage as of 31 December 2022 is shown in **Table 6.2**.

Table 6.2
MyCPD Version 2.0 System Usage

User	Supervisor	Provider	Health Services Scheme
281,103	24,861	1,836	52

Source: Medical Development Division, MOH

CPD points will continue to be used for various purposes for different requirements such as for Annual Practising Certificate (APC) renewal for health practitioners and also for National Specialist Register (NSR).

HOUSEMANSHIP TRAINING PROGRAMME UNIT

Housemanship is a two (2) years training programme that encompasses six (6) different disciplines to produce safe and competent medical practitioners. Upon successful completion of the training, the House Officers (HO) are eligible to obtain full registration certificates and provide healthcare services. A total of 3,252 new HOs were appointed in 2022.

Accreditation of Housemanship Training Hospitals

In January 2022, the Housemanship Training Programme Unit conducted a visit to Lahad Datu Hospital to be accredited as a new Housemanship Training Hospital (HLS). The hospital management was given an in-depth briefing on the implementation of the Housemanship Programme at the hospital level. With the accreditation of Hospital Lahad Datu, there are now 51 hospitals in Malaysia that are designated as HLS.

Audit of Housemanship Training Programme Implementation

Every year, a few hospitals are selected for audit sessions to make sure the Housemanship Training Programme is carried out in accordance with the set guidelines and policies. In 2022, Tuanku Ampuan Najihah Hospital and Ampang Hospital were selected for this purpose. The Housemanship Programme Unit also held engagement sessions with HOs during the audit sessions at both hospitals to get feedback on their training.

Housemanship Assessment Module

During housemanship training, HOs are required to complete a logbook during each posting to ensure optimal competency levels. Since 2021, the logbook was adapted for the COVID-19 pandemic situation. Therefore, in 2022, the Housemanship Training Programme Unit held several engagement sessions with stakeholders to develop a new and comprehensive housemanship assessment module. In May 2022, a workshop was held with Heads of Services (HOS) and specialists to finalize the format and content of the new housemanship assessment module. Subsequently, the module was approved by the Medical Qualifying Committee (MQC). The module will also be developed in the CPRC Hospital System in line with the PSP KKM 2021-2025.

In addition, the Housemanship Training Programme Unit also carried out a pilot project for the implementation of an e-logbook with representatives from HOs, medical officers, and specialists from Hospital Tengku Ampuan Rahimah (HTAR). The project aimed to test the effectiveness and ease of use of the e-logbook integrated into the CPRC Hospital System.

Housemanship Programme Organisation at Hospital Level

The Housemanship Training Programme Unit is proactive in improving programme implementation. Based on previous audits and feedback received, there is a need to revisit the mechanism of managing the Housemanship Training Programme at the hospital level in a more systematic manner. Several engagement sessions have been conducted to restructure and strengthen the role of the Housemanship Training Programme organization at the hospital level. In June 2022, a workshop was held with deputy hospital directors and hospital management representatives to finalize this goal.

MEDICAL CARE QUALITY SECTION

INFECTION CONTROL UNIT

Infection Control Unit published three (3) guidelines in year 2022 and successfully produced the 2021 Annual Report of Infection Prevention & Control and Antimicrobial Resistance Containment Programme as well as the National Wound Care Surveillance Report 2021.

With the theme of *Navigating the New Normal in Infection Prevention and Control (IPC)*, the 2nd National Infection Prevention and Control Conference 2022 was held on the 6 and 7 September 2022 and officiated by the Director-General of Health. The conference aims to strengthen the knowledge of health personnel and provide them with the latest information related to IPC practices and Antimicrobial Resistance (AMR).

Malaysia is currently participating in the Improving the TRIcycle Protocol: Upscaling to National Monitoring Detection of CPE and WGS Pipelines for One Health Surveillance (TRiUMPH) project with the Netherlands, France, Madagascar and Pakistan. This One Health AMR project is under the global Joint Programming Initiatives on Antimicrobial (JPIAMR) and funded by the International Development Research Centre (IDRC) of Canada. This surveillance covers human and animal health and the environment, looking at the prevalence and inter-relatedness of proxy indicator organisms, such as ESBL-producing *E. coli* and Carbapenem-resistant Enterobacteriaceae (CRE), in all three (3) related sectors. This project is expected to be completed by end of 2023.

Infection Control Unit has organized a Wound Care Programme Meeting which includes the National Wound Care Committee Meeting No. 2/2022 as well as Workshop on the Revision of Wound Care Manual and Strengthening of the National Wound Care Surveillance at the Adya Hotel, Langkawi on the 19 to 21 October 2022.

PATIENT SAFETY UNIT

In year 2022, Patient Safety Unit carried out several activities including monitoring of patient safety incidents in government hospitals and institutions through the e-Incident Reporting (e-IR) System and also achievements in Malaysian Patient Safety Goals (MPSG) which involve both public and private health facilities. For the year 2021 incident report, 6,759 (85 per cent) of them are actual incidents whilst 1,150 (15 per cent) are near misses.

Table 6.3
Malaysian Patient Safety Monitoring System for Year 2018 to 2021

Malaysian Patient Safety Monitoring System	2018	2019	2020	2021
e-IR System incidents (rate – incidents per 1,000 admissions)	7,928 (2.96)	9,432 (3.46)	9,427 (4.14)	7,909 (3.40)
Malaysian Patient Safety Goals (percentage of national reporting, excluding private clinics)	90.4	87.9	80.2	95.4

Source: Medical Development Division, MOH

World Patient Safety Day (WPSD) was celebrated in September 2022 with the theme of *Medication Safety*. A webinar was held on 20 September 2022 and participated by 11,597 participants. On top of that, iconic buildings and monuments around Malaysia were lit up in orange on the night of 17 September 2022. On 13 and 14 September, Patient Safety Unit in collaboration with Hospital Kuala Lumpur (HKL) organised a virtual Symposium for Safe Surgery Saves Lives 2022.

OCCUPATIONAL SAFETY AND HEALTH (OSH) UNIT

The National OSH Conference was held on 24 and 25 May 2022, in conjunction with the World Day for Safety and Health at Work campaign by the International Labour Organisation (ILO). The theme was *To build a positive safety and health culture; #Let's Act Together* and it was officiated by The Director-General of Health.

The OSH introduce evidence-based policies using data analysis of established health and safety programmes in Malaysia. Posters presented at national-level conferences in year 2022 includes violence against healthcare workers, fatigue among healthcare workers during the COVID-19 pandemic and medical errors among healthcare workers. The research on Incidence, Prevalence, and Sources of COVID-19 Infection among Healthcare Workers in Hospitals in Malaysia was a joint collaboration with the Occupational and Aviation Medicine Department, University of Otago Wellington, New Zealand and was published in the International Journal of Environmental Research and Public Health.

CLINICAL PERFORMANCE SURVEILLANCE UNIT

Two (2) guidelines had successfully published in year 2022, and the Medical Programme KPI Audit Implementation Workshop attended by all JKN Quality Officers has also been successfully organised. A KPI audit was also held at HKL in August 2022. In addition, this Unit has successfully expanded performance monitoring using KPI from 111 *Penjawat Pengurusan Tertinggi Perkhidmatan Awam* (PPTPA) incumbents in year 2021 to 590 PPTPA incumbents in year 2022 where more than 80 per cent were Medical Specialists.

ACCREDITATION AND STANDARD UNIT

In 2022, the unit has successfully organised Training for Trainer courses for the South Zone in July and the North Zone in September 2022. This unit also successfully produced three (3) reports. As the secretariat of MS ISO 9001, the ISO certification of the Medical Program was successfully obtained in March 2022.

CLINICAL AUDIT UNIT (CAU)

Guideline on the implementation of Clinical Audit has been established and will be launched in year 2023. The implementation of Pain as the 5th Vital Sign (P5VS) at MOH facilities involves Medical Programme (as the lead Programme), Public Health Programme, Oral Health Division and Pharmacy Services Division. There are 30 certified Pain Free Hospital (PFH) throughout Malaysia. The *Program Menangani Kesakitan Kronik* (MENANG), which focused on chronic pain patients, will be expanded in year 2023. At the moment, the activity of the MENANG Programme, is on regional basis and being practiced only in certain hospitals. Perioperative Mortality Review (POMR) is a peer-review clinical audit that involves 71 MOH Specialist Hospitals throughout Malaysia. It is an essential component in Global Surgery 2030, with a target that the reporting rate of POMR is at 100 per cent by the year 2030. The reporting rate of POMR has reached more than 92 per cent throughout Malaysia in year 2022. Surgical Site Infection (SSI) as an important component of the quality of care for surgical patients, will be monitored starting in the year 2023 along with the establishment of the National SSI Guideline.

Table 6.4
Policy/Guideline/Manual and Protocol produced in Year 2022

Title
Malaysian National Action Plan on Antimicrobial Resistance (MyAP-AMR) 2022-2026
Management of Carbapenem Resistant Enterobacteriaceae (CRE) in Healthcare Setting
Multidrug Resistant Organism Surveillance Manual, 3 rd Edition 2022
One Health Integrated Antimicrobial Resistance Surveillance Manual
Garis Panduan Pelaksanaan POMR 2022
Garis Panduan Pelaporan POMR 2022
Garis Panduan pelaporan buli di kalangan warga KKM – MyHelp
Tatacara selamat penempatan dan pengendalian mesin pencetak di pejabat
Garis Panduan Menangani Kekerasan di Fasiliti Kesihatan KKM Edisi 2
Garis Panduan Audit KPI Program Perubatan
Garis Panduan Akreditasi Hospital dan Institusi KKM
Garis Panduan Pengurusan SIQ
Garis Panduan Penubuhan dan Pemerkasn Klinik Warga di Fasiliti Kesihatan KKM
Guideline on Fall Prevention and Intervention Program
Quick Guide in Consent Process
Semakan semula polisi akreditasi hospital dan institusi
Garis Panduan Kajian Kepuasan Pelanggan PSQ18
Bahan Pendidikan Pain Free Program 2022
Pindaan Annex 21b: Management of healthcare workers confirmed with COVID-19 for return to work
Laporan Pencapaian Indikator Jawatankuasa Keselamatan dan Kesihatan Pekerjaan (JKK) Bagi Blok E1 IPKKM 2022
Surat Peringatan Amalan Tidak Merokok oleh Pejabat TKPK(P) kepada semua warga Program Perubatan bertarikh 23 Ogos 2022

Source: Medical Development Division, MOH

MALAYSIAN HEALTH TECHNOLOGY ASSESSMENT (MaHTAS)

In year 2022, MaHTAS had produced various reports and guidelines, as illustrated in **Figure 6.1**.

Figure 6.1
2022 Achievements by MaHTAS



Source: Medical Development Division, MOH

Three (3) Clinical Practice Guideline (CPG) were produced in the year 2022 including two (2) mental related CPGs i.e., Management of Dementia (Third Edition) and Management of Schizophrenia (Second Edition) and Management of E-Cigarette or Vaping Product Use-Associated Lung Injury (EVALI).

Image 6.2
Launching of CPG Management of Dementia and CPG Management of Schizophrenia



Source: Medical Development Division, MOH

MaHTAS has been actively collaborating with other players in local and international arenas, including the International Network of Agencies for Health Technology Assessment (INAHTA), HTAsiaLink, The Professional Society for Health Economics and Outcomes Research (ISPOR), International Health TechScan (iHTS), WHO, Ministry of Science, Technology, and Innovation (MOSTI), and Health Technology Assessment International (HTAi). At the international level, MaHTAS has been appointed leadership roles as the President of the HTAsialink, Regional Coordinator for iHTS, and Chair for the ISPOR HTA Council for Asia Pacific. MaHTAS is also involved in various INAHTA Taskforce and Learning Group, namely the Real-World Evidence, Communication Task Group and Patient Engagement Learning Group.

In conjunction with Jelajah Aspirasi Keluarga Malaysia (JAKM) last October 2022 in Jempol, Negeri Sembilan, MaHTAS spearheaded the exhibition of Futuristic Hospital in collaboration with health technology providers and other divisions of MOH.

Image 6.3
Futuristic Hospital Programme



Source: Medical Development Division, MOH

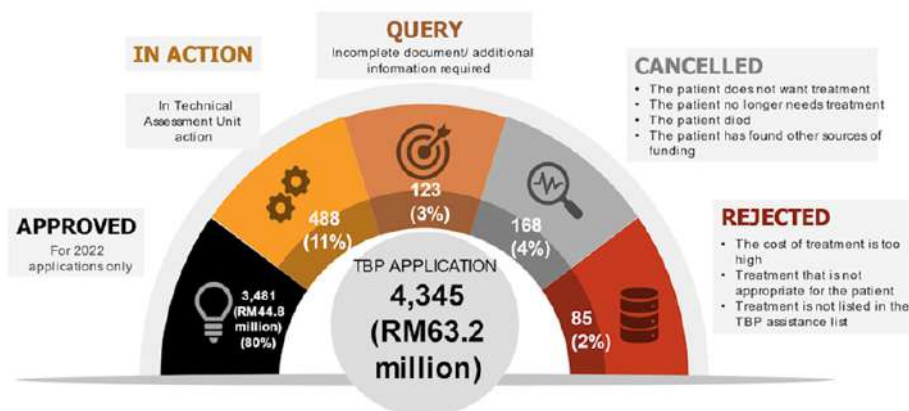
MEDICAL COMPENSATION TECHNICAL EVALUATION UNIT (SARAUBAT)

Saraubat unit is responsible for managing reimbursement claims for medical facilities and treatment borne by the government that are subject to the circulars in force. In year 2022, 87 per cent of the total 21,585 applications were approved for reimbursement with an estimated value of RM133,642,471.09. Saraubat unit plans to enhance efforts and ability to process applications more efficiently and effectively through the digitization system, in order to be able to deliver information more customer friendly.

MEDICAL AID FUND (TBP) TECHNICAL ASSESSMENT UNIT

TBP was created under the Trust Fund Section 10 of the Financial Procedures Act 1957. Since year 2005 to 2022, this fund had helped a total of 71,387 patients with a total assistance of RM605.1 million. In order to ensure that the assessment is carried out transparently, the Guidelines for Application for Assistance According to Medical Disciplines were created and used started May 2022. There are 394 medical devices listed under TBP assistance involving 18 clinical disciplines. With the development of digital technology, the Medical Aid Fund System (STBP) was used by Medical Social Work Officers at the MOH Hospitals and Public University Medical Centres since May 2021 to refer applications to TBP.

Figure 6.2
TBP Implementation Status in Year 2022



Source: Medical Development Division, MOH

Table 6.5
TBP Approval Status in Year 2022

NO	DISCIPLINE	NUMBER OF APPROVALS	AMOUNT (RM) MILLION	(%)	NO	DISCIPLINE	NUMBER OF APPROVALS	AMOUNT (RM) MILLION	(%)
1	CARDIOLOGY	1,012	20.03	26.5	13	CARDIOTHORACIC	19	0.67	0.5
2	ORTHOPEDIC	709	11.39	20.2	14	UROLOGY	7	0.05	0.2
3	OTORINOLARINGOLOGY (ENT)	509	3.39	15.5	15	HEMATOLOGY	5	0.05	0.1
4	REHABILITATION	412	1.42	10.8	16	VASCULAR SURGERY	5	0.22	0.1
5	PEDIATRIC	334	3.20	8.8	17	PLASTIC & RECONSTRUCTIVE SURGERY	4	0.03	0.1
6	GENERAL MEDICINE	221	2.51	5.8	18	RHEUMATOLOGY	4	0.08	0.1
7	DERMATOLOGY	99	1.96	2.6	19	OPHTHALMOLOGY	3	0.02	0.1
8	GENERAL SURGERY	98	0.96	2.6	20	ANESTHESIOLOGY	1	0.01	0.0
9	RESPIRATORY	78	0.65	2.0	21	HEPATOLOGY & GASTROENTEROLOGY*	1	0.00	0.0
10	NEUROLOGY	64	1.41	1.7	22	NEPHROLOGY	1	0.00	0.0
11	NEUROSURGERY	56	0.69	1.5	23	RADIO THERAPY	1	0.04	0.0
12	ORAL AND MAXILLOFACIAL SURGER	29	0.15	0.8		TOTAL	*3,812	*48.93	100

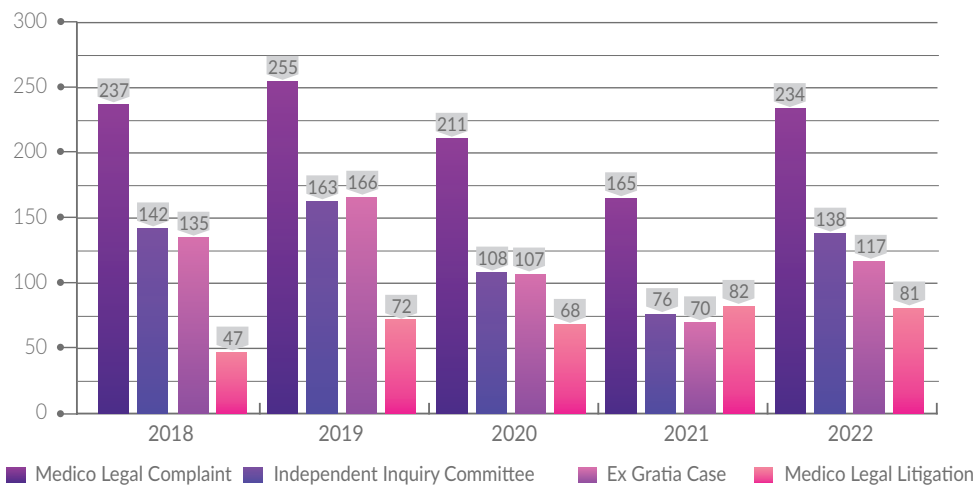
Source: Medical Development Division, MOH

MEDICAL PRACTICE DIVISION (BAP)

MEDICO LEGAL SECTION (CML)

The main role of the CML is to manage medico legal cases involving public healthcare facilities in the MOH. The section is further divided into four (4) sectors – Medical Malpractice; Medical Jurisprudence; Policies, Operations and Standards; and Surveillance and Information. CML's responsibilities include processing medico legal grievances, ex gratia compensation claims, engagement with the Attorney General's Chambers (AGC) on matters of medical malpractice, organising teaching and training sessions with regards to medico legal issues together with auditing and surveillance activities.

Figure 6.3
Medico Legal Statistics from the Year 2018 to 2022



Source: Medical Practice Division, MOH

MANAGEMENT OF MEDICO LEGAL COMPLAINTS

Medico legal complaints are investigated by the facilities involved and reported to the Medico Legal Section. In the event of an unresolved complaint or compensation claim, an External Inquiry Committee (JKPB) is formed. In 2022, CML registered 234 medico legal complaints. A Total of 117 new cases were presented in the Ex Gratia Meeting and 65 (55.6 per cent) cases were recommended for compensation. The KPI for 2022 was Percentage of Resolved Medico Legal Cases with Compensation Claims in MOH Healthcare Facilities, which was 70 per cent . Throughout the year 2022, a Total of 84.4 per cent of medico legal complaints were resolved within 365 days from the date of complaint until the Ex Gratia Meeting review.

MEDICO LEGAL LITIGATION

CML and AGC combine their efforts in managing medical malpractice litigation cases filed against MOH healthcare facilities. CML provides technical input, advise on case management, coordinates preparation of documents for out of court settlements and facilitates in identifying Expert Witness candidates. A Total of 81 medical malpractice litigation cases were filed against MOH in 2022.

DAMAGES AWARDED

Table 6.6 shows the amount of compensation paid for both ex-gratia and litigation from the year 2018 to 2022. In 2022, the Total payment was RM4,752,469.20.

Table 6.6
Damages Awarded for Medico Legal Cases from the Year 2018 to 2022

Year	Ex Gratia		Litigation		Total (RM)	
	Amount (RM)	No. of Cases	Amount (RM)	No. of Cases	Amount (RM)	No. of Cases
2022	558,962.56	18	4,193,506.64	10	4,752,469.20	28
2021	2,740,822.43	46	27,715,932.27	15	30,456,754.70	61
2020	3,909,087.89	55	14,427,784.37	18	18,336,872.26	73
2019	4,471,603.29	70	18,449,560.91	36	22,921,164.20	106
2018	5,050,145.58	83	13,322,967.61	11	18,373,113.19	94

Source: Medical Practice Division, MOH

SURVEILLANCE

CML also is responsible to monitor and audit MOH healthcare facilities and JKNs in establishing the recommendations by the External Inquiry Committees. CML successfully held:

- Technical Meeting on Management of Medico Legal Cases on 27 April 2022 and 12 to 13 October 2022;
- Medico Legal Case Monitoring Meeting with JKN Pulau Pinang on 10 March 2022; and
- Medico Legal Case Monitoring Meeting with Oral Health Program MOH on 30 August 2022.

MEDICO LEGAL COMPETENCY ADVANCEMENT

CML has conducted the following training activities in 2022 in the efforts to fortify the management of medico legal cases in MOH healthcare facilities and JKNs.



Inquiry Committee Training Course
Adya Hotel, Langkawi
30 May - 1 June 2022

Image 6.4
Training and Courses Conducted by Medico Legal Section in 2022



Reinforcement Course in Management of Medico Legal Complaints
Grand Puteri Hotel, Kuala Terengganu
11-12 October 2022

Source: Medical Practice Division, MOH

PUBLICATION

e-Bulletin Medico Legal Section Vol. 3 was published on 24 March 2022 and uploaded to the BAP website to facilitate access by MOH staff. The e-CML information system has been operational since 1 July 2022 and medico legal case data is being uploaded currently.

2023 PLANNING

The following are new activities planned for the year 2023:

- i. Expert Witness Training;
- ii. Medico Legal Complaints Management Course;
- iii. External Inquiry Chairperson Course; and
- iv. Publications of Guidelines on the Management of Medico Legal Litigation in MOH.

MEDICAL LEGISLATION SECTION (CPP)

CPP consists of five (5) sectors which are Drafting, Private Health Facility Fee, Medical Aesthetic Practice, Health Tourism and Globalisation.

DRAFTING SECTOR

This sector is responsible in drafting bills and new regulations so as amending existing Acts and Regulations under the Medical Programme.

In 2022, this sector had finalised and submitted the Private Aged Healthcare Facilities and Services Regulations under the Private Aged Healthcare Facilities and Services Act 2018 [**Act 802**] and its guidelines to MOH Legal Advisor (PUU) for review.

As part of approval process for the Pathology Laboratory Regulations under the Pathology Laboratory Act 2007 [**Act 674**] meetings including with the AGC were conducted followed by visits to Putrajaya Hospital pathology laboratory and Lablink (M) Sdn. Bhd. Kuala Lumpur to get better understanding on laboratory operation.

Drafting of new regulations for private standalone ambulance services which is one of the KPI under MOH Strategic Plan was started which involved consultation sessions with Malaysian Fire and Rescue Department (JBPM) and Malaysia Civil Defence Force (MCDF) and working visits to MRCS and St. John Ambulance Malaysia (SJAM). Drafting workshops involving various agencies among others the Road Transport Department (JPJ) were conducted. Regulatory Impact Statement (RIS) which is a requirement for all new regulation was completed and submitted for approval by the Malaysian Productivity Corporation (MPC).

This sector also has prepared other RIS for approval by MPC such as RIS for amendment of Private Healthcare Facilities and Services Act 1998 [**Act 586**], RIS for Assisted Reproductive Technology Bill and RIS for amendment of Mental Health Act 2001 [**Act 615**]. For the purpose of preparing the RIS for Proposal to Regulate Private Home Healthcare Services by standalone provider and freelance healthcare professional, a public consultation through MPC's Unified Public Consultation (UPC) portal was conducted and the Closure Report for the consultation was prepared.

PRIVATE HEALTH FACILITY FEE SECTOR

In 2022, this sector successfully finalised the amendment of 13th Schedule under Act 586 which prescribed the professional fee for medical practitioners in private hospitals. This amendment involves addition of more than 1,500 new procedures to the existing list. A Total of 28 meetings with 39 associations representing various specialties and subspecialties were conducted, such as the Malaysian Orthopaedic Association (MOA) and Malaysian Neuroscience Associations (MSN).

Throughout 2022, this sector also managed to settle 170 complaints and queries related to professional fee for private medical specialists received from hospital management, insurance companies, Third Party Administrators (TPA) and medical specialists. Apart from that, this sector actively participated in engagement sessions and invitations for briefing on charging protocol for example the involvement in Hybrid Neuro-oncology and Radiosurgery Symposium and Malaysian Arthroscopy Association Annual Scientific Meeting (MAS).

MEDICAL AESTHETIC PRACTICE SECTOR

This sector is the secretariat for The Main Credentialing & Privileging Committee for Aesthetic Medical Practice that conduces written assessment and interviews for general medical practitioners who want to practice aesthetic medicine. Candidates who pass will receive Letter of Credentialing and Privileging (LCP) that will allow them to provide medical aesthetic services in registered private healthcare facilities. In year 2022, two (2) written assessments and two (2) interview sessions were conducted involving 101 and 88 candidates respectively.

Apart from new applications, this sector also conducted renewal process for LCP that had expired. Until December 2022, Total number of medical practitioners with LCP are as follows:

- i. Chapter 1 (general medical practitioner): 432
- ii. Chapter 2 (medical specialists): 76
- iii. Chapter 3 (surgical specialists): 80

In year 2022, this sector had continued its effort to overcome the issue of medical aesthetic practice by unqualified individuals through the cooperation with Ministry of Domestic Trade and Consumer Affairs (KPDNHEP), Department of Standards Malaysia (DSM) and Medical Device Authority (MDA) to ensure the public receives safe services.

HEALTH TOURISM SECTOR

This sector had managed the verification process for the application of Investment Tax Allowance for Health Tourism with a value of more than RM21 million in year 2022. It involves the cooperation from Malaysian Investment Development Authority (MIDA), MOH Engineering Division, MDA and Private Medical Practice Control Section, BAP. This sector is also involved in formulation of health tourism policy which is led by Malaysian Healthcare Travel Council (MHTC).

GLOBALISATION SECTOR

This sector worked closely with Ministry of International Trade and Industry (MITI) to examine and monitor development of international trade agreements involving private healthcare services, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), ASEAN Framework Agreement on Services (AFAS) and number of other bilateral and multilateral trade agreements. This sector also has a role in the revision process of the Policy of Foreign Equity Participation in Private Healthcare Facilities.

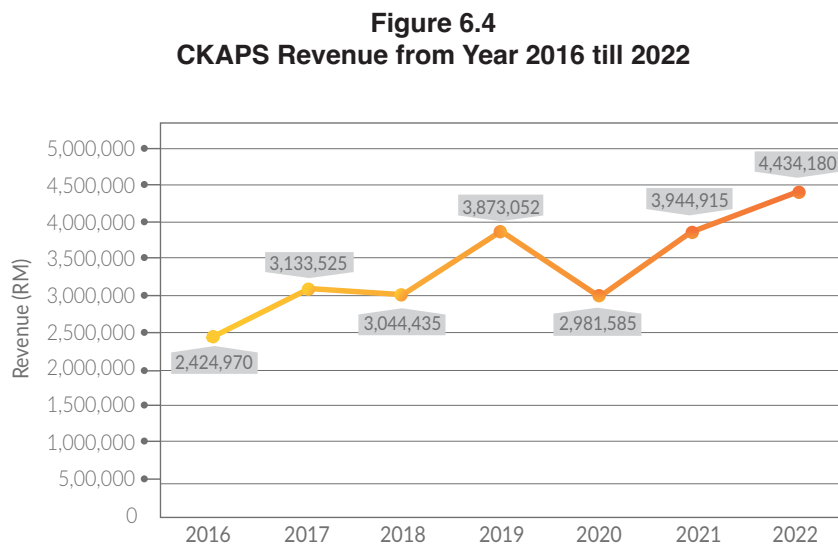
As in previous years, this sector represented Malaysia in ASEAN Joint Coordinating Committee on Medical Practitioners Meeting (AJCCM). Meetings for year 2022 were conducted virtually hosted by Brunei Darussalam and Philippines. In the meetings Malaysia had finalised the information on mobility mechanism and registration of medical practitioners and participated in the preparation of final draft of report for Study on Supply and Demand of Professional Services in ASEAN oleh Economic Research Institute for ASEAN and East Asia (ERIA).

PRIVATE MEDICAL PRACTICE CONTROL SECTION (CKAPS)

CKAPS undertakes the role to implement and enforce the Private Healthcare Facilities and Services Act 1998 [**Act 586**]. The regulation and control for Private Healthcare Facilities and Services (PHFS) under Act 586 include registration, approval, licensing, handling of complaints, evaluation of quality, enforcement activities and matters relating to PHFS. In year 2022, a Total of 14,468 PHFS have been registered and licensed under Act 586.

REVENUE FOR YEAR 2022

In 2022, CKAPS had collected RM4,434,180 from processing, issuance and administrative fees, which shows 12.4 per cent increment compared to the previous year. **Figure 6.4** shows the comparison of the revenue from year 2016 until 2022.



Source: Medical Practice Division, MOH

CKAPS TECHNICAL MEETING

The CKAPS Technical Meeting was held from 22 to 24 August 2022 at Tasik Villa International Resort, Port Dickson. It was attended by 42 CKAPS officers from the headquarters and JKN/FT. The meeting was organised to discuss the latest policies and guidelines regarding the registration and licensing processes of PHFS as well as to identify issues pertaining to evaluation of services provided by PHFS through incident reporting and assessable death, handling complaints, enforcement activities and prosecution. Among the decided matters in this meeting includes:

- i. Guidelines for Processing Application for Registration of Private Medical/Dental Clinic [One (1) Person In-Charge to one (1) Private Medical/Dental Clinic];
- ii. Criteria on Number of Consultation Room, Treatment Room and Minor Surgery Room in Private Medical Clinic;
- iii. Management of Confiscated Goods (Exhibit) and Release of Seal Standard Operating Procedure (SOP); and
- iv. Appointment of Task Force for Policy Development related to Enforcement of Act 586.

Image 6.5
CKAPS Technical Meeting



Source: Medical Practice Division, MOH

TRAININGS AND COURSES

TRAINING OF TRAINER (TOT) PRIVATE CLINIC REGISTRATION PROCESS

Tasks and applications involving registration and licensing activities for PHFS have markedly increased since Act 586 was implemented. Various policies, guidelines and checklists have been issued by CKAPS HQ to facilitate CKAPS officers at HQ and JKN/FT. Hence, this programme was held to update information regarding the latest policies and guidelines to avoid misunderstandings and disorganisation in the implementation of Act 586 and its regulations. This TOT for Private Clinic Registration process includes processing the private clinic registration applications, floor plan reading guide and pre-registration visits to private clinics.

Subsequently, until 31 December 2022, a Total of four (4) ToT series have been successfully held as follows:

- i. CKAPS JKN Selangor : 9 August 2022
- ii. CKAPS JKN Pulau Pinang, Kedah & Perlis : 13 - 14 October 2022
- iii. CKAPS JKN Kelantan & Terengganu : 26 - 27 October 2022
- iv. CKAPS JKN Melaka : 20 - 21 December 2022

Image 6.6
ToT Private Clinic Registration Process for Year 2022



ToT CKAPS JKN Melaka



ToT CKAPS JKN Selangor



ToT CKAPS JKN Pulau Pinang, Kedah & Perlis



ToT CKAPS JKN Kelantan & Terengganu

Source: Medical Practice Division, MOH

ATTACHMENT AT CKAPS HEADQUARTERS

To enhance the implementation of Act 586, CKAPS HQ organized a training program for officers from CKAPS JKN/FT at its headquarters. Two (2) officers from CKAPS FT Kuala Lumpur & Putrajaya were selected as the first participants and underwent a two (2) month attachment. This comprehensive training aims to enhance officers' proficiency, understanding, and efficiency in enforcing Act 586 and its Regulations, with the intention of extending the opportunity to officers from all sections at the state level in the future.

Image 6.7
Attachment at CKAPS HQ



Source: Medical Practice Division, MOH

OTHER COURSES

CKAPS Basic Prosecution Course and Forensic Photography Course were held simultaneously from 3 to 5 October 2022 at Crystal Crown Hotel, Kuala Lumpur.

ASSISTANT MEDICAL OFFICER BRANCH

REGISTRATION AND ANNUAL REGISTRATION CERTIFICATE (ARC)

A total of 85 per cent of applications utilising Form 3 (regulation 16 (1)) for the Certificate of Registration as a Medical Assistant with the Malaysian Medical Assistant Board were completed within 45 working days from the date the application is received. Additionally, all compliant registrations were successfully processed, achieving a 100 per cent success rate.

COMPULSORY PLACEMENT PROGRAMME (PPW)

The six (6) month PPW in Emergency Department is a special programme designed and implemented to all newly appointed Assistant Medical Officers (AMO) in MOH with the aim to strengthen clinical skills, enhances ability to make decisions and improves communication effectiveness.

Table 6.7
PPW for Year 2022

State	Total
Perlis	40
Kedah	145
Pulau Pinang	122
Perak	152
Selangor	388
FT Kuala Lumpur (HKL)	215
FT Putrajaya	67
Negeri Sembilan	86
Melaka	92
Johor	132
Kelantan	93
Terengganu	93
Pahang	124
Sabah	226
Sarawak	195
FT Labuan	16
Total	2,186

Source: Medical Practice Division, MOH

POLICY AND STRATEGIC PLANNING

Table 6.8
Academic Qualification of AMO for Year 2022

Details	Total
Total numbers of Registered AMO	29,104
Total numbers of AMO (Government)	23,401
Total numbers of AMO (Private)	5,703
Post Basic	5,944
Bachelor Degree	578
Master Degree	97
Doctorate (PhD)	11
Without Post Basic	17,457
Post Basic Graduates per year (Average)	700

Source: Medical Practice Division, MOH

Table 6.9
Human Resource of Healthcare Assistant for Year 2022

Grade	Filled	Vacant	Total Post
U 16	88	15	103
U 14	1,005	133	1,138
U 11/14	25,907	2,491	28,398
Total	27,000	2,639	29,639

Source: Medical Practice Division, MOH

ESTATE HOSPITAL ASSISTANT'S BOARD (LPHE)

Table 6.10
Human Resources of LPHE for Year 2022

State	Total Farm	Total Clinic	Estate Hospital Assistant's	Assistant Medical Officer
Perlis	0	0	0	0
Kedah	27	27	5	2
Pulau Pinang	1	1	0	0

State	Total Farm	Total Clinic	Estate Hospital Assistant's	Assistant Medical Officer
Perak	65	57	17	12
Selangor	85	38	4	7
Negeri Sembilan	8	8	5	11
Melaka	7	7	1	6
Johor	100	98	29	28
Pahang	16	13	4	9
Terengganu	21	10	1	1
Kelantan	10	2	2	2
Sarawak	38	38	0	8
Sabah	1,570	240	269	20
Total	1,984	539	391	112

Source: Medical Practice Division, MOH

MALAYSIAN OPTICAL COUNCIL (MOC)

MOC is a regulatory body responsible in registering optometrists and opticians, issuing Annual Practising Certificate (APC) for optometrists and opticians and monitoring optometry services and practices under provisions of Optical Act 1991. MOC is also involved in evaluation and recognition of the Optometry and Opticianry Program provided by Higher Education Providers (HEP) in Malaysia.

RECOGNITION, OPERATION AND FINANCE SECTOR

This sector is responsible in recognition of the Optometry/Opticianry Programme and APEL (C) Assessment for registered opticians.

Assessment of Program Accreditation Monitoring

Assessment of program accreditation monitoring has been carried out on the three (3) programmes as shown in Figure 6.5.

Figure 6.5
Programme Accreditation Monitoring for Year 2022



Source: Malaysian Optical Council, MOH

DEVELOPMENT OF STANDARDS AND GUIDELINES

Programme Standard Documents and Guidelines of Optometry/Opticianry Programmes Accreditation Approval Version 2.0 based on Code of Practice Programme Accreditation (COPPA) 2.0 and Malaysian Qualification Framework (MQF) 2.0 has been approved in 80th MOC meeting. These documents will be distributed to all HEPs offering optometry/ opticianry programmes in Malaysia.

Assessment of Accreditation of Prior Experiential Learning for Credit Award (APEL C)

Some activities related to APEL (C) were held as follow:

Table 6.11
APEL (C) Assessment Activities for Year 2022

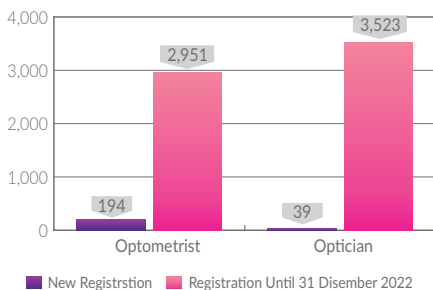
Activities	Date	Target
Workshop on APEL (C) [Credit Award] – Practice Based Assessment	3 March 2022	APEL (C) MOC Committee
Engagement session regarding implementation of APEL (C) MOC	18 October 2022	Registered Opticians
APEL (C) portfolio filling briefing session	11 May 2022	13 APEL (C) candidates

Source: Malaysian Optical Council, MOH

REGISTRATION SECTOR

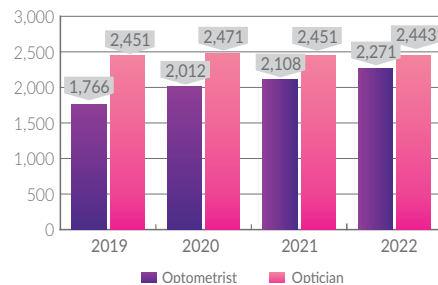
MOC Evaluation Committee (JKP) is responsible in matters related to registration and annual practicing certificate for optometrists and opticians (optometry practitioners) in Malaysia. **Figure 6.6** shows number of optometrists and opticians registered for the year 2022. **Figure 6.7** shows total APC issuance from year 2019 to 2022.

Figure 6.6
Number of Registered Optometrists & Opticians for Year 2022



Source: Malaysian Optical Council, MOH

Figure 6.7
Total APC Issuance from Year 2019-2022



Professional Qualifying Assessment (PQA)

MOC with the Pertubuhan Akademi Optometri Malaysia have successfully handled the PQA to register opticianry programme graduates who have qualifications that are not listed in the First Schedule, Optical Act 1991 as a registered optician. The PQA was held at the UKM Optometry Clinic on 18 June 2022 involving three (3) candidates.

Clients Day

Clients Day was held on 24 May 2022, 26 July 2022 and 30 August 2022 to give the opportunity to practitioners to come to the MOC office, make an APC application and get the APC certificate on the same day.

ETHICS AND ACT SECTOR

This sector is responsible for the drafting of the Optometry Bill, amendment of Schedule of Optical Act 1991 and Optical Regulations 1994, handling practitioner-related and MOC services-related complaints and conducting audits surveillance on optometry practitioners.

Optometry Bill Draft

Regulatory Impact Statement (RIS) for the Optometry Bill has been approved by MPC through a letter dated 2 November 2022. The bill then will be sent to PUU and AGC for review.

Complaint

MOC accepts complaints from various channels including through e-mail (eaduan.moc@moh.gov.my), letters and phone calls. Total complaints received and handled by MOC are as in **Figure 6.8**.

Image 6.8
PQA in UKM Optometry Clinic



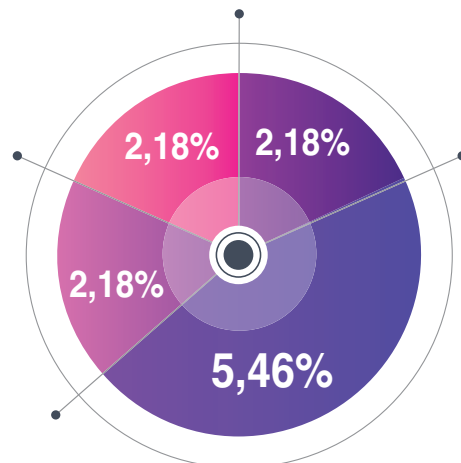
Source: Malaysian Optical Council, MOH

Image 6.9
Clients Day



Source: Malaysian Optical Council, MOH

Figure 6.8
Number of Complaints Received by Category for Year 2022



- Online Contact Lens sale
- Violation of the code of practice
- Sales in non-optical premises
- No registered practitioner

Source: Malaysian Optical Council, MOH

Optics Surveillance Audit

Optics Surveillance Audit is an audit conducted on registered optometrists and opticians practicing optometry in optical premises in Malaysia. The objective is to assess their level of compliance with Optical Act 1991 and Code of Practice. List of audited registered optometrists and opticians as in **Table 6.12**.

Table 6.12
List of Audited Optometrists and Opticians for Year 2022

Date	Place	Number of audited	
		Optometrists	Opticians
10 March 2022	Cyberjaya	11	3
24 March 2022	Bangi Phase 1	15	7
19 July 2022	Bangi Phase 2	21	2
27 July 2022	Sepang	8	6
25 August 2022	Section 7, Shah Alam	19	5
13 October 2022	Putrajaya	1	0

Source: Malaysian Optical Council, MOH

Engagement Sessions with Other Agencies

In an effort to empower the enforcement activities on optical premises and registered optometry practitioners in Malaysia, an engagement session was held with the Enforcement Division, KPDNHEP on 13 September 2022 and 19 October 2022 and with Local Authority (PBT) Section, Economic Planning Unit (UPEN), Selangor on 27 October 2022.

Image 6.10
KPDNHEP Enforcement Division



Image 6.11
PBT Section, UPEN Selangor



Source: Malaysian Optical Council, MOH

COMPETENCY SECTOR

Contact Lens Examination for Registered Opticians

Section 30 of the Optical Act 1991 provides a permit to prescribe and dispense contact lenses for registered opticians who have passed the exam held by the council. The examination was conducted on 31 May 2022 & 1 June 2022 at the SEGi University, Kota Damansara, Petaling Jaya. A total of 16 registered opticians attempted the practical contact lens exam and only three (3) candidates passed. The permits to prescribe and dispense contact lenses have been issued to registered opticians who have passed the exam.

Continuing Professional Development (CPD)

To ensure systematic lifelong learning and professional development among registered optometrists and opticians, MOC actively encourages all optometry practitioners to register and actively claim CPD points in the myCPD 2.0 system. The number of optometry practitioners registered in the myCPD system and the number of programmes and events that have been approved throughout the year 2022 are shown in **Figures 6.9** and **6.10**.

Figure 6.9
Number of Optometry Practitioners Registered in myCPD 2.0 System for Year 2022

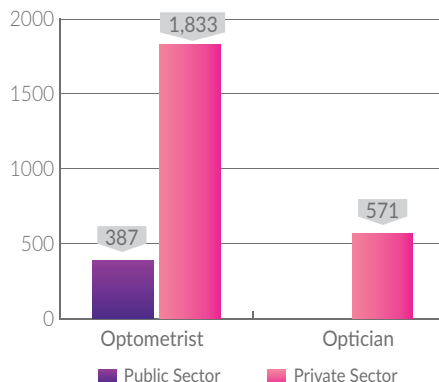
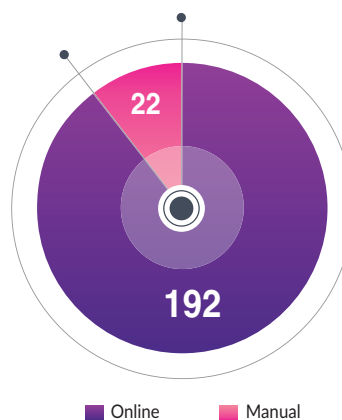


Figure 6.10
Total Approved Programme for Year 2022



Source: Malaysian Optical Council, MOH

ALLIED HEALTH SCIENCES DIVISION (AHSD)

AHSD is responsible for 29 Allied Health Professions (AHP) in MOH. This division is accountable for managing a workforce of 30,000 individuals from clinical, laboratory and public health services. Its core responsibilities include developing policies for health services, fostering career growth, promoting research and quality activities, determining training and competency standards as well as addressing the health resource needs.

ALLIED HEALTH PROFESSIONS ACT 2016 [ACT 774]

ALLIED HEALTH PROFESSIONS (AMENDMENT OF SECOND SCHEDULE) 2022

The Allied Health Professions (Amendment of Second Schedule) 2022 Order became effective on 24 March 2022. The updated Second Schedule [2022] now includes 16 regulated AHP, compared to the original list of 23 professions. This reduction in the number of professions resulted from the Malaysian Allied Health Professions Council's (MAHPC) deliberate decision to remove two (2) and combine six (6) professions under the Medical Laboratory Scientist title. The profession list is as shown in **Table 6.13**.

Table 6.13
Profession Lists Before and After Amendment of Second Schedule Allied Health Profession Act 774

Before Amendment	After Amendment
1. Audiologist	1. Audiologist
2. Dietitian	2. Dietitian
3. Entomologist (Public Health)	3. Entomologist (Public Health)
4. Physiotherapist	4. Physiotherapist
5. Medical Physicist	5. Medical Physicist
6. Nutritionist	6. Nutritionist
7. Clinical Psychologist	7. Clinical Psychologist
8. Clinical Scientist (Biochemist)	8. Medical Laboratory Scientist
9. Clinical Scientist (Biomedical)	9. Occupational Therapist
10. Clinical Scientist (Embryologist)	10. Speech-Language Therapist
11. Clinical Scientist (Medical Geneticist)	11. Radiation Therapist
12. Clinical Scientist (Microbiologist)	12. Diagnostic Radiographer
13. Occupational Therapist	13. Medical Laboratory Technologist
14. Speech-Language Therapist	14. Environmental Health Officer
15. Radiation Therapist	15. Health Education Officer
16. Diagnostic Radiographer	16. Dental Technologist
17. Medical Laboratory Technologist	
18. Dental Technologist	
19. Environmental Health Officer	
20. Health Education Officer	
21. Food Service Officer (Healthcare)	
22. Forensic Science Officer	
23. Medical Social Officer	

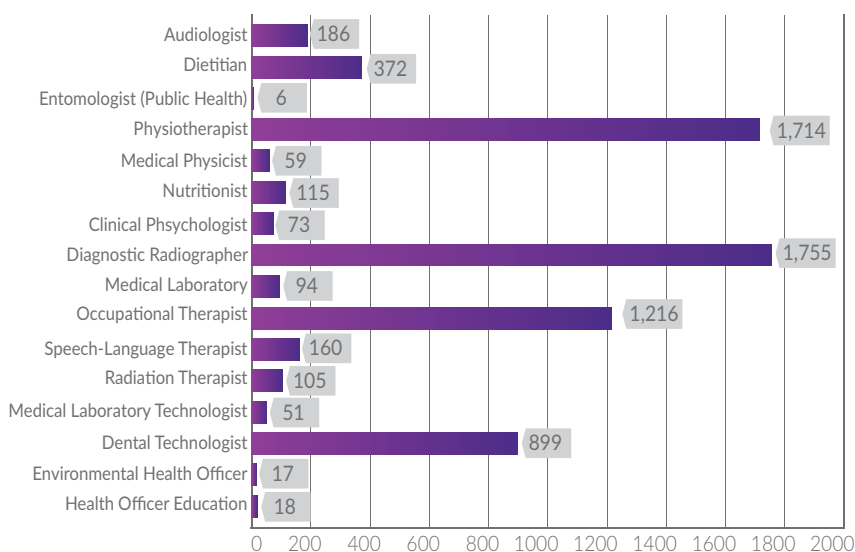
Source: Allied Health Sciences Division, MOH

REGISTRATION OF ALLIED HEALTH PRACTITIONERS

MAHPC initiated the registration process for AHP on 1 July 2022. This registration process applies to practitioners from both the public and private sectors and institutions of higher learning. A transitional period for registration has been established from 1 July 2022 to 30 June 2025, during which a registration rotation schedule will be implemented to ensure a seamless registration process.

The registration process for AHP is entirely conducted online using the Malaysian Healthcare Practitioners' System (MHPS). As of 31 December 2022, 6,840 practitioners had successfully registered, as indicated in **Figure 6.11**.

Figure 6.11
Registered Allied Health Practitioners for Year 2022



Source: Allied Health Sciences Division, MOH

The Allied Health Professions Regulations (Fees) 2020 prescribe the fees for registering AHP. The fee for the registration application is set at RM50.00, while the fee for issuing a certificate of registration is RM100.00. The Total revenue generated from these fees, as of 31 December 2022, is indicated in **Table 6.14**.

Table 6.14
Revenue of AHP Registration for Year 2022

Types of Fee	RM
Application for registration as an allied health practitioner	379,500.00
Issuance of certificate of registration	684,400.00
Total	1,063,900.00

Source: Allied Health Sciences Division, MOH

ENFORCEMENT OF ACT 774

VISITS TO THE PREMISES PROVIDING ALLIED HEALTH SERVICES

The Enforcement Section of the AHP Council conducted several visits to 15 premises that offer services related to Allied Health as shown in **Table 6.15**. The purposes of these visits were to raise awareness among practitioners about the provisions of Act 774, specifically regarding the offences (Part VI) and the enforcement measures (Part VII).

Table 6.15
Visit to Premises Provide Allied Health Services

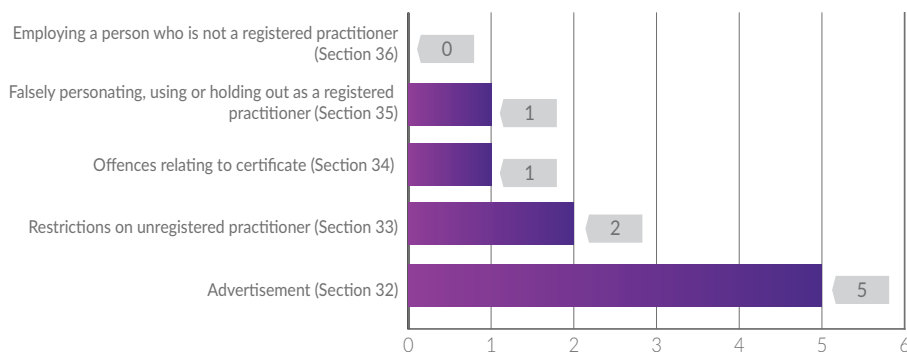
Zone	Area	No. of Premise
Central Zone	Klang Valley	3
Southern Zone	Johor Bahru	5
Eastern Zone	Kelantan	7

Source: Allied Health Sciences Division, MOH

COMPLAINTS

The Council received nine (9) complaints regarding offences under the Act 774 throughout the year 2022 as shown in **Figure 6.12**.

Figure 6.12
Offences under the Act 774 for Year 2022



Source: Allied Health Sciences Division, MOH

NEW KEY PERFORMANCE INDICATORS (KPI) OF AHSD

Starting year 2022, the new KPI for the Director of the AHSD is the Percentage of Registration of AHP under the Malaysian Allied Health Professions Act 2016 [**Act 774**] working at MOH facilities. Despite the online registration portal for AHP only being made available in July 2022, the results were remarkably positive, with a registration rate of 29.5 per cent, surpassing the set target of 5.0 per cent.

Furthermore, the AHSD Senior Deputy Director was tasked with monitoring four (4) MOH Tier 3 KPIs throughout the year 2022, as depicted in **Table 6.17**.

Table 6.17
MOH Tier 3 KPIs for Allied Health Senior Deputy Director

Indicator	Target (%)	Achievement (%)
Production of Staffing Analysis for Allied Health Professions	80	81
Assessment of Allied Health Services Equipment Status in Cluster Hospital Facilities	100	100
Development of a Training Module for the Care of Elderly Dysphagia Patients in Multidisciplinary Collaboration	100	100
Production of Guidelines for Allied Health Services in Standalone Health Facilities	100	100

Source: Allied Health Sciences Division, MOH

PROJECTS UNDER THE WHO PROGRAMME BUDGET

The WHO has shortlisted two (2) high-impact projects to be included in year 2022 to 2023 budget:

- i. Development of Credentialing, Competency and Capability Framework for Allied Health Professions in MOH; and
- ii. Occupational Engagement Activities Among the Elderly to Promote Health and Well-Being in the Community.

The outcome of these projects will contribute to formulating new policies related to career development and allied health services in Malaysia. The AHSD had also completed projects under the allocation of the WHO Programme Budget 2020 to 2021, resulting in the production of technical reports on an effective regulatory framework for allied health professionals in the country.

GUIDELINES FOR STANDALONE PRIVATE ALLIED HEALTH CARE FACILITIES AND SERVICES

The Guidelines for Standalone Private Allied Health Care Facilities and Services was developed in year 2022 for providing direction for individuals interested in offering standalone private allied health care facilities and services. These guidelines are structured into three (3) sections includes infacility standards, service standards (general and specific) and personnel standards. The guidelines specify service standards for six (6) AHP: Audiology, Speech-Language Therapy, Physiotherapy, Occupational Therapy, Counseling and Clinical Psychology.

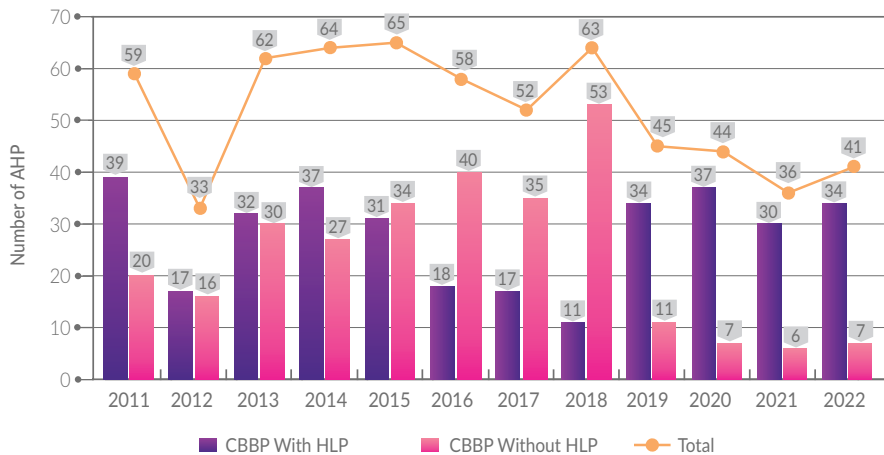
CREDENTIALING FOR AHP

The AHSD manages the credentialing activities for nine (9) AHPs including Physiotherapy, Occupational Therapy, Diagnostic Radiology, Radiation Therapy, Dental Technologist, Optometrist, Dietetics, Speech Language Therapy and Audiologist. In year 2022, the Sub-Specialty Committee (SSC) Meeting and the National Credentialing Committee Meeting (NCC), MOH successfully granted credentials to 1,243 AHPs.

TRAINING OF AHP

In year 2022, the AHSD conducted a comprehensive orientation programme to advance the services provided by AHPs. The programme had a total attendance of 882 participants from 14 different professions. AHSD successfully coordinated 27 courses involving 1,701 participants with a budget of RM134,496.00 for capacity building in year 2022. Furthermore, 41 AHPs successfully pursued their Master's and PhD. degrees, either locally or abroad as shown in **Figure 6.13**.

Figure 6.13
AHP Further Studies Trend for Year 2011 to 2022



Source: Training Management Division, MOH

STUDENTS' PRACTICAL AT MOH FACILITIES

In year 2022, 46 Higher Learning Institutions (11 Public Higher Learning Institutions and 35 Private Higher Learning Institutions) had signed Memorandum of Agreement with the Government of Malaysia for student training at MOH facilities. There are 116 Allied Health Programmes and 541 MOH facilities approved by the *Jawatankuasa Penggunaan Fasilitas* (JKPF), MOH.

NURSING DIVISION

The Nursing Division is responsible for planning the development of nursing services in line with the aspirations of the MOH and managing the nursing fraternity in a constructive and productive manner to maintain nursing standards.

There are two (2) branches namely the Policy & Practice Branch and the Regulatory Branch which are divided into five (5) sectors and a secretariat. These sectors are the Practice Sector (Hospital and Public Health), Quality & Training Sector, Registration & Enforcement Sector, Standards & Accreditation Sector, Corporate Management Sector and the Secretariat of the Malaysian Nursing Board & Malaysian Midwifery Board.

NURSING POLICY AND PRACTICE BRANCH

QUALITY AND TRAINING SECTOR

Under this sector there are three (3) indicators that are monitored for the Nursing Division which are the Director's KPI, Quality Objectives and Customer Charter. As for the national level, three (3) indicators are monitored, namely the National Nursing Audit (NNA) for Hospital and Public Health facilities, National Operating Room Audit (NORNA) and National Nursing Indicator Approach (NNIA).

QUALITY AND TRAINING UNIT

The Director of Nursing has six (6) KPIs and has met all of the targets as shown in **Table 6.18**.

Table 6.18
KPI Achievements for Director of Nursing

<i>Indikator</i>	<i>Sasaran (%)</i>	<i>Pencapaian (%)</i>
<i>Peratus jururawat berdaftar yang mempunyai sijil pengkhususan pos basik (Sijil/ Diploma Lanjutan) ditempatkan mengikut bidang pengkhususan.</i>	≥ 90	98
<i>Peratus perakuan pengamalan jururawat tahunan dikeluarkan sebelum atau pada 31 Disember tahun semasa.</i>	100	100
<i>Peratus melaksanakan dua belas (12) lawatan pemantauan setahun, bagi keakuran penggunaan fasiliti KKM yang digunapakai untuk latihamal program kejururawatan.</i>	100	100
<i>Peratus pesakit yang tidak jatuh dalam tempoh rawatan di dalam wad semasa berada di hospital.</i>	≥ 95	100
<i>Peratus pesakit dalam (inpatients) dengan intravenous (IV) cannulation bebas dari insiden thrombophlebitis.</i>	≥ 90	100
<i>Peratus sijil credentialing dan lencana bagi permohonan baharu dikeluarkan dalam tempoh tiga puluh (30) hari bekerja selepas diperakukan dalam mesyuarat National Credentialing Committee (NCC).</i>	≥ 80	100

Source: Nursing Division, MOH

Nursing standards and competencies of nurses in hospital are measured using Medical NNA which has five (5) elements as shown in **Table 6.19**.

Table 6.19
Achievement of Medical NNA for Year 2022

<i>Elemen</i>	<i>Sasaran (%)</i>	<i>Pencapaian (%)</i>
<i>Administration of oral medication</i>	100	100
<i>Administration of intravenous (IV) infusion</i>	> 90	99
<i>Aseptic wound dressing</i>	90	96
<i>Administration of blood/ blood component transfusion</i>	100	100
<i>Pain as 5th vital sign</i>	90	96

Source: Nursing Division, MOH

12 elements of Public Health NNA for year 2022 were audited and achieved as shown in **Table 6.20**.

Table 6.20
Achievement of Public Health NNA for Year 2022

<i>Elemen</i>	<i>Sasaran (%)</i>	<i>Pencapaian (%)</i>
<i>Pengendalian kes risiko ibu hamil – Anemia.</i>	85	91
<i>Pengendalian kes risiko ibu hamil – PIH.</i>	85	94
<i>Pengendalian kes risiko ibu hamil – GDM.</i>	85	91
<i>Pemeriksaan fizikal dan palpasi abdomen ibu hamil.</i>	90	98
<i>Jagaan perawatan ibu dan bayi lepas bersalin – Ibu.</i>	95	99
<i>Jagaan perawatan ibu dan bayi lepas bersalin – Anak.</i>	95	100
<i>Pemberian imunisasi melalui suntikan.</i>	100	99
<i>Pengurusan sistem rangkaian sejuk.</i>	100	100
<i>Pertumbuhan dan perkembangan dalam kalangan bayi dan kanak-kanak.</i>	95	99
<i>Pengurusan bayi dan kanak-kanak berumur 6 bulan hingga 6 tahun yang mengalami masalah kekurangan makanan dan tidak menerima bantuan.</i>	80	87
<i>Kepimpinan dan pentadbiran perkhidmatan kejururawatan.</i>	85	99
<i>Pengurusan sumber manusia di peringkat penjagaan kesihatan primer.</i>	85	98

Source: Nursing Division, MOH

In order to maintain safe patient care, the indicators that are being monitored under the NNIA are fall, thrombophlebitis and pressure ulcer. All indicators have achieved standards set for the year 2022 as shown in **Table 6.21**.

Table 6.21
NNIA Achievement for Year 2022

Indikator	Sasaran (%)	Pencapaian (%)
Incidence of patient fall.	≤ 4	0.3
Incidence of thrombophlebitis among in patient with cannulation.	≤ 0.5	0.03
Incidence of pressure sores in non- ambulatory patients.	≤ 2.1	0.9

Source: Nursing Division, MOH

NURSING PROFESSIONAL DEVELOPMENT UNIT

For the year 2022, a total of 20 courses were organised by the Nursing Division and eight (8) courses organised by external agencies such as National Institute of Public Administration (INTAN) and others. This unit as a Regulatory Body in awarding CPD points for organisers who conduct courses. For year 2022, this unit had received 2,931 applications from government and private sectors. A total of 2,100 (72 per cent) programmes were approved meanwhile 831 (28 per cent) were rejected.

CREDENTIALING AND PRIVILEGING (C&P) UNIT

There are 12 disciplines that provide credentialing certificates, while the privileging certificate is given by the privileging committee at the hospital level. The highest number of credentialing certificates for the year 2022 was for Intensive Care (468) and followed by Paediatrics (335). Palliative and pre-hospital is a newly introduced discipline in 2019 and applications need to be improved. Credentialing certificates are awarded every two (2) years. The highest recredentialing approval is the Intensive Care Unit followed by Peri-Operative and Haemodialysis for year 2022.

COMPLAINTS AND FEEDBACK UNIT

The Nursing Division has taken the initiative to improve communication and attitude at the facility level through monitoring, the buddy system, AKRAB program and others. Soft skill is the main cause of complaints about nurses which is 284 (38.2 per cent) followed by attitude 171 (22.9 per cent) for year 2022.

NURSING RESEARCH UNIT

The activity of the Nursing Research Unit for year 2022 as shown in **Table 6.22**.

Table 6.22
Activities of Nursing Research Unit for Year 2022

Activities	Achievement
Selection of Nursing Research Coordinators at the state/institution/ hospital level MOH.	39 nurses with Bachelor's Degree in Nursing had been appointed as coordinators.
Manuscript Writing and Publication Workshop.	Involving 40 Nursing Research Coordinators. Papers presented by HKL, Melaka, Johor and Sarawak.
Secretariat of the Scientific committee for 25 th Joint Malaysia-Singapore Nursing Conference 2022.	Seven (7) plenaries, 65 oral & 31 poster presentations.
Publication	International Nurses Day Celebration and Yearly reports for the Nursing Division

Source: Nursing Division, MOH

PRACTICE SECTOR

NURSING PRACTICE UNIT (MEDICAL AND PUBLIC HEALTH)

Monitoring and supervisory visits at 41 facilities including hospitals, public health and outreach program were done in year 2022. This unit places great emphasis on SOPs, guidelines and MOH policies while conducting clinical monitoring and supervision for patient and healthcare worker safety as shown in **Image 6.12**.

Image 6.12
Monitoring and Supervisory Visits by Practice Sector for Year 2022



Source: Nursing Division, MOH

REGULATORY BRANCH

REGISTRATION AND ENFORCEMENT SECTOR

REGISTRATION AND ANNUAL PRACTISING CERTIFICATE (APC) UNIT

In year 2022, a total of 4,864 nurses were registered with Malaysia Nursing Board consist of 4,219 Registered Nurses, 60 Assistant Nurse, 70 Public Health Nurse and 13 Mental Health Nurse. Meanwhile 502 Midwives Part 1 were registered with Malaysia Midwifery Board. A total number of 136,166 were given APC of which 114,769 Registered Nurse, 20,282 Community Nurse and 1,115 Assistant Nurse.

TEMPORARY PRACTICING CERTIFICATE (TPC) REGISTRATION AND INTERNATIONAL RELATIONS UNIT

THE 35TH ASEAN JOINT COORDINATING COMMITTEE OF NURSING (AJCCN) AND 25TH JOINT MALAYSIA-SINGAPORE NURSING CONFERENCE (MSNC)

The 35th AJCCN meeting chaired by Brunei Darussalam virtually on 28 September 2022 and was attended by all representatives from ASEAN Member States (AMS), except Laos PDR. Thailand has presented regarding the strengthening of the Nursing Curriculum and learning outcomes. Brunei Darussalam presented guidelines and standards for nursing education. Malaysia presented the nursing research at the 25th Joint Malaysia-Singapore Nursing Conference (MSNC) which was held physically on 22 to 24 September 2022 in Johor Bahru, attended by 523 nurses from Malaysia, Indonesia, Myanmar and Singapore. In addition, Singapore and Brunei Darussalam discussed challenges and ways to overcome obstacles during the COVID-19 pandemic.

STANDARDS AND ACCREDITATION SECTOR

NURSING CURRICULUM ASSESSMENT UNIT

The number of nursing training institutions and accreditation assessment visits for year 2022 as shown in **Table 6.23**.

Table 6.23
Nursing Training Institutions and Accreditation Assessment Visits for Year 2022

Institutes	Facilities	Visit
Ministry of Health Training Institute (ILKKM)	13	3
Public Universities (UA)	11	4
Private Higher Education Institution (IPTS)	49	23
Ministry of Defence	1	0
Total	74	30

Source: Nursing Division, MOH

EXAMINATION UNIT

Total of 5,476 candidates in year 2022 had completed the examinations in which 87.1 per cent of candidates had passed while the remaining 12.9 per cent were fail.

MOH FACILITY UTILISATION MANAGEMENT FOR INSTITUTES OF HIGHER EDUCATION UNIT

This unit carries out compliance monitoring of the usage of MOH facilities for the purpose of placing practical nursing training students or HEP trainers. All monitoring of 18 MOH hospitals and public health facilities was conducted virtually and 56 HEP had signed MoA with MOH for the clinical practice.

CORPORATE MANAGEMENT SECTOR

NURSING HUMAN RESOURCE PLANNING UNIT

In year 2022, 1,678 nurses were given permanent positions, while 1,510 nurses were given contracts.

ADMINISTRATION AND FINANCE UNIT

For year 2022, the Administration and Finance Unit has achieved the HRMIS target set according to the guidelines and regulations.

REVENUE REPORT FOR 2022

The cumulative revenue received for the year 2022 was RM1,157,412.40 with total receipts of 13,905 from registration, examination and certificate applications.

INFORMATION TECHNOLOGY UNIT

Figure 6.14

Activities and Achievements of Information Technology Unit for Year 2022



Source: Nursing Division, MOH

TRADITIONAL AND COMPLEMENTARY MEDICINE DIVISION (T&CMD)

T&CMD which established in year 2004, is committed in complying with existing legislations, meeting customers' needs and implement continuous improvements on the effectiveness and efficiency of control systems and standards in the field of traditional and complementary medicine.

COLLABORATION BETWEEN THE GOVERNMENT OF MALAYSIA AND THE REPUBLIC OF INDIA IN THE FIELD OF TRADITIONAL MEDICINE

Since the signing of the MoU between the Government Malaysia and the Republic of India on Cooperation in the Field of Traditional Systems of Medicine on 27 October 2010, the MOH received enormous support and cooperation from the Government of the Republic of India to strengthen the field of Traditional Indian Medicine (TIM) in Malaysia. The MoU has lapsed since October 2020 and is expected to be renewed in 2023.

Among the long-term collaborations between both governments are the provision of TIM services (Shirodhara, External Basti Therapy and Varmam Therapy) at the MOH hospitals by TIM practitioners and assistant practitioners deputed under the Indian Technical and Economic Cooperation (ITEC) programme since 2011. On top of providing TIM consultation and treatment, the TIM practitioners also shared their knowledge and experiences at various conferences, seminars and courses. They also served as subject matter experts in the development of guidelines on education and training as well as practice in TIM.

Following the end of the deputation period of the TIM practitioners, the Varmam therapy at Hospital Sungai Buloh, the Shirodhara and External Basti Therapy at Hospital Rehabilitasi Cheras and Hospital Port Dickson have been put on hold since July and October 2021 respectively. The MOH is in the process of renewing the MoU and matters related to the ITEC program with the Ministry of Ayush and the Indian High Commission to Malaysia so that applications for the deputation of new TIM practitioners and assistant practitioners can proceed in the near future.

The Government of the Republic of India offers the AYUSH Scholarship Scheme for interested students to further their studies in the field of TIM at universities in India. This scheme has benefited 16 Malaysian students as of 2022.

The 7th Bilateral Technical Meeting (BTM) on Cooperation in the Field of Traditional Systems of Medicine Between the Government of the Republic of India and Malaysia was held on 9 December 2022 in Goa, India. The annual BTM meeting is hosted alternately by India and Malaysia. Among the items discussed in the 7th BTM were existing collaborations and proposals for new areas of collaboration in the practice, education and training, research, planning for MoU renewal and many others. Both counterparts have agreed to collaborate in activities such as organising workshops relating to the development of a Pharmacopoeia Commission for TIM and Homeopathy, approaches of TIM in disease management and prevention as well as technology transfer on the development of the herbal industry. The Indian counterpart has also agreed to be a source of reference for matters regarding TIM research.

Image 6.13
7th BTM on Cooperation in the Field of Traditional Systems of Medicine



Source: Traditional and Complementary Medicine Division, MOH

COURTESY CALL BY THE SECRETARY, MINISTRY OF AYUSH, REPUBLIC OF INDIA

Secretary-General of MOH has received a courtesy call from Secretary of Ministry of Ayush, accompanied by High Commissioner (HICOM) of India to Malaysia on 17 November 2022. The purpose of this session is to discuss the cooperation in the field of traditional systems of medicine between the two governments. The visit is a part of the Secretary, Ministry of Ayush's schedule in Malaysia to attend the WHO ICD-11 Traditional Medicine Chapter Module 2 Alpha Draft Review Workshop organised by the WHO in Kuala Lumpur.

The MOH representatives including T&CMD, Policy and International Relations Division, and National Pharmaceutical Regulatory Agency (NPRA) had attended the session. The matters discussed were the collaboration in the field of research, traditional medicine product registration and the renewal of MoU in traditional systems of medicine.

Image 6.14
Courtesy Call by The Secretary of Ministry of Ayush



Guestbook Signing Session



Souvenir Exchange Session

Source: Traditional and Complementary Medicine Division, MOH

COLLABORATION BETWEEN THE GOVERNMENT OF MALAYSIA AND THE PEOPLE'S REPUBLIC OF CHINA (PRC) IN THE FIELD OF TRADITIONAL MEDICINE

Malaysia and PRC had signed the MoU on the Cooperation in Traditional Medicine which is an extension of the first MoU signed previously on 7 November 2011. The MoU was signed by the Minister of Health Malaysia and the Commissioner of National Administration of Traditional Chinese Medicine (NATCM), PRC in a ceremony that was conducted virtually on 31 March 2022.

The MoU commits to encourage, facilitate and promote cooperation between both the countries in traditional medicine, focusing on the areas of practice, medicinal materials and products, education and training and also in research and development. This in turn creates an effective communication network between Malaysia and China for the exchange of technical, scientific and regulatory information related to traditional medicine, especially traditional Chinese medicine.

Following the MoU signing ceremony, the Fourth BTM between the MOH and the NATCM was held and led by the Director General of MOH and the Director General of the International Cooperation Department, NATCM. The meeting discussed the implementation of the memorandum on the exchange of expert and training opportunities in traditional Chinese medicine in selected hospitals and universities in China, the development of standards for traditional medical products and practices and improves the quality and safety of services in government hospitals within the targeted timelines from year 2022 to 2027. The proposed action plans will strengthen the knowledge and skills of the parties involved as well as further strengthening the relationship.

The two countries are collaborating closely and sharing information in the field of traditional medicine in virtual programs organised by the PRC in year 2022, including:

- i. International Training Workshop on Standard, Certification and Accreditation of Traditional Chinese Medicine (TCM) for ASEAN Countries; and
- ii. 7th ASEAN-China Forum on Traditional Medicine.

Image 6.15
Virtual Signing Ceremony of the MoU between Malaysia and PRC



Source: Traditional and Complementary Medicine Division, MOH

Image 6.16
Collaboration between Malaysia and PRC



Fourth Bilateral Technical Meeting between the MOH and the NATCM



Director of T&CMD delivered an opening speech virtually at the 7th ASEAN-China Forum on Traditional Medicine

Source: Traditional and Complementary Medicine Division, MOH

T&CM CAPACITY BUILDING ACTIVITIES UNDER THE WHO COLLABORATING CENTRE (WHOCC) FOR TRADITIONAL, COMPLEMENTARY AND INTEGRATIVE MEDICINE

T&CMD was designated as a WHOCC for Traditional, Complementary and Integrative Medicine on 29 June 2020 for a period of four (4) years. T&CMD had conducted two (2) capacity building activities in year 2022 for the WHO Member States using online platform, considering the COVID-19 pandemic situation. Both activities were well received and attended by local and international participants. Among the activities were:

Intellectual Property (IP) Awareness Related to Knowledge in Traditional Herbs and Medicine Practices Webinar was conducted on 28 September 2022 via Facebook Live. The main objectives of this webinar are to increase awareness and knowledge related to IP and the latest research in the field of indigenous herbs, as well as creating opportunities for collaboration or networking with practitioners, agencies and research institutions involved. As of December 2022, this video has garnered up to 1,100 views.

A self-paced *Online Course on the Development of Regulatory Framework for Traditional and Complementary Medicine Practices and Practitioners in Malaysia* was conducted via Google Classroom from 12 to 25 September 2022. The objectives are to share Malaysia's experience and knowledge in the development process of key documents and approaches to prepare for the registration of practitioners that involve various recognised practice areas as provided for under the Traditional & Complementary Medicine (T&CM) Act 2016. A Total of 206 participants have successfully completed the course.

Image 6.17
T&CM Capacity Building Activities



Source: Traditional and Complementary Medicine Division, MOH

4TH FORUM OF WHOCC IN THE WESTERN PACIFIC REGION (WPR) AND INFORMAL CONSULTATION ON THE DEVELOPMENT OF A NEW ASIA PACIFIC HEALTH SECURITY ACTION FRAMEWORK (AP-HSAF)

T&CMD had attended the 4th Forum of WHOCC in the WPR and Informal Consultation on the Development of a New AP-HSAF at Siem Reap, Cambodia on 28 to 30 November 2022. The WHOCC Forum has been conducted every two (2) years since 2014 for the purpose of fostering an effective partnership between the WHO and the WHOCC.

The main objective of the 4th Regional Forum for WHOCC is to identify effective and strategic collaboration between WHO and WHOCC in the FTR for the implementation of the *For the Future* vision. Four (4) thematic priorities are health security including antimicrobial resistance, non-communicable diseases and aging, climate change, environment and health as well as reaching the unreached.

Following the forum, an Outcome Statement of the 4th Regional Forum of WHOCCs in the Western Pacific was prepared and agreed upon by the participants. The outcome of the discussions will serve as inputs into the first draft of the implementation plan to operationalize the Forum's Outcome Statement.

Image 6.18
4th Forum of WHOCC in the FTR and Informal Consultation on the Development of a New AP-HSAF



Source: Traditional and Complementary Medicine Division, MOH

PILOT PROJECT ON THE PROVISION OF T&CM SERVICES

A public-private partnership pilot project on the provision of T&CM services by Malaysia Holistic and Herbal Organisation (MHHO), a non-governmental organization was developed by the MOH at the KK Jinjang as one of the initiatives to integrate T&CM services into primary health care level. This project was implemented with the aim of developing, implementing and evaluating the public-private partnership model developed.

The MoA for this pilot project was signed on 28 November 2020 where the implementation period of the project was set for two (2) years from 1 January 2020 to 31 December 2022. However, due to the COVID-19 situation which caused a delay in the project implementation, the subsequent data collection and analysis process has also been affected. A policy decision was made to extend the MoA period for one (1) year to ensure that this project can run smoothly, so that sufficient data collection can be done before it is presented to the higher management of MOH.

Below are activities organised under this collaboration:

Workshop on Implementation of the Pilot Project between MHHO and KK Jinjang in the Provision of T&CM Services (Second Series) was held on 4 July 2022. Participation in the workshop is one (1) of the requirements MHHO practitioners and volunteers must meet before being allowed to provide services in the pilot project. The objective of the workshop was to train MHHO members on the work procedures in the implementation of this pilot project, specifically in the delivery of T&CM services according to the guidelines and SOP that have been set. The workshop was attended by 57 MHHO members and nine (9) MOH officers.

Appreciation Ceremony and Presentation of Certificates to MHHO Members was held on 20 October 2022. The ceremony was attended by representatives from BPTK, PKD Kepong and KK Jinjang. The objective of the ceremony was to present certificates of appreciation to the members of MHHO who were involved in this pilot project.

Signing Ceremony of the Supplementary Agreement to the MoA between the Government of Malaysia and MHHO in the Provision of T&CM Services at the KK Jinjang was held on 16 December 2022. The Director of T&CMD and a representative of MHHO had signed the Supplementary Agreement for the extension of the pilot project for one (1) year from 1 January 2022 to 31 December 2023.

Image 6.19
Pilot Project on the Provision of T&CM Services



Appreciation Ceremony and Presentation of Certificates to MHHO Members

Signing Ceremony of Supplementary Agreement to the MoA

Source: Traditional and Complementary Medicine Division, MOH

REGISTRATION OF T&CM PRACTITIONERS

Registration of practitioners in recognised practice areas with the T&CM Council has commenced since 15 March 2021 and was done according to zones starting from the Central, Northern, Southern, Eastern and Sabah & Sarawak Zones. Up to 31 December 2022, 3,995 applications as a Registered T&CM Practitioner (local) and 81 applications for TPC (foreigner) has been approved by the T&CM Council.

STATISTICS OF PRACTITIONERS REGISTERED WITH THE T&CM COUNCIL FOR YEAR 2022

2,183 applications for registration of T&CM practitioners was received by the Traditional and Complementary Medicine Council Section (T&CMCS). 2,144 applications were from local T&CM practitioners and 39 from foreign T&CM practitioners as shown in **Table 6.24**.

Table 6.24
Number of Practitioners Registered for Year 2022

Recognised Practice Area	Local Registered Practitioners	Foreign Registered Practitioners
Traditional Malay Medicine	184	0
Traditional Chinese Medicine	1,175	15
Traditional Indian Medicine	4	9

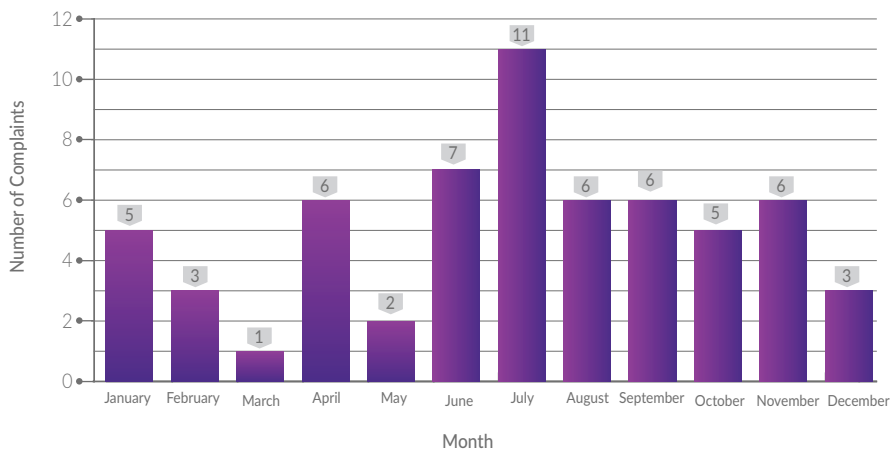
Recognised Practice Area	Local Registered Practitioners	Foreign Registered Practitioners
Homeopathy	113	1
Chiropractic	40	8
Osteopathy	0	3
Islamic Medical Practice	273	0
Total	1,789	36

Source: Traditional and Complementary Medicine Division, MOH

COMPLAINTS ON T&CM SERVICES

In year 2022, 61 complaints from various categories were received. Each complaint received will be responded to the complainant within 24 hours after receiving the complaint. The initial investigation report and response to the complainant will be issued within 14 working days as shown in **Figure 6.15**.

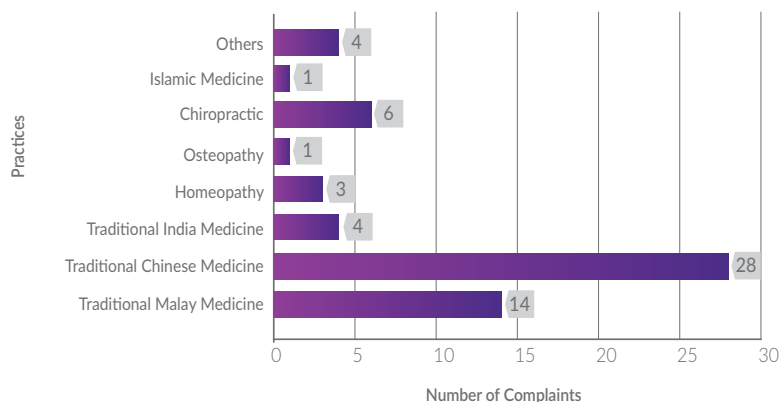
Figure 6.15
Number of Complaints for Year 2022



Source: Traditional and Complementary Medicine Division, MOH

Complaints received are categorised into eight (8) groups which comprises of seven (7) recognised practice areas which are Traditional Malay Medicine, Traditional Chinese Medicine, Traditional Indian Medicine, Homeopathy, Osteopathy, Chiropractic and Islamic Medicine and another area for Others. The breakdown of complaints received is as shown in **Figure 6.16**.

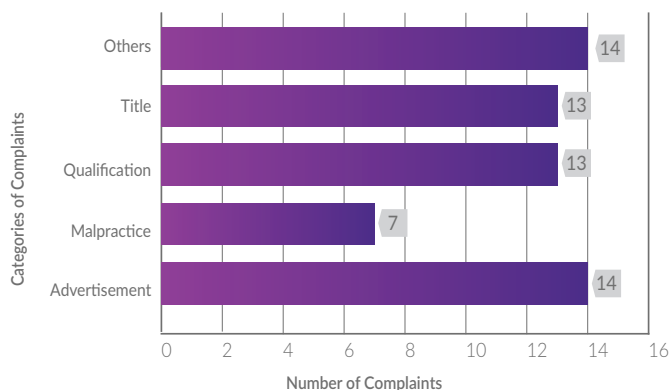
Figure 6.16
Number of Complaints by Practices for Year 2022



Source: Traditional and Complementary Medicine Division, MOH

The category of complaints involving advertisements was the highest number of complaints received at 14 complaints as shown in **Figure 6.17**. Other categories include complaints regarding fees, courses, unregistered products, unregistered medical equipment, practicing without a valid work permit, treatment charges and unlicensed premises.

Figure 6.17
Categories of Complaints for Year 2022



Source: Traditional and Complementary Medicine Division, MOH



The background of the slide is a blurred photograph of a laboratory or office setting. In the foreground, a black computer mouse and a portion of a keyboard are visible on a white desk. The background shows a computer monitor, a blue water bottle on a stand, and some white equipment, all out of focus. A dark purple gradient bar is overlaid on the middle of the image, containing the chapter title.

Chapter 7

RESEARCH & TECHNICAL SUPPORT

PLANNING DIVISION

The Planning Division focuses on several crucial activities such as the formulation of the Health Sector Transformation Plan, improving the quality of health data, implementation of health informatics standards in Malaysia as well as planning, developing and evaluating the programmes or projects as planned in Twelfth Malaysia Plan (12MP). The Planning Division consists of six (6) sections:

- i. Health Plan and Policy Planning (PDPK);
- ii. National Health Financing (NHF);
- iii. Malaysia National Health Accounts (MNHA);
- iv. Health Informatics Centre (HIC);
- v. Health Facility Planning (PFK); and
- vi. eHealth Planning.

HEALTH PLAN AND POLICY PLANNING (PDPK) SECTION

2022 STRATEGIC PLAN

The 2022 Strategic Plan (PS 2022) has been developed based on the priorities in the 12MP, MOH Strategic Plan 2021-2025 as well as the direction set by the MOH Top Management. It outlines the ministry's direction planning for the year 2022 and is translated in the form of initiatives, programmes or projects implemented. The proposal was presented during the MOH Post Cabinet Meetings.

PS 2022 has outlined six (6) areas and 15 sub-areas, 56 initiatives with 60 KPIs. All KPIs have specific targets for each quarter to be achieved. List of field and sub-field are as in **Table 7.1**.

Table 7.1
The 2022 Strategic Plan

Field	Sub-field
Prevention and control of infectious diseases	<ul style="list-style-type: none">• Special provisions for COVID-19• Strengthen the infectious disease program
Prevention and control of non-communicable diseases	<ul style="list-style-type: none">• Expansion of mental health programs• Addressing the double burden of malnutrition among children• Expansion of dental health programs
Communications for health	<ul style="list-style-type: none">• Empower health campaigns• Collaboration with various ministries and agencies
Resources for health	<ul style="list-style-type: none">• Human resources• Facilities and equipment• Funding

Field	Sub-field
Health system reform including healthcare financing	<ul style="list-style-type: none"> • Health service delivery reform • Health financing reform • Health system governance reform
Leveraging research, innovation and digital technology	<ul style="list-style-type: none"> • Research • Innovation and digital technology

Source: Planning Division, MOH

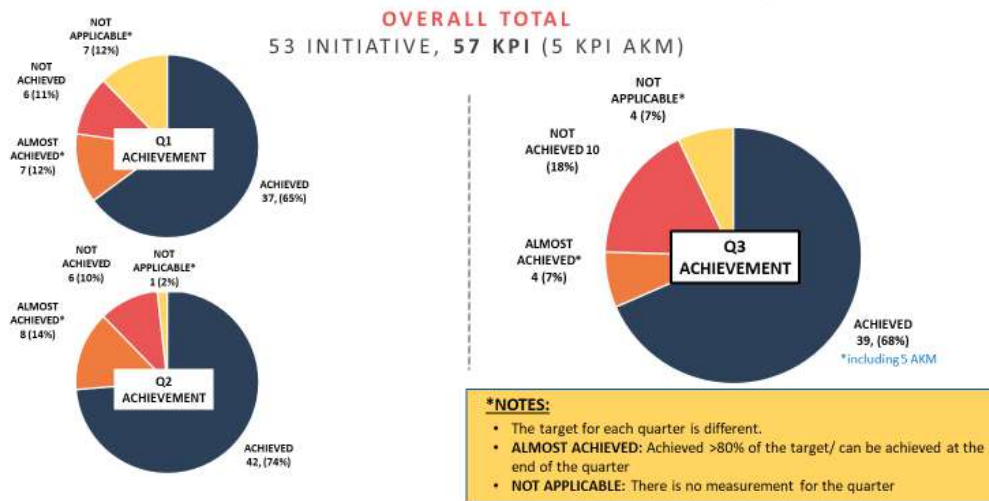
To monitor the implementation of PS 2022, the 2022 Strategic Plan Monitoring Committee (JKP PS 2022) which was co-chaired by the Secretary-General of MOH and the Director-General of Health with 22 permanent members was established. Throughout the year 2022, a total of three (3) JKP PS 2022 Meetings and the presentation of PS 2022 achievements at the Post Cabinet Meeting was held as in **Table 7.2**. The reported achievements up to the third quarter of 2022 are as in **Figure 7.1**.

Table 7.2
The 2022 Strategic Plan Achievements

First Quarter (Q1)	
JKP PS 2022 No. 1/2022	22 March 2022
Presentation at Post Cabinet Meeting	28 March 2022
Second Quarter (Q2)	
JKP PS 2022 No. 2/2022	16 June 2022
Presentation at Post Cabinet Meeting	22 June 2022
Third Quarter (Q3)	
JKP PS 2022 No. 3/2022	20 September 2022
Presentation at Post Cabinet Meeting	30 September 2022

Source: Planning Division, MOH

Figure 7.1
2022 Strategic Plan Achievements Analysis



Source: Planning Division, MOH

MEDIUM TERM *KELUARGA MALAYSIA* ASPIRATIONS (AKM)

Following on the success of the 100-day AKM, the government has ordered the Medium Term AKM which is for six (6) months duration to be implemented and monitored from January to June 2022. The objective of this AKM is to determine the direction and momentum of the government in achieving its goals, so that *Keluarga Malaysia* can enjoy a better life. There are five (5) AKM that have been identified as in **Table 7.3**.

Table 7.3
***Keluarga Malaysia* Aspirations (AKM) 2022**

Core 3: Improving Social Welfare		
Strategy: Preventing and Controlling the COVID-19 Disease		
No	Programmes/Initiatives	Target
1	COVID-19 vaccination coverage among children 7 to under 12 years old	45% of children 7 to under 12 years old received 1 dose of the COVID-19 vaccine
Strategy: Improving Health Protection for Vulnerable Groups and B40 in the Endemic Phase		
No	Programmes/Initiatives	Target
2	The percentage of giving PPC to the B40 group	90% of PPC packs are distributed to eligible recipients

Core 6: Empower Delivery		
Strategy: Improving Accessibility of Healthcare Services		
No	Programmes/Initiatives	Target
3	Outsourcing of medical services to private facilities for MOH hospital patients	90% of 2,100 cases outsourced (1,890 cases)
4	Number of Wellness on Wheels (WoW) outreach localities	200 WoW outreach localities
Strategy: Strengthening Health Service Delivery Intensifying Digital Technology		
No	Programmes/Initiatives	Target
5	Number of Health Clinics that use the Clinic Appointment System (SJTK)	100 Health Clinics that use the SJTK

Source: Planning Division, MOH

The achievement of AKM Medium Term (6 months) is summarised in **Figure 7.2**.



Source: Planning Division, MOH

MINISTRY OF HEALTH'S POLICY AND PLANNING COMMITTEE (JDPKK)

JDPKK responsible in making key policy decisions, planning and development holistically and in line with national policies and visions. The main function of JDPKK is to review and consider matters related to policy proposals, strategic planning and direction of the MOH. A total of 14 policy papers were presented according to section as in **Table 7.4**.

Table 7.4
JDPKK Meeting for Year 2022

No.	Paperwork	Status	Programme/Division
JDPKK No. 1/2022 (25 April 2022)			
1.1	Recommendations for Strengthening the Governance of Hyperacute Stroke Treatment Services at the National, State and Hospital Levels	Approved with minor improvements	Medical Development Division
JDPKK No. 2/2022 (20 October 2022)			
2.1	Proposed Amendments to the Food Act 1983 [Act 281]	Needs to be reviewed and improved	Food Safety and Quality Program
2.2	Proposed Establishment of Bagan Datuk Health Office	Approved	Hilir Perak District Health Office
2.3	Proposed Installation of Air Conditioners in Class 3 Wards of MOH Hospitals	Approved with minor improvements	Planning Division Engineering Services Division
2.4	Proposed Future Hospital Design Requirements Include Infectious Disease Elements	Approved	Planning Division Engineering Services Division
2.5	Nephrology Dialysis Medicine Integration Strategic Action Plan Proposal	Approved	National Nephrology Service
JDPKK No. 3/2022 (15 December 2022)			
3.1	Improvement of Blood Donor Privileges and Annual Allocation for Blood Donor Education and Promotion Activities	Approved with minor improvements	National Blood Centre

No.	Paperwork	Status	Programme/Division
3.2	Proposal to Rent or Buy a Lot/Shop House for the Operation of a Stand-Alone MOH Dental Clinic	Approved	Dental Health Programme
3.3	Proposed Design Requirements for Future Health Facility Buildings Including Green Building Elements	Approved	Engineering Services Division
3.4	Proposed Minor Specialist Hospital Equipped with CT Scan Machine	Approved	Medical Development Division
3.5	Recommendations for Outsourcing of Food Service at MOH Hospitals based on the Latest Technological Changes	Approved	Medical Development Division
3.6	Proposal to Abolish Class G & H Quarters and Replace with Class F at the Ministry of Health's New Facility	Approved	Development Division
3.7	Strengthening and Expanding Diabetes Treatment Using SGLT2 Inhibitor Drugs to Reduce Complications among Patients in Hospitals and Health Clinics	Approved	Medical Development Division
3.8	Recommendations for Providing Toilet Facilities in each Visitor Centre Accommodation Room	Approved	Planning Division

Source: Planning Division, MOH

Image 7.1
JDPKK Meeting



Source: Planning Division, MOH

NATIONAL HEALTH FINANCING (NHF)

NHF Section is responsible for studying, designing, implementing and monitoring health system transformation plans for Malaysia in particular related to health financing. In year 2022, NHF conducted many activities, such as monitoring the implementation of the PeKa B40, Electronic Service Provider for SPIKPA (ESP-SPIKPA) and PICK by ProtectHealth Corporation Sdn. Bhd. (PHCorp) via Governance, Monitoring and Evaluation Committee (GMEC), acting as the secretariat for COVID-19 Care Package (PPC) and collaborating with the Joint Learning Network (JLN).

GOVERNANCE, MONITORING AND EVALUATION COMMITTEE (GMEC)

NHF Section as GMEC Secretariat has successfully produced an Executive Report entitled *Laporan Eksekutif Pencapaian Prestasi ProtectHealth Corporation Sdn. Bhd. & ProtectHealth Malaysia 2019-2021*. The report aims to present an analysis of the performance of PHCorp and ProtectHealth Malaysia (PHM) as well as suggestions for improvement to Minister of Health. The scope of this inaugural report includes the performance of three (3) programmes implemented by the PHCorp which are PeKa B40, Electronic Service Provider for SPIKPA (ESP-SPIKPA) and PICK from year 2019 to 2021. This Executive Report will be produced yearly to ensure that PHM dan PHCorp are managed prudently, effectively achieve their social objectives and are sustainable in the long term.



COVID-19 CARE PACKAGE (PPC)

On 19 September 2021, the former Prime Minister had announced that the government will be distributing PPC, which is expected to benefit 3.53 million *Keluarga Malaysia B40* (household category recipients of *Bantuan Prihatin Rakyat*). These efforts among others, were aimed at easing the financial burden of B40 households and helping them cultivate the new norms, at the same time helping to protect their families from COVID-19.

Each PPC pack contained four (4) reusable face masks, four (4) COVID-19 self-test kits, one (1) pulse oximeter and one (1) thermometer, as well as leaflets containing health information and user guides. The PPC distribution had been carried out by Pos Malaysia starting from 30 November 2021. NHF as the secretariat of the PPC project together with representatives from other sections in the Planning Division, monitored the end-to-end PPC distribution process throughout the project period which includes supplying, packaging and delivery of PPC. In addition, we also conducted quality control measures such as the Supplier Corrective Action Report (SCAR) and Complaint Management. Data received from Pos Malaysia and delivery status reports by state are prepared periodically to ensure the project runs smoothly.

Image 7.2
Monitoring and Quality Checking Activities



Source: PPC Monitoring Team

Image 7.3
Monitoring of the PPC Packaging Process



Source: PPC Monitoring Team

The process of supplying, packaging, delivery and complaint management was completed for 3.53 million recipients of B40 families on 11 August 2022. The PPC secretariat conducted site visits to Pos Malaysia warehouses for the process of receiving and inspecting the stored PPC to ensure that the amount of PPC tally with the data and is in good condition. As a result of this monitoring, several issues were successfully detected such as damaged PPC box due to exposure to water and multiple delivery of PPC issues where mitigation measures were carried out.

COLLABORATION WITH JOINT LEARNING NETWORK (JLN)

JLN is a country-led and country-driven joint learning and mutual problem-solving platform which brings together policymakers and practitioners from 34 countries to systematically share their knowledge. Malaysia is a full member of the JLN and has been involved in JLN activities since 2010. The Planning Division through the NHF coordinates the JLN Country-Core Group (CCG) for Malaysia. JLN CCG is chaired by the Director of Planning Division. The participation of Malaysia's representatives is coordinated through JLN CCG Malaysia.

Image 7.4
Receiving and Checking Retour PPC Process



Source: PPC Monitoring Team

In 2021, Malaysia has been reappointed back into the JLN Steering Group (JLN SG). The JLN SG is the elected governing body of the JLN. It oversees the strategic direction of the network, ensures transparent decision-making, directs the execution of the network strategy, determines country membership, and manages funding within the JLN. NHF Section represents Malaysia in JLN SG and has been also elected as the Co-Convener since 26 August 2022. Co-Convener's responsibility is to assist the Convener during steering group meetings and activities as well as chair steering group meetings in the absence of the Convener.

JLN activities were participated by MOH officers from various divisions within MOH. Nevertheless, among the activities that NHF officers had participated were the Efficiency Collaborative, Provider Payment Mechanism Collaborative, Domestic Resource Mobilisation Collaborative and Private Sector Engagement Collaborative which also produced several knowledge products that help in improving the quality of healthcare services.

NHF officers were specifically involved and had contributed technical inputs and country experiences in JLN international activities, such as:

- i. JLN Knowledge Product *Making Explicit Choices on the Path to UHC: Guide for Health Benefits Package Revision* whereby NHF officer were also involved in the Efficiency Collaborative Writer's Workshop held on 1 and 4 August 2022 in New Delhi, India;
- ii. JLN Ghana-Malaysia Country Pairing on Provider Payment Mechanism on 8 September 2022;
- iii. Learning Exchange on *Private Sector Healthcare - How can public payers better monitor, manage, and enforce contracts for subsidised healthcare services* from 16 March to 27 April 2022; and
- iv. Learning Exchange on *Private Sector Healthcare - How can governments unlock private capital to catalyse their UHC reform* from 16 March to 8 June 2022.

Image 7.5
JLN Efficiency Collaborative Writer's Workshop

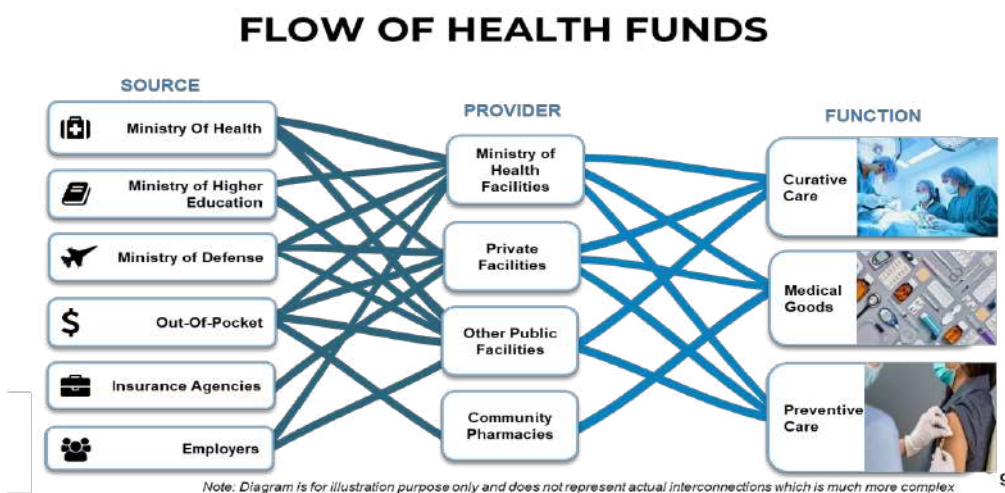


Source: Planning Division, MOH

MALAYSIA NATIONAL HEALTH ACCOUNTS (MNHA)

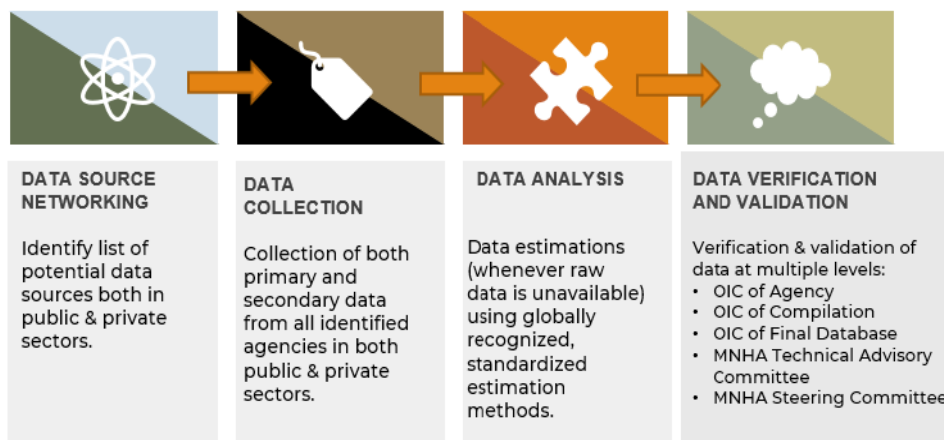
MNHA section maintains accountability and transparency by establishing the MNHA Technical Advisory Committee (TAC) to review, verify and validate the data. The MNHA TAC is chaired by the Director of Planning Division and has members from various MOH divisions. Furthermore, the MNHA Steering Committee comprising of representatives from various public and private agencies, co-chaired by the Director-General of Health and Secretary-General of MOH, annually reviews and endorses the estimates produced. Only upon obtaining endorsement from the MNHA Steering Committee, the annual time-series health expenditure data is published and broadly shared both locally and internationally.

Figure 7.3
Flow of Health Funds



Source: Planning Division, MOH

Figure 7.4
Overview of Methodology

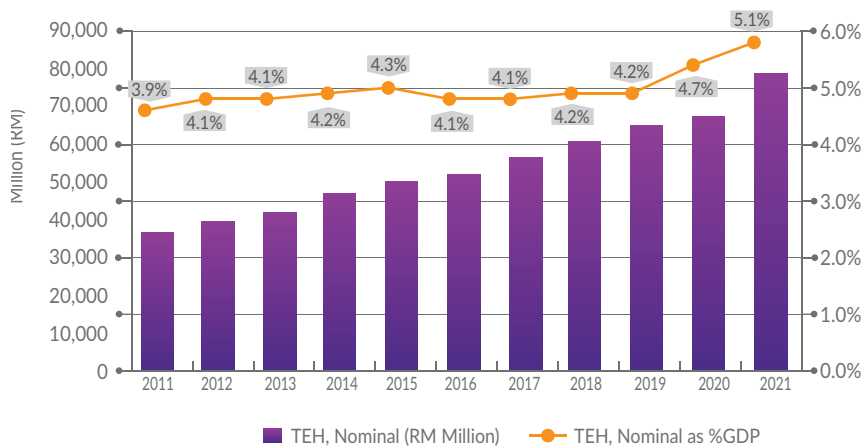


Source: Planning Division, MOH

MNHA HEALTH EXPENDITURE 2011 - 2021

The 2022 MNHA Steering Committee Meeting was chaired by Director-General of Health and the latest time-series report from 2011-2021 was presented for approval. The findings of this report showed that in 2021, Malaysia's Total Expenditure on Health (TEH) was estimated at RM78,220 million or 5.1 per cent of Gross Domestic Product (GDP). This was an increase of 17 per cent compared to RM67,022 million spent in 2020. In year 2021, per capita expenditure of health calculated using constant value of TEH based on population compared to 2020, showed an increase of 10 per cent from RM2,186 to RM2,401. The notable boost in total expenditure on health and the increase in TEH was a reflection of high priority given to COVID-19 related health expenditure, especially in view launching the nationwide National COVID-19 Immunisation Programme.

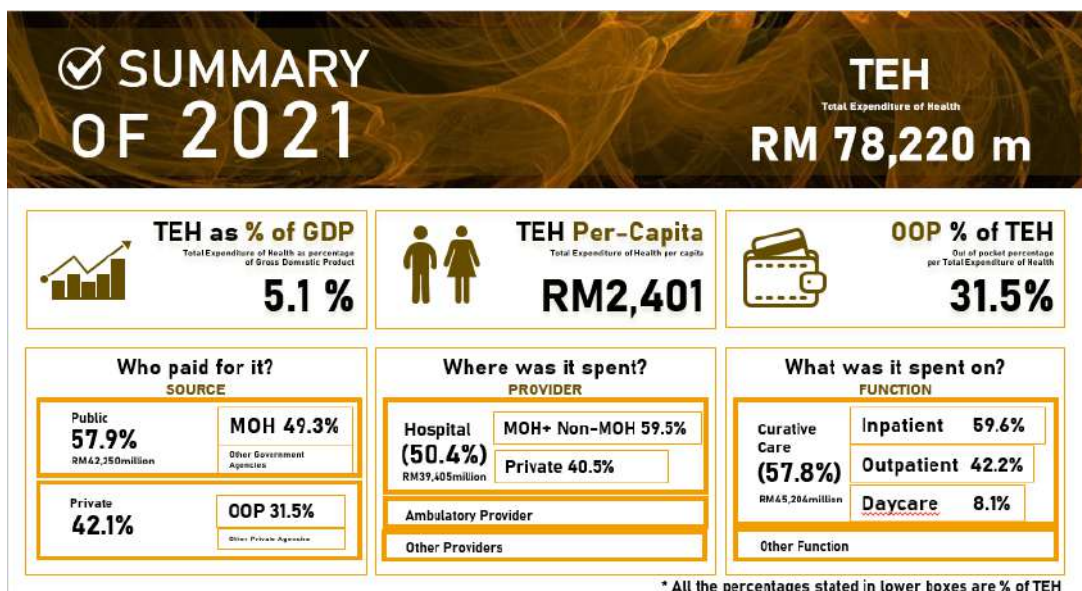
Figure 7.5
Total Expenditure on Health, 2011-2021



Source: MNHA, Planning Division, MOH

In year 2021, the private sources of financing share of TEH was 42.1 per cent and Out-of Pocket (OOP) share was 31.5 per cent of TEH. MOH was the primary source of public financing at 49.3 per cent of TEH. During the same year, based on function codes, services of curative care which encompasses inpatient, outpatient and day-care services, occupies 57.8 per cent of TEH. Hospitals are the highest contributors as providers of health care, taking up 50.4 per cent of TEH spending. This was followed by ambulatory care providers contributing to 25.1 per cent of TEH.

Figure 7.6
Summary of MNHA Expenditure on Health for Year 2021

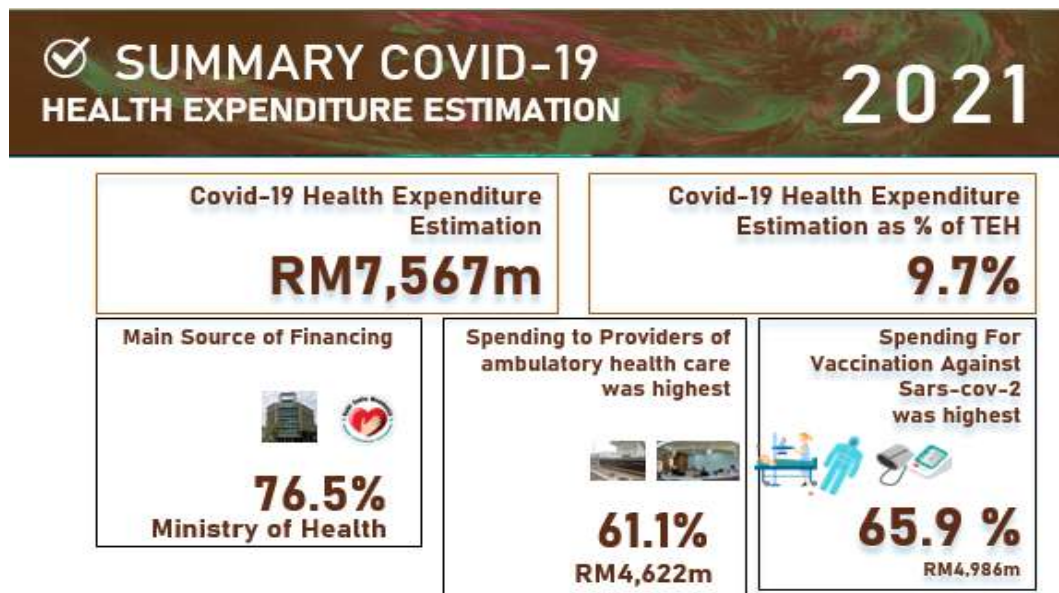


Source: Planning Division, MOH

MNHA COVID-19 HEALTH EXPENDITURE ESTIMATIONS FOR YEAR 2021

The COVID-19 pandemic has underscored the need for increased investments in health. Nearly all countries including Malaysia responded with additional budget allocations. The deeply affected health sector, now involved new stakeholders, priorities and interventions. MNHA continued its previous work on collecting and producing COVID-19 health expenditure estimates as a sub-account. This section used the fundamental principles of National Health Accounts (NHA) to track the spending. In 2021, the estimated COVID-19 health expenditure was RM7,567 million or 9.7 per cent of TEH. MOH was the main source of financing contributing to three quarter of this expenditure. Spending at providers of ambulatory care was the highest and 65.9 per cent of the RM7,567 million was spending on COVID-19 vaccination.

Figure 7.7
Summary of COVID-19 Health Expenditure for Year 2021



Source: Planning Division, MOH

MNHA COLLABORATION ACTIVITIES

Global Health Expenditure Database (GHED) is the largest database that provides a global reference for health expenditure data for WHO member countries. On annual basis, MNHA section submits their national health expenditure data according to WHO request formats and framework. This allows for better cross-country comparisons. MNHA also collaborated with World Bank Group (WBG) to assist in their Public Expenditure Review activity. This networking was further strengthened with WBG offering to provide capacity building for year 2022.

Image 7.6
MNHA Activities



MNHA Steering Committee Meeting 2022



WBG Technical Dialogue Session Related to Primary Healthcare (PHC) Policy Notes

Source: MNHA, Planning Division, MOH

HEALTH INFORMATICS CENTRE (HIC)

ENHANCEMENT OF MALAYSIAN HEALTH DATA WAREHOUSE (MyHDW)

The project entitled *Penambahbaikan Fungsi dan Pengukuhan Keselamatan Teknologi Maklumat dan Komunikasi (ICT) untuk Aplikasi Malaysian Health Data Warehouse (MyHDW), Sistem Maklumat Rawatan Pelanggan (SMRP) dan Patient Registry Information System (PRIS)* is led by HIC in collaboration with MIMOS Berhad. This project implementation is in line with *Pelan Strategik Pendigitalan MOH 2021-2025* and also one of the initiatives under the Digital Infrastructure and Data Cluster in the Malaysian Digital Economy Blueprint (MDEB), Council of Digital Economy and *the Fourth Industrial Revolution (MED4IRN)*.

The objectives of this project are:

- i. To improve the functionality of MyHDW and the source systems;
- ii. To develop a module for diagnostic coding from the International Classification of Disease from the 10th version to the 11th version (ICD-10 to ICD-11);
- iii. To integrate the MyHDW User Registration System with the MyHDW portal; and
- iv. Strengthening MyHDW ICT security through Security Posture Assessment.

The kick-off ceremony of this project was held on 4 July 2022 in Putrajaya and was officiated by the Senior Deputy Director of Branch II, Planning Division. The project team and related stakeholders are committed to ensuring the project's development to improve the capabilities of MyHDW as a digital data collection platform, improve system security, and maintain patient data confidentiality. The collected data can be analysed and used for the publication of official statistics and the policymaking of MOH.

Image 7.7

Penambahbaikan Fungsi dan Pengukuhan Keselamatan ICT untuk Aplikasi MyHDW, SMRP dan PRIS Project Kick-Off Ceremony



Source: Planning Division, MOH

KKMNOW

The KKMNOW Portal was launched on 5 October 2022 at Dewan Serbaguna, Ministry of Health Malaysia, Putrajaya by the Minister of Health which the objective to be an integrated platform for reference and data sharing for all, in line with the digitalisation plan for health services.

The development of the KKMNOW Portal at data.moh.gov.my was the result of the strategic collaboration between MOH and DOSM. This portal is also a continuation of the COVIDNOW portal which provided up-to-date information on the current situation of the COVID-19 infection in Malaysia.

The scope of the KKMNOW Portal at the moment includes presenting information on health facilities and data related to health programs such as blood donation, organ donation, health screening and PeKa B40 as well as data related to communicable diseases.

The KKMNOW portal development is in line with MOH's efforts towards sustainability of the transformation on MOH data transparency. The implementation of open data sharing in the portal maintains the importance and guarantees the confidentiality of the patient's personal information.

Image 7.8
MOHNOW Portal Launching Ceremony



Source: Planning Division, MOH

INTERNATIONAL CLASSIFICATION OF HEALTH INTERVENTIONS (ICHI) SYSTEM INTRODUCTION AND TRAINING WORKSHOP

HIC, Planning Division, in collaboration with the Classifications and Terminologies Unit (CAT), WHO, held the ICHI System Introduction & Training Workshop from 19 to 20 May 2022. All stakeholders related to medical records at MOH health facilities participated in this workshop. The workshop was held in a hybrid manner with the involvement of more than 154 participants from all over Malaysia.

ICHI is a new classification system developed by WHO to replace the ICD-9-CM system to code medical procedures in health facilities. HIC has taken the initiative to hold this workshop as an early exposure step, considering that this coding process is essential in the production of health data and statistics.

Image 7.9
Hybrid Workshop of ICHI System Introduction & Training



Source: Planning Division, MOH

ICD-11 TRADITIONAL MEDICINE CHAPTER MODULE 2 ALPHA DRAFT REVIEW MEETING

HIC and T&CM, in collaboration with the CAT, WHO and WHO Country Office Malaysia have organised the ICD-11 Traditional Medicine Chapter Module 2 Alpha Draft Review Meeting on 16 to 18 November 2022 at the Impiana KLCC Hotel, Kuala Lumpur. This hybrid meeting was attended by representatives from 12 countries, such as the United States, Nepal, and India.

The purpose of this meeting is to discuss the results of the review of the alpha module of the ICD-11 TM2 draft, the planning for the development of the ICD-11 TM2 Beta Draft module and to present the use of ICD-11 TM as well as standard data in the field of Traditional & Complementary Medicine. This meeting is a follow-up to the resolution of the International Conference of Diagnosis and Terminologies in Ayurveda, Unani, Siddha Systems of Medicine (ICoSDITAUS) and the declaration of the New Delhi Declaration on Collection and Classification of Traditional Medicine Diagnostic Data. The development of the second module, TM2, started in 2020 as a WHO effort to provide a diagnosis category that combines the Ayurvedic, Unani, and Siddha classification systems.

Image 7.10

ICD-11 Traditional Medicine Chapter Module 2 Alpha Draft Review Meeting



Source: Planning Division, MOH

SNOMED EXPO 2022

Each year, SNOMED CT Expo unites clinical terminologists from around the world, including government officials, health information technology (IT) professionals, health practitioners, researchers, academicians and vendors. The Expo was held in a hybrid manner where a total of 642 registered delegates from 47 countries attended. Representative from Malaysia, Dr. Zulhairi bin Mohamad from HIC, Planning Division presented two (2) topics as follows:

- i. e-Poster: Evolution of SNOMED CT Reference Set in Improving Report presented as e-poster; and
- ii. Oral presentation: Implementing Unstructured Data Analysis for Reports in Oral Health Programme, Malaysia.

Image 7.11

SNOMED CT Expo 2022 in Lisbon, Portugal



Source: Planning Division, MOH

HEALTH FACILITY PLANNING (PFK) SECTION

The MOH is committed to providing quality healthcare services for the nation. The PFK plays a vital role to ensure health facility planning and development are in line with government policies. This includes the identification of new facilities and upgrading existing ones to improve accessibility to healthcare services across the country. The year 2022 has been challenging for MOH in ensuring healthcare facilities are adequately equipped and up-to-date with the standards required for pandemic management. PFK has taken the lead in updating the requirements needed for our healthcare facilities in terms of design specifications for infectious diseases.

HANDOVER OF PROJECTS IN YEAR 2022

In year 2022, there were a total of 11 projects, consisting of two (2) hospital upgrading projects, three (3) new or replacement hospitals, and six (6) health offices, which have been built and successfully handed over to end users for operation. The projects were:

- i. Blok Kardiologi Hospital Serdang, Selangor;
- ii. Blok Endokrin Hospital Putrajaya;
- iii. Hospital Tanjung Karang, Selangor;
- iv. Hospital Bera, Pahang;
- v. Hospital Sri Aman 2, Sarawak;
- vi. Health Clinic (Type 7) Telok Jering, Tumpat, Kelantan;
- vii. Health Clinic (Type 7) Sg. Keladi, Pasir Mas, Kelantan;
- viii. Health Clinic (Type 7) Joh, Machang, Kelantan;
- ix. Health Clinic (Type 7) Temai, Pekan, Pahang;
- x. Health Clinic (Type 5) Lenggeng, Negeri Sembilan; and
- xi. Health Clinic (Type 3) Pauh, Perlis.

IMPLEMENTATION OF APPROVED PROJECTS FOR YEAR 2022

A total of 14 projects have been approved for implementation in 2022. The approved projects consist of 2 new hospitals, 7 hospital upgrading projects, 4 new and upgrading health clinics and 1 upgrading health office. Some of these projects are:

- i. Malaysia Institute of Infectious Disease (MIID), Bandar Enstek, Nilai, Negeri Sembilan;
- ii. Development of Hospital Kapar, Selangor;
- iii. Upgrading Autopsy Room for Forensic Department, Sultan Ismail Hospital, Johor;
- iv. Upgrading Autopsy Room for Forensic Department, Sungai Buloh Hospital, Selangor;
- v. Upgrading Catering and Dietetic Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah;
- vi. Pharmacy Complex, Queen Elizabeth Hospital, Sabah;
- vii. Beseri Health Clinic (Type 2), Perlis with quarters (replacement);
- viii. Parit Raja Health Clinic (Type 3), Johor with quarters (replacement); and
- ix. Selising Health Clinic (Type 3), Pasir Puteh, Kelantan with quarters (replacement).

DEVELOPMENT OF STANDARDS DESIGNS FOR HEALTH CLINIC

In order to provide the best service to the public, especially in rural areas, the MOH has prepared a new design of Health Clinic (Type 7) which will replace the existing rural health clinic. This new design prepared by the Public Works Department (JKR) is expected to reduce the implementation period and the total estimated cost of the project. This new clinic design will be able to accommodate the daily workload, equipped with an outpatient clinic, Mother and Child Health (MCH) clinic, two (2) bedded observation wards, labour room, laboratory and pharmacy. With the new design, more clinics will be able to be built in rural areas to ensure access to health services.

DESIGN DEVELOPMENT OF NON-CLINICAL MATERIALS COMPONENTS FOR HEALTH FACILITIES

To standardise non-clinical material components at the construction site, several workshop sessions were held with the JKR between March and November 2022 focusing on the scope of architecture as follows:

- i. Ironmongery & Security System;
- ii. Floor Finishing;
- iii. Wall Finishing;
- iv. Interior Decoration;
- v. Interior Paint Color Scheme;
- vi. Sanitary ware & Fittings;
- vii. Built-In Furniture & Lab Furniture;
- viii. Landscape;
- ix. Signages; and
- x. Loose Furniture.

MOH HOSPITAL EQUIPMENT GUIDELINES (300 BEDS)

MOH Hospital Equipment Guidelines Workshop (300 Beds) was held at the IKN from 5 to 7 December 2022 which aims to prepare a document pertaining to medical and non-medical equipment for the hospital with 300 beds. It contains planning norms for equipment, a list of equipment, specification, estimated costs and many more. This document will be used as a reference internally and externally such as Economic Planning Unit (EPU).

GUIDELINES AND REGULATIONS FOR BUILDING PLANNING

In year 2022, MOH was involved in the preparation of Guidelines and Regulations for Building Planning with the EPU which aims to update the existing document (2015 edition). A series of workshops were held from March to April 2022 with the BPP and National Advisor for relevant services in order to get input on the optimal size of the space and rooms in the specific area at MOH facilities. This input will be updated in the new Guidelines and Regulations for Building Planning.

COORDINATION OF HEALTH FACILITY VENTILATION SYSTEM NEEDS FOR INFECTIOUS DISEASES AND INSTALLATION OF AIR COOLERS IN 3rd CLASS WARD OF MOH HOSPITAL

In view of the COVID-19 pandemic, there is a need to revise the ventilation system requirement in hospitals. Therefore, a workshop was held by the MOH on 19 May 2022 to analyse the proposal.

Several papers were presented by the Technical Committee Members as follows:

- i. Review of Design Effects for 3rd Ward Class Ventilation and Convertibility on Electrical Aspect;
- ii. Management of Infectious Disease – Prevention of Disease Spread in Hospital;
- iii. Retrospective review on Maintenance Cost and Energy Saving; and
- iv. Review of Design Effects for 3rd Ward Class Ventilation and Convertibility on Mechanical Aspect.

This proposal has been approved by the JDPKK on 20 October 2022 for implementation.

eHEALTH PLANNING

HEALTH INFORMATION EXCHANGE (HIE) PROJECT

HIE Project is a digital health platform that enables sharing of information by healthcare facilities and patients, complying with an international standard seamlessly in a secure manner. This project under the Planning Division (one of the components of the Negeri Sembilan EMR Pilot Project) has been implemented since December 2021 and is targeted for full completion by December 2023. This project is developed using an agile methodology (STAGEs 1,2,3 and 4) and implemented incrementally in selected healthcare facilities with the development of the following portals:

- i. Provider Portal (RekodPesakit) - focusing on continuity of care and care coordination (involving Patient Registration, Create Medical Records, Scheduling and Appointments module)
- ii. Person Portal (RekodSaya) - aims to increase people's involvement (person engagement) by allowing people to access selected health records safely and accurately
- iii. At STAGE 1, the use of the HIE Provider Portal (RekodPesakit) and HIE Patient Portal (RekodSaya) was started on 10 October 2022 in 11 selected healthcare facilities in the Hospital Tuanku Ampuan Najihah (HTAN) Cluster, Kuala Pilah.

Currently, in STAGE 2, the use of the HIE Provider Portal will be extended to other facilities in the Kuala Pilah, Tampin and Jempol areas with the addition of care coordination functions where inter and cross-facility referrals can be made. This HIE project is an effort for the unification and uniformity of health information so that the quality of the country's public health strategies can be improved.

Image 7.12
HIE Project Activities



Source: Planning Division, MOH

VIRTUAL CLINIC (VC) PROJECT AT HEALTH FACILITIES IN NEGERI SEMBILAN

The VC project provides virtual (online) clinical consultation service and patient treatment plan for selected healthcare services that have been identified by the MOH. This project is one of the initiatives in implementing the EMR Project by the Planning Division.

By reducing the frequency of physical attendance at the facility, virtual healthcare consultation services can expand access to health services while simultaneously addressing the problem of overcrowding in health facilities. In addition, this initiative also includes an online payment function for the services offered. The developed VC system consists of four (4) components: online appointments, online registration, virtual face-to-face consultation and documentation with the payment module.

Table 7.5
Activities of VC Project

Activity	Date
Kick Off VC Project	13 April 2022
Business Requirement Study Workshop Series 1 for VC Project	19 - 20 May 2022
Business Requirement Study Workshop Series 2 for VC	14 - 15 September 2022
Sprint Stage 1 Session No. 1/2022	17 November 2022
Stage 1 User Acceptance Testing (UAT) VC: UAT Stage 1 Cycle 1	1 December 2022
Stage 1 User Acceptance Testing (UAT) VC: UAT Stage 1 Cycle 2	22 December 2022

Source: Planning Division, MOH

Image 7.13
Business Requirement Study Project VC
Workshop



Source: Planning Division, MOH

Image 7.14
UAT Stage 1



Source: Planning Division, MOH

THE ONLINE HEALTHCARE SERVICES REGULATORY LAB (OHS REGLAB)

Online Healthcare Service (OHS) refers to new healthcare service models provided to a client or patient by healthcare professionals intermediated by a specialised digital platform. To date, there are no standards or regulations to ensure that the business entities providing OHS adhere to the five (5) guiding principles of healthcare services, namely safety, quality of care, accountability, traceability and confidentiality.

The Planning Division and BAP is currently working with Futurise Sdn. Bhd., an agency under the MOF, in the OHS RegLab. The OHS RegLab is a controlled environment where participating OHS platform providers, refer to companies providing digital platforms in OHS, operate under specific conditions and guidance from the MOH and relevant regulators. The objective of the OHS RegLab is to study various OHS models in order to co-create appropriate regulatory and non-regulatory instruments through discussions with stakeholders, particularly companies and regulators.

Stakeholder engagement sessions were held in February and August 2022. A total of 33 OHS platform providers were selected to participate in the first and second cohorts of the OHS RegLab. The OHS RegLab Guideline is to guide OHS platform providers during their participation in the RegLab. This guideline is a dynamic document that is being improved through feedback from various stakeholders. The final version of the OHS Guideline is expected to be ready by the end of 2023.

Image 7.15
Online Healthcare Services Engagement Sessions

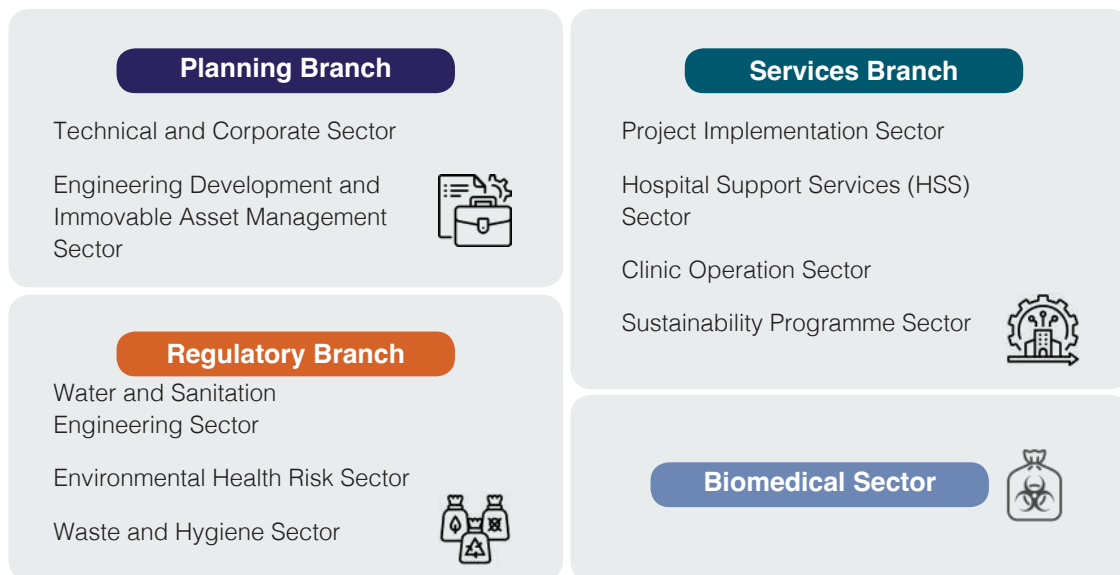


Source: Planning Division, MOH

ENGINEERING SERVICES DIVISION (ESD)

ESD is responsible for planning, implementing and monitoring engineering services at MOH health facilities, including maintenance services and project implementation. Additionally, ESD also plays a role in implementing engineering activities related to environmental health. The role of ESD is assigned to branches and sectors within ESD as in **Figure 7.8**.

Figure 7.8
Branches and Sectors in ESD



Source: Engineering Services Division, MOH

PLANNING BRANCH

TECHNICAL AND CORPORATE SECTOR

TECHNICAL AND ENGINEERING TECHNOLOGY UNIT (UTTK)

UTTK is responsible for driving the process of policy planning and engineering technical guidelines in ensuring that the requirements for the operation, maintenance and management of buildings, equipment and engineering systems in the MOH can be met and implemented effectively based on functional requirements, standards, safety, technological development and policy implementation through technical consultation services. UTTK also provides engineering technical advisory services for the MOH in regard to special projects related to Public Private Partnerships (PPP) and Private Finance Initiatives (PFI).



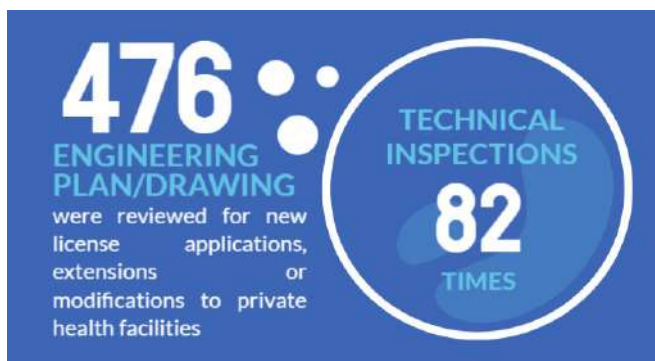
Image 7.16
Ambulances Pre-Delivery Inspection (PDI)
for Cyberjaya Hospital



Source: Engineering Services Division, MOH

PRIVATE HEALTHCARE FACILITY UNIT (UPKS)

UPKS provide engineering service expertise to private healthcare premises by reviewing engineering drawings submitted for facility new licenses, expansions or renovations and technical inspections to ensure compliance with the Private Healthcare Facilities Services Act 1998 [Act 586] and its regulations with related standards.

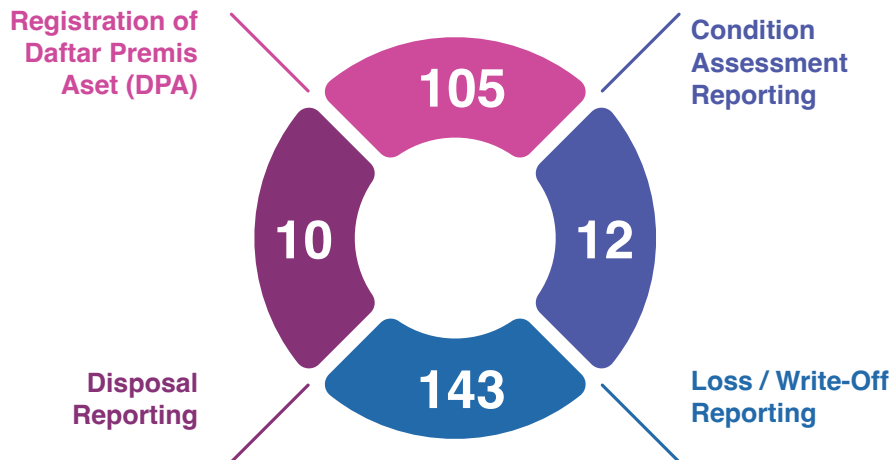


ENGINEERING DEVELOPMENT AND IMMOVABLE ASSET MANAGEMENT SECTOR

IMMOVABLE ASSET MANAGEMENT UNIT (PATA)

PATA assist the Controlling Officer in carrying out all MOH immovable asset management responsibilities (life cycle asset) in accordance with the *Pekeliling Am Bil.3 Tahun 2021: Tatacara Pengurusan Aset Tak Alih Kerajaan*.

ENGINEERING RESEARCH UNIT (UPKj)



UPKj coordinates and implements research activities and initiatives related to engineering technology at ESD. Among the activities carried out in 2022 is the implementation of POC for robotic technology at Hospital Bera, Pahang. Along with the National 4IR Policy, UPKj aims to implement activities that apply the latest technologies such as artificial intelligence, the internet of things (IoT) and drones.

Image 7.17
POC For Robotic Technology Implementation



Source: Engineering Services Division, MOH

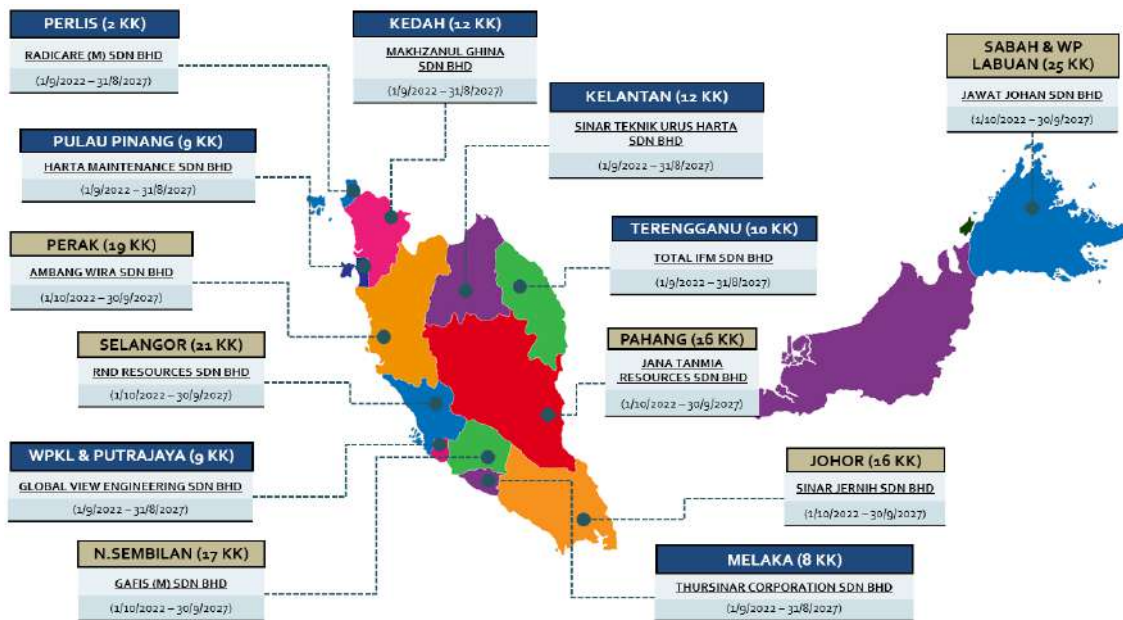
SERVICES BRANCH

CLINIC OPERATION SECTOR

CLINICS SUPPORT SERVICES (CSS)

This sector monitor and supervise the implementation of the CSS programme at 201 KK throughout the country with an annual cost of RM137 million, involving two (2) scope of services namely Facility Engineering Maintenance Services (FEMS) and Cleansing Services (CLS). The main CSS activities involved Planned Preventive Maintenance (PPM) and Corrective Maintenance (CM) works by the contractor. In year 2022, this sector was involved in the preparations of tender documents and site briefings to potential contractors' kick-off meeting for the new *Kontrak PSK Kitaran 3* for 13 states with a contract duration of five (5) years. Apart from that, two (2) documents have been developed and approved which are Project Operation Guidelines (POG) and SOP to implement the CSS programme systematically and effectively.

Figure 7.9
CSS Programme Involvement for Year 2022

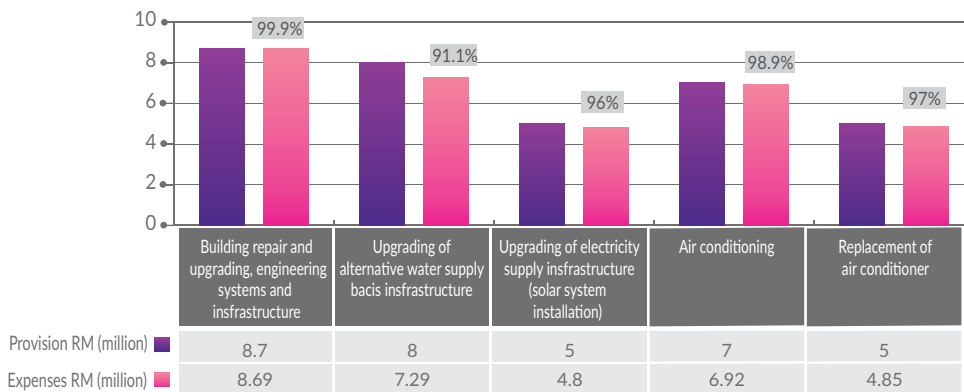


Source: Engineering Services Division, MOH

CLINIC FACILITY ENGINEERING

In year 2022, RM33,699,731 has been allocated to ensure the operation and function of the clinic are at an optimal level in order to provide better health services to the patient. Among the activities that have been carried out nationwide involves repair work, upgrading and replacement of engineering systems, buildings and infrastructure in clinics.

Figure 7.10
Allocations and Expenditure for The Engineering Works in MOH Facilities for Year 2022

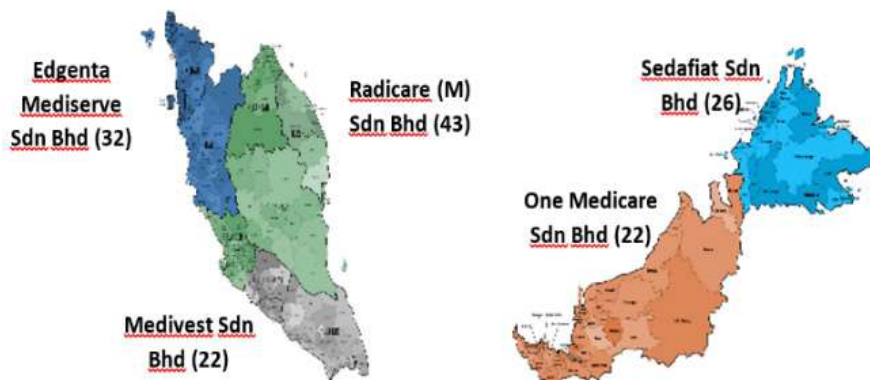


Source: Engineering Services Division, MOH

HOSPITAL SUPPORT SERVICES (HSS) SECTOR

This sector is responsible for monitoring and supervising privatised HSS through five (5) concessionaires and six (6) outsourced non-concessionaire contracts in ensuring compliance with requirements. In year 2022, the number of contract hospitals and institutions involved with the HSS Contract is 146 amounting to RM1.92 billion a year.

Figure 7.11
Number of Hospitals or Institutions by Concession Companies



Source: Engineering Services Division, MOH

FLYING SQUAD TECHNICAL AUDIT

Flying Squad Technical Audit monitor and supervise the implementation of HSS privatisation by concessionaires and non-concessionaires in compliance with the HSS agreement requirements. In year 2022, a total of eight (8) hospitals and institutions under the MOH were involved in the Flying Squad Technical Audit namely the Hospital Sabak Bernam, Hospital Ampang, Hospital Tuanku Fauziah, Hospital Jitra, Hospital Temenggong Seri Maharaja Tun Ibrahim, Hospital Jerantut and Hospital Putrajaya.

Image 7.18
Flying Squad Technical Audit



Source: Engineering Services Division, MOH

HSS PROJECT MONITORING COMMITTEE (PMC) – CONCESSIONAIRE

The HSS PMC Meeting chaired by the Director General of Health was conducted as a platform to discuss policy matters, HSS issues and evaluation of the company's performance in the implementation of the services provided. Overall, all concessionaires performed satisfactorily in the range of 90 to 95 per cent for Contractor Performance Assessment (CPA) achievement.

Image 7.19
PMC-Non-Concession Meeting

HSS PROJECT MONITORING COMMITTEE (PMC) – NON-CONCESSIONAIRE

The HSS PMC Meeting for non-concession companies chaired by the Deputy Secretary General of Finance functions as a platform to discuss policy matters, HSS issues and performance evaluation of the company in the implementation of the services provided. Overall, all non-concessionaires performed satisfactorily in the range of 90 to 95 per cent for CPA achievement.

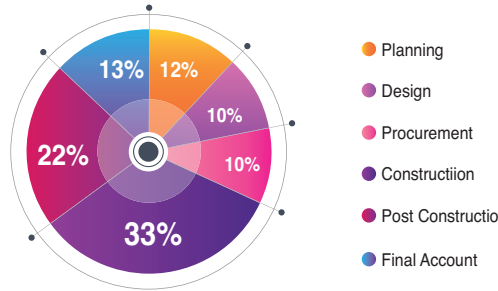


Source: Engineering Services Division, MOH

PROJECT IMPLEMENTATION SECTOR (SIP)

In year 2022, SIP had implemented 91 projects under the Development, Sinking Fund and PFI allocation. **Figure 7.12** shows the breakdown of projects managed by SIP according to the implementation category for year 2022. A total of five (5) projects worth RM22,355,115.90 were fully completed, handed over to the users in year 2022 and have begun operations as shown in **Image 7.21**.

Figure 7.12
Percentage of SIP Projects According to Implementation Category for Year 2022



Source: Engineering Services Division, MOH

Image 7.21
Project Handover in 2022



Project Handover for Upgrading Klinik Pergigian Tronoh, Perak



Project Handover for Modular Operating Theatre Construction at Hospital Balik Pulau, Pulau Pinang



Project Handover for Construction of Klinik Pergigian Pasir Akar, Besut, Terengganu

Source: Engineering Services Division, MOH

This sector has also successfully completed projects under the *Darurat* Fund and involved in providing technical advice and engineering expertise for upgrading projects at health facilities and other divisions at the MOH Headquarters.

Image 7.22
Special Projects and Technical Advisory Services



Construction of Medical Gas System Facilities and Other Works at Pusat Kawalan Kusta Negara Hospital Sungai Buloh



Pusat Kecemerlangan Kesihatan Mental Kebangsaan, Quill 18 Cyberjaya



Renovation of Office Space and Other Related Works at the Examination and Certification Unit, Training Management Division, MOH

Source: Engineering Services Division, MOH

SUSTAINABILITY PROGRAMME SECTOR (SPL)

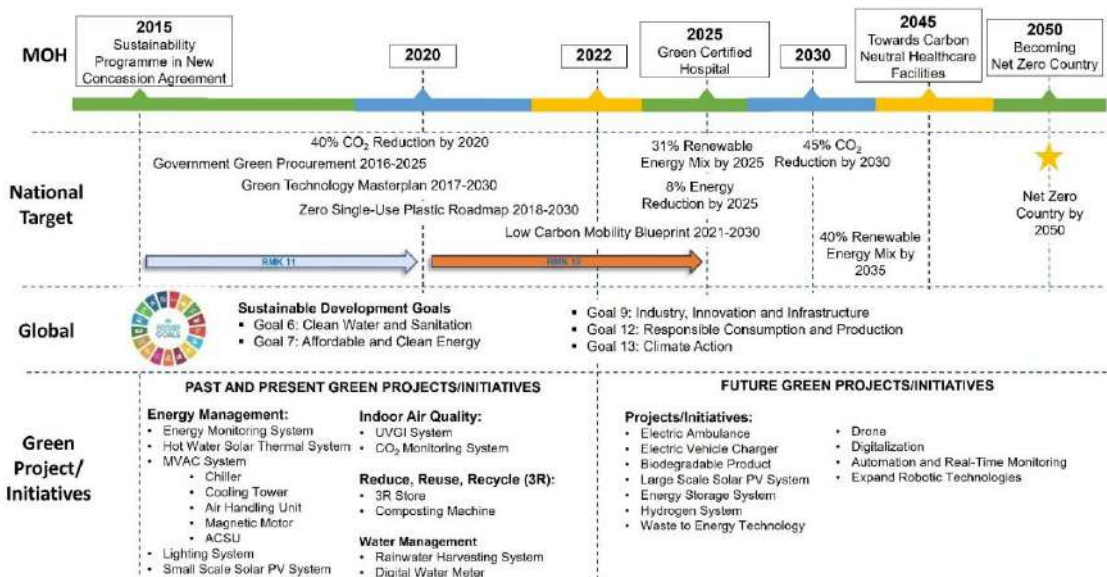
SPL was established in 2018 for planning, coordinating, implementing, and monitoring sustainability programme (SP) in MOH healthcare facilities. Through the implementation of SP, MOH has won various international and national awards in 2022 (Figure 7.13). MOH aspires to ensure all government healthcare facilities become carbon neutral by 2045 and support the country's aspiration to be net zero by 2050. This is outlined in MOH Sustainability Framework in Figure 7.14.

Figure 7.13
MOH Sustainability Programme Achievement for 2022



Source: Engineering Services Division, MOH

Figure 7.14
MOH Sustainability Programme Framework



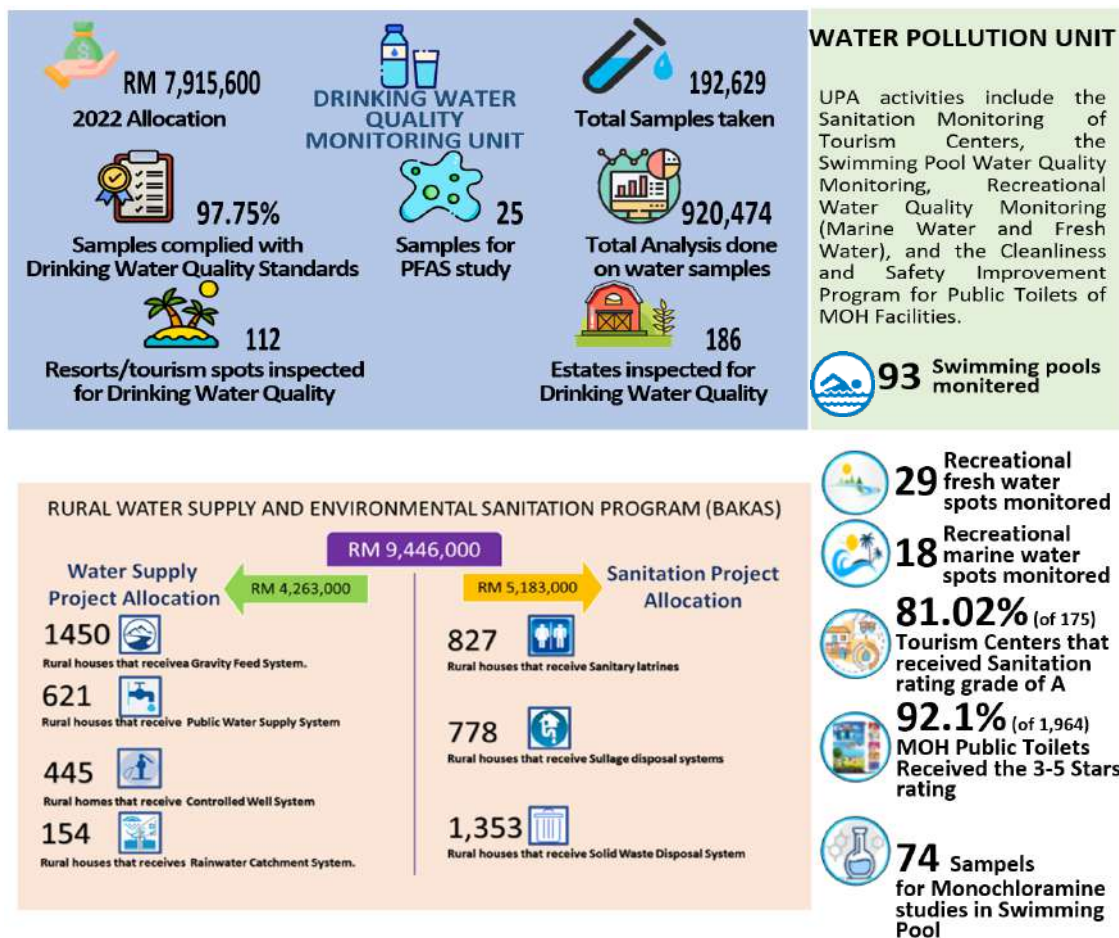
Source: Engineering Services Division, MOH

REGULATORY BRANCH

WATER & SANITATION ENGINEERING SECTOR (KAS)

This sector carries out engineering health programs by contributing to the improvement of environmental health and cleanliness, in order to prevent the spread of related infectious diseases. The program includes monitoring the quality of the public water supply to ensure safe use by the community. Other programs include ensuring the sustainability and protection of environmental health through activities such as the provision of low-cost systems for water supply, solid waste, sewage and wastewater in rural areas, as well as the monitoring of water quality and sanitation in selected recreational and tourism locations. This sector also provides technical inputs or advice to related stakeholders on matters or issues pertaining to environmental health. The units under this sector are the Water Supply and Environmental Cleanliness Unit (BAKAS), the National Drinking Water Quality Monitoring Unit (KMAM), the Water Pollution Unit (UPA), and the Scientific Unit.

Figure 7.15
KAS Sector's Program Implementation



Source: Engineering Services Division, MOH

ENVIRONMENTAL HEALTH RISK SECTOR

NATIONAL ENVIRONMENTAL HEALTH ACTION PLAN UNIT (NEHAP)

In year 2022, the NEHAP Unit which acts as the Secretariat of NEHAP Malaysia has implemented the main programs as shown in **Figure 7.17**.

Figure 7.17
Main Programs of NEHAP Unit for Year 2022

NATIONAL ENVIRONMENTAL HEALTH ACTION PLAN (NEHAP)		STATE ENVIRONMENTAL HEALTH ACTION PLAN (SEHAP)		Program	Date
NEHAP Steering Committee - Chairman: Health Director General		2 states PoA Implementation		NEHAP Technical Committee Meeting Bil.1	24 March 2022
NEHAP Technical Committee - Chairman: ESD Director		8 states PoA Development		NEHAP Technical Committee Meeting Bil.2	1 September 2022
Thematic Working Group (TWG) - Chairman: From related agencies		3 states SEHAP Establishment		8th NEHAP Conference 2022	27 September 2022
11				SEHAP/NEHAP Chapter Meeting	7 November 2022
				NEHAP Steering Committee Meeting Bil.1	30 December 2022

Source: Engineering Services Division, MOH

AIR QUALITY UNIT (UKU)

In year 2022, Indoor Air Quality (IAQ) surveillance and monitoring activities were conducted at 15 premises of the MOH to ensure the premises comply with the Industry Code of Practice Indoor Air Quality (ICOP IAQ, 2010) issued by Department of Safety and Occupational Health (DOSH), Malaysia. In the same year, UKU also carried out surveillance of COVID-19 in the environment through CO₂ monitoring as an indicator of indoor ventilation performance in the selected healthcare facilities. IAQ audited 10 selected healthcare facilities as a motoring of KPI for the Research and Technical Support Programme Strategic Plan, 2021-2025 as shown in **Image 7.23**.

Image 7.23
IAQ Activities for year 2022



Source: Engineering Services Division, MOH

ENVIRONMENTAL HEALTH PROTECTION UNIT (PEKA)

Throughout year 2022, PEKA activities focused on enhancement of Environmental Health Risk Inventory (EHRI) System and provides technical reviews related to environmental health engineering. PEKA achievements are as shown in **Figure 7.17**.

Figure 7.17
Achievements of PEKA in 2022



Source: Engineering Services Division, MOH

WASTE AND HYGIENE SECTOR (SH)

IMPLEMENTATION OF WASH IN HEALTHCARE PROGRAMME

The acquisition of Water, Sanitation and Hygiene (WASH) basic data information at healthcare facilities under the MOH for 150 clinics without PSK has been successfully implemented as targeted for year 2022. The data obtained along with improvement actions for healthcare facilities that are at a limited or no service level will be reported to the Joint Monitoring Program (JMP) level of the WHO and UNICEF.

Table 7.6
Summary of WASH Services Coverage for 150 Clinics Without PSK

Wash Services Level/ WASH Provision	Water	Sanitation	Hygiene	Healthcare Waste Management	Environmental Cleaning
Basic Services	135	67	122	126	95
Limited Services	0	83	26	24	45
No Services	15	0	2	0	10
Total Facilities	150	150	150	150	150

Source: Engineering Services Division, MOH

BIOMEDICAL SECTOR (SB)

SB responsibilities includes:

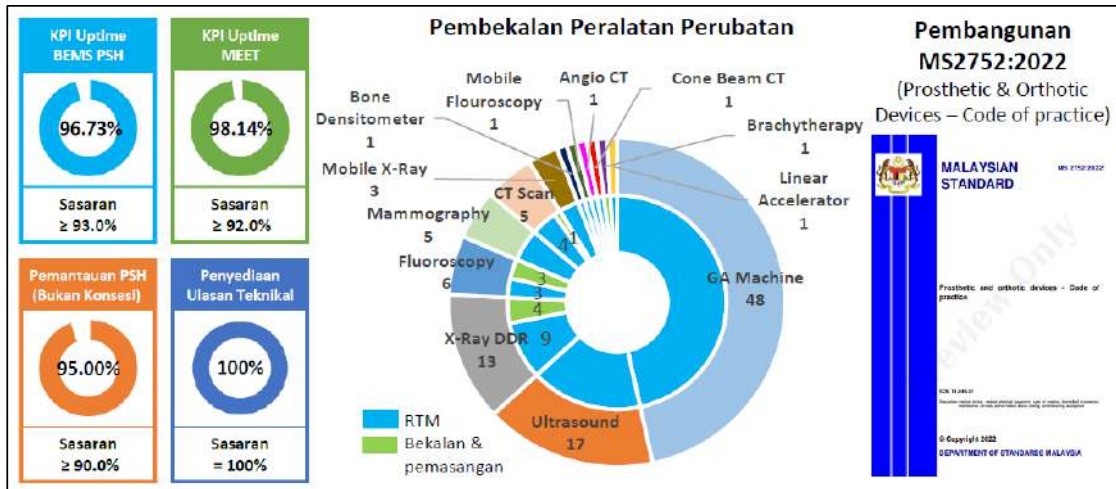
- i. supervision of the biomedical engineering maintenance services (BEMS) at MOH healthcare facilities under the HSS Concession Agreement, Medical Equipment Enhancement Tenure (MEET) Programme and other BEMS contracts;
- ii. supply of medical equipment in MOH facilities through approach such as Supply & Install and Replacement Through Maintenance (RTM) Programme; and
- iii. providing advisory services such as forensic investigation, technical advice, and development of standard and guidelines.

Table 7.7
SB Activities for Year 2022

Matters	Supervision			Supply of Medical Equipment	
	PSH (Concession)	PSH (Non-concession)	MEET	Supply & Installation	RTM programme
No. of Facility	148	9	3,035	8	57
No. of Equipment	209,700	9,375	141,631	9	94

Source: Engineering Services Division, MOH

Figure 7.18
SB Achievements for Year 2022



Source: Engineering Services Division, MOH

MEDICAL RADIATION SURVEILLANCE DIVISION (MRSD)

The MRSD plays a major role as a competent authority in enforcing the usage of ionising radiation and non-ionising radiation for medical purposes and becoming one of the prominent agencies in MOH and internationally. This role also involves advisory services in aspects of medical physics.

MRSD comprises:

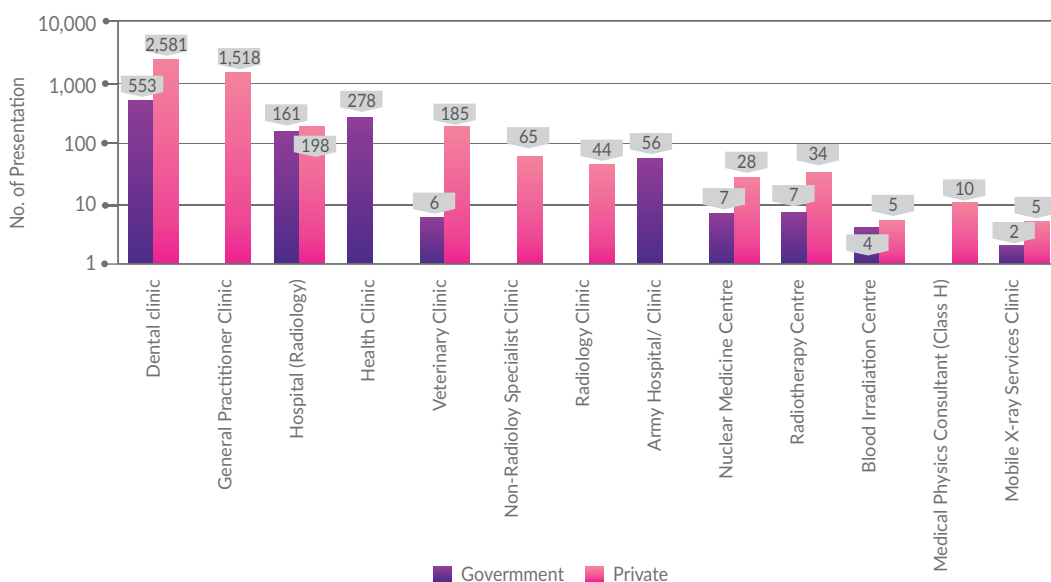
- i. Licensing & Registration Control Branch (Licensing Section & Registration Section);
- ii. Enforcement & Prosecution Branch (Enforcement Section & Prosecution Section);
- iii. Medical Physics Services Branch (Code and Standard Section & Technical Service Section); and
- iv. Inter-Agency Cooperation & Training Branch (Inter-agency Cooperation Section & Training Development Section).

LICENSING AND REGISTRATION CONTROL BRANCH

LICENSING UNDER THE ATOMIC ENERGY LICENSING ACT [ACT 304]

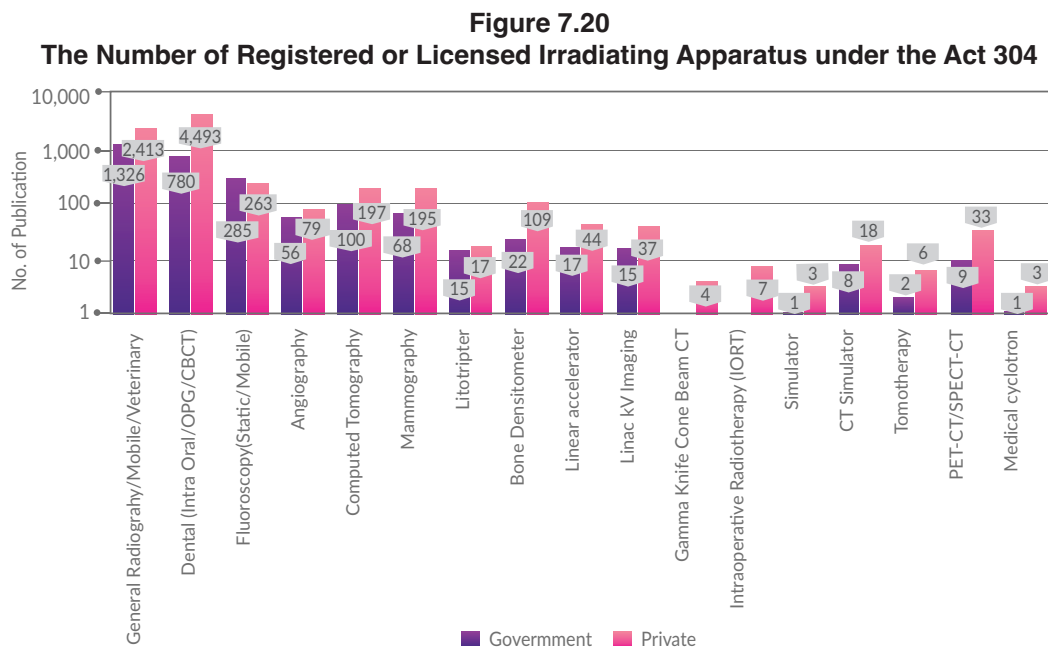
A total of 2,067 licenses were issued to private medical institutions in year 2022. These include 548 new licenses and 1,519 renewals of the license. Overall, 5,747 public and private medical institutions have irradiating apparatus. It consists of 1,074 public medical institutions and 4,673 private medical institutions respectively as shown in **Figure 7.19**.

Figure 7.19
Number of Licensed or Registered Medical Institutions under the Act 304



Source: Medical Radiation Surveillance Division, MOH

Meanwhile, there were a total of 10,626 registered or licensed irradiating apparatus in both public and private medical institutions. The number of irradiating apparatus by type of modality is shown in **Figure 7.20**. Besides irradiating apparatus, a total of 1,619 radioactive sources consist of 1,438 sealed sources and 181 unsealed sources were registered or licensed in public and private medical institutions as shown in **Table 7.8**.



Source: Medical Radiation Surveillance Division, MOH

Table 7.8
The Number of Registered or Licensed Radioactive Sources under the Act 304

Type of Radioactive Source	Services	No. of Sources		Total
		Public	Private	
Sealed Sources	Radiotherapy	7	829	836
	Nuclear Medicine	235	355	590
	Blood irradiator	7	5	12
Unsealed Sources	Nuclear Medicine	46	135	181
Total		295	1,324	1,619

Source: Medical Radiation Surveillance Division, MOH

ENFORCEMENT AND PROSECUTION BRANCH

ENFORCEMENT AND PROSECUTION ACTIVITIES UNDER ACT 304

In year 2022, a total of 1,295 medical institutions were inspected, comprises of 47 public medical institutions and 1,248 are private medical institutions. It was found that 93.9 per cent of the medical institutions complied with the regulatory requirements while the remaining 7.1 per cent did not comply at the time of inspection as shown in **Table 7.9**. Follow-up actions were taken to ensure all medical institutions adhered to the regulatory requirements under Act 304.

Table 7.9
The Number of Inspections Performed in Year 2022

Category	No. of Inspection (%)	Status of Compliances	
		Comply (%)	Not Comply (%)
Public: Compliance with Registration Requirements	47 (_%)	47 (_%)	0 (0%)
Private: Compliances with the Licensing requirements	1,248 (_%)	1,169 (_%)	79 (_%)
Total	1,295 (100%)	1,216 (93.9%)	79 (7.1%)

Source: Medical Radiation Surveillance Division, MOH

Besides the inspection works, a total of 24 medical physics consultancy companies that performed quality control tests for public and private medical institutions were audited. All the tests were performed according to the approved test protocols. A summary of enforcement and prosecution activities in year 2022 is shown in **Table 7.10**.

Table 7.10
Enforcement and Prosecution Activities in Year 2022

Activities	Total
Issuance of Notice under the Atomic Energy Licensing Act 1984 (Act 304)	
• License renewal notice	1,331
• License renewal reminder	165
Number of raids under the Act 304	10
Number of radiation dose complaints exceeding prescribed dose limits	10
Number of complaints of violation of the Act 304	41
Investigation visit	33
Number of legal actions under Act 304	3

Activities	Total
Number of Investigation Papers (IPs) opened for prosecution purposes under the Act 304	8
Number of cases of suspended of licenses under Act 304	5
The number of premises of prohibited of use, such as prohibition stickers, pasted during the inspection visit	18
The percentage of legal actions taken on the premise of expired license, such as investigation, enforcement and prosecution action	100
X-ray Radiograph Audit Report 2022	
• Numbers of premises audited	236
• Satisfactory/comply	190
• Non-compliance	46

Source: Medical Radiation Surveillance Division, MOH

MEDICAL PHYSICS SERVICES BRANCH

TECHNICAL SERVICE ACTIVITIES AND CODES & STANDARDS

In year 2022, a total of 156 technical advice on Ionising Radiation (IR) and Non-Ionising Radiation (NIR) activities were provided to MOH hospitals and clinics. The details are listed in **Table 7.11**.

Table 7.11
Technical Advice on Ionising Radiation (IR) and Non-Ionising Radiation (NIR)

Type of Activities	Total
Preparation and evaluation of IR modality specifications and related facilities	24
Site visits, technical advice and testing & commissioning (T&C) -	
• T&C visit, Technical Specification Adherence (TSA)	
• Project progress/site visit	99
• Shielding verification on the thickness	
Random repeat test (RRT) on quality control (QC) testing at the public facilities	27
Radiation safety technical plan/drawing & protection review for new public clinic or hospital projects	6
Total	156

Source: Medical Radiation Surveillance Division, MOH

Furthermore, other activities related to the technical section for year 2022:

- a. Engagement and road show of Quality Management Audits in Nuclear Medicine Practices (QUANUM). It benefits 91 participants across three (3) zones East Malaysia (Sarawak), Southern Region (Johor) and Northern Region (Pulau Pinang) from 13 nuclear medicine centres.
- b. Coordination meeting:
 - i. Standing Committee on Quality Assurance Programme (QAP) for Nuclear Medicine Services under Act 304.
 - ii. Standing Committee on Quality Assurance Programme (QAP) for Radiology Services under Act 304.
 - iii. Standing Committee on Quality Assurance Programme (QAP) for Radiotherapy Services under Act 304.
 - iv. Standing Committee on Quality Assurance Programme (QAP) for Dental Services under Act 304.
 - v. Steering Committee for Certification on Radiation Protection Officer (RPO) (Medical) under Act 304.
 - vi. Working Group for Certification on Radiation Protection Officer (Medical) under Act 304.

MRSD is also actively involved in the development of new documents involving the use of medical radiation in Malaysia. Among the activities in 2022 as in **Table 7.12**.

Table 7.12
Activities under Code & Standard

Activities	Notes
Guidelines for the Implementation of the Competency Log Book for New Workers of Computed Tomography (CT Scanner) and Mammography under the Atomic Energy Licensing Act 1984 (Act 304)	The document has been distributed to public and private medical facilities through the circular letter of the Director General of Health No. 8/2022 on 15 March 2022
Guidelines on Ultrasound Usage in Medical Practice	The document has been distributed to public and private medical facilities through the circular letter of the Director General of Health No. 22/2022 on 3 November 2022
Technical Quality Control Protocol Handbook for Gamma Camera, Single Photon Emission Computed Tomography (SPECT), and Single Photon Emission Computed Tomography/Computed Tomography (SPECT/CT) Systems (Version 2022)	The document has been distributed to public and private nuclear medicine facilities through a circular from the Director General of Health dated 2 November 2022
Technical Quality Control Protocol Handbook for Positron Emission Tomography/Computed Tomography (PET/CT) System (Version 2022)	
Technical Quality Control Protocol Handbook for Dose Calibrator, Gamma Counter/Well Counter/Thyroid Uptake System and Gamma Probe (Version 2022)	

Activities	Notes
Technical Quality Control Protocol Handbook for Radiography System (General and Mobile Radiography) (Version 2022)	The document has been distributed to public and private medical facilities through a circular from the Director General of Health dated 27 November 2022
Technical Quality Control Protocol Handbook for Fluoroscopy System (General Fluoroscopy and Mobile C-Arm) (Version 2022)	
Technical Quality Control Protocol Handbook for Computed Tomography (CT) Scanner (Version 2022)	
Technical Quality Control Protocol Handbook for Computed Radiography (CR) System (Version 2022)	
Technical Quality Control Protocol Handbook for Digital Radiography (DR) System (Version 2022)	

Source: Medical Radiation Surveillance Division, MOH

During year 2022, there are activities related to radiation safety and research as follows:

- a. Dissemination of information through training/technical cooperation with related government agencies
 - i. MRI Safety in Clinical Practice Training organised by *Hospital Pengajar Universiti Putra Malaysia* (23 July 2022); and
 - ii. Technical Cooperation for Extremely Low Frequency (ELF) and Electromagnetic Field (EMF) Testing at the *Dewan Bahasa & Pustaka* (DBP) with the Malaysian Nuclear Agency (MNA) (29 December 2022).
- b. Research
 - i. Medical Radiation Exposure Study for the Development of Malaysian Diagnostic Reference Level (DRL) in Medical and Dental Imaging Services
 - The data collection training course was conducted on 1 to 2 March 2022.
 - Background information survey was also conducted at the beginning of 2022.

INTER-AGENCY COOPERATION AND TRAINING BRANCH

INTER-AGENCY TECHNICAL COOPERATION AND TRAINING DEVELOPMENT

MRSD is always at the forefront in ensuring the level of usage of irradiating apparatus and radioactive sources in a safe and effective manner in Malaysia. Thus, to support these efforts, MRSD has established cooperation between agencies in the country and abroad as shown in **Table 7.13**.

Table 7.13
Inter-Agency Cooperation Activities for Year 2022

Activities	Comments/ Achievements
Regional cooperation with international agencies for the medical and health sectors	<p>International Atomic Energy Agency (IAEA)</p> <ul style="list-style-type: none"> i. Country Programme Framework (CPF) 2024-2027; ii. IAEA Expert Mission: Enhancement on Security Culture Self-Assessment for Medical Institutions in Malaysia; iii. IAEA Expert Mission: Establishment on Security Culture Self-Assessment for Medical Institutions-Second Cycle; iv. Seventh Annual Meeting of the Ad-Hoc Working Group on Alternatives to High-Activity Radioactive Sources; v. Comprehensive Capacity-Building Initiative for State System of Accounting and Control (SSACs) and State Authority Responsible for Safeguards Implementation (SRAs) (COMPASS) Webinar; vi. COMPASS Expert Support: Development of License Condition and Licensing Procedures (Malaysia-Hungary) No. 1/2022; vii. COMPASS Expert Support: Development of License Condition and Licensing Procedures (Malaysia-Hungary) No. 2/2022; viii. Additional Protocol Outreach Program under the 2021 - 2022 COMPASS Initiative; and ix. IAEA Mission on International Nuclear Security Advisory Service (INSServ). <p>Office of Radiological Security, Department of Energy (ORS-DOE) United States of America (USA)</p> <ul style="list-style-type: none"> i. Meeting of Proposal of the Replacement of Cesium-137 (Cs-137) Blood Irradiation Machine with Non-Radioisotopic-Based Alternative Technology for University Medical Facility with the ORS and MOHE; ii. Site Visit of Physical Security System Assessment at Medical Facilities by ORS; iii. Workshop on EBeam/X ray technology in Daejeon, Korea; and iv. Management of Security System maintenance contract renewal between Medical Facilities and ORS (10 facilities)
National level of inter-agency cooperation for the medical and health sectors	<p>Atom Energy licensing Board (AELB), MOSTI</p> <ul style="list-style-type: none"> i. 106th Board Meeting (No. 3/2021); ii. 107th Board Meeting (No. 1/2022); iii. 108th Board Meeting (No. 2/2022); and iv. 109th Board Meeting (No. 3/2022). <p>Department of Atomic Energy (Atom Malaysia), MOSTI</p> <ul style="list-style-type: none"> i. Meeting of Activities Coordination under the Act 304 No. 2/2021; ii. Meeting of Activities Coordination under the Act 304 No.1/2022; iii. Dialogue Session between the Radiation Regulatory Division (RRD), Atom Malaysia and MRSD;

Activities	Comments/ Achievements
	<p>Atomic Energy Licensing Board (AELB), MOSTI</p> <ul style="list-style-type: none"> iv. Safeguards Webinar Session under COMPASS National Training Workshop; v. Verification Visit of Nuclear Materials for Medical Usage; vi. IAEA ASEANTOM Technical Visit on Security Inspections of Radioactive Material and Associated Facilities, Hospital Tunku Azizah, Kuala Lumpur; vii. Follow-up Meeting to Discuss the Issue of Controlling the Sale of Radioactive Materials Produced by the Cyclotron, National Cancer Institute (NCI). <p>Nuclear Malaysia Agency, MOSTI</p> <p>Coordination of a Memorandum of Cooperation between the Malaysian Nuclear Agency and the MOH on Cooperation in the Field of Research, Development, Services and Training Related to Health using Nuclear Technology.</p> <p>Ministry of Science, Technology and Innovation (MOSTI)</p> <p>Discussion on Collaboration with Rosatom State Nuclear Energy Corporation (ROSATOM), Russia in the health field organised by the Strategic Technology and S&T Application Division, MOSTI.</p> <p>Malaysian Protection Security Training Institute (ILKEM), Prime Minister Office (PMO)</p> <p>Organisation of a threat assessment course for hospital/medical centre facilities that have Category 1 radioactive material.</p>
Development of document	Guidance Document on Developing Site Security Plan for Medical Facilities in Malaysia (Draft)
Project Management of Comprehensive Medical Radiation Information System (COMRAD)	Working Committee on the Development of the National Blueprint for Regulatory Authority on Radiological Information System (NBRAIS) Engagement Session
Development of a nuclear security programme	<ul style="list-style-type: none"> i. Meeting of the Working Committee for the Development of the Security Culture Programme at the MOH No. 1/2022; ii. Meeting of the Working Committee for the Development of the Site Security Plan Programme at the MOH No. 1/2022; iii. Meeting of the Steering Committee for the Development of the Nuclear Security Programme at the MOH Level No. 1/2022.
Coordination Meeting: development of the BKRP's strategic plan 2021 - 2025	Engagement session on the development of quality management documents towards MS ISO 9001:2015 certification - MRSD Risk Management and Strategic Plan.
Number of Responses <ul style="list-style-type: none"> i. Statement of Ownership ii. Brief and Speaking Notes 	12 responses of the Statement of Sale of Radioactive Materials and Irradiating Apparatus (LPTA/BM/2) under Act 304. 9 briefs and speaking notes.

Source: Medical Radiation Surveillance Division, MOH

In addition, the aspect of human capital development is one of the important agendas in MRSD. Therefore, the following is a summary of activities for training including engagement sessions conducted in 2022 as shown in **Table 7.14**.

Table 7.14
Engagement and Training Development Activities for Year 2022

Activities	Total/ Achievement
Number of continuous medical education (CME) approvals under the Act 304	190
Number of dissemination of information through CME sessions under the Act 304	196
Total hours of information dissemination by MRSD's officers through the CME program	236
Number of personnel trained	492
Number of Training Programs Organised/Attendance of Generic and Functional Courses for MRDS Officers	42
Engagement session with Atomic Energy Licensing Board (AELB):	
<ul style="list-style-type: none"> • Coordination of Enforcement and Prosecution Activities Under the Atomic Energy Licensing Act 1984 Between the Enforcement & Prosecution Branch, MRSD, MOH & AELB, MOSTI 	
<ul style="list-style-type: none"> • Number of sessions engaged 	1
<ul style="list-style-type: none"> • Number of attendances 	36
Engagement session with JKN to develop the document of Subject Matter Expert (SME) for Medical Physicist (radiation regulatory in medicine)	
<ul style="list-style-type: none"> • Number of states involved 	13
<ul style="list-style-type: none"> • Number of officers involved 	34
Engagement session and updates of registration programme with the institutions – supervised by the Registration Section, MRSD:	
<ul style="list-style-type: none"> • Guidelines for Application for Registration of Radiation Facilities for Diagnostic Radiology Services in Government Medical Facilities 	
<ul style="list-style-type: none"> • Number of sessions engaged 	5
<ul style="list-style-type: none"> • Total number of states involved 	5
<ul style="list-style-type: none"> • Total number of attendance Responsible Persons (OYB) 	88
<ul style="list-style-type: none"> • Total number of public health institutions 	49
Engagement session and updates of registration programme with the institutions (Malaysian Armed Forces, ATM) supervised by the Registration Section, MRSD:	
<ul style="list-style-type: none"> • Number of sessions engaged 	3
<ul style="list-style-type: none"> • Number of attendances 	59
<ul style="list-style-type: none"> • Zone/region 	3

Activities	Total/ Achievement
Engagement session programme and document briefing for uidelines for Application for License for Radiation Facilities in Radiology Services in Private Medical Facilities Including University Medical Facilities	
<ul style="list-style-type: none"> • Number of sessions engaged • Number of states involved • Total attendance of Licensees (Private) 	<p>2 5 250</p>
Number of recognised training centre under the Atomic Energy Licensing Act (Act 304) for radiation workers	
<ul style="list-style-type: none"> • Nuclear Medicine • General practitioners • Dental Orthopantomography (OPG) and Cone Beam Computed Tomography (CBCT) 	<p>2 3 3</p>
Continuous Professional Education (CPE) Programme:	
<ul style="list-style-type: none"> • Product or technology updates by the local and international institutions 	10
Number of certifications for trained medical physicist in MOH - QC testing for general radiography & dental intra-oral machine:	
<ul style="list-style-type: none"> • MRDS (Headquarters) • JKN 	<p>16 27</p>
Achievements of KPIs for Research & Technical Support (R&TS) Programme Strategic Plan 2021 – 2025 -:	
i. KPI enhancing consultancy and provision of technical services	
<ul style="list-style-type: none"> • Information sharing on the awareness and safety of IR and NIR medical equipment to the public Number of National Programmes Conducted (160%) 	8
ii. KPI intensifying capacity building	
<ul style="list-style-type: none"> • Conduct training for capacity building Radiological Emergency Preparedness and Response (100%) • Strengthening the competency of MOH physicist through training programme Develop Comprehensive Module Training (100%) 	<p>1 1</p>

Source: Medical Radiation Surveillance Division, MOH

NATIONAL INSTITUTES OF HEALTH (NIH)

OFFICE OF NIH MANAGER

The Office of NIH Manager plays a key role in governance and technical support to the NIH institutes which includes the development of NIH strategic plans, research conduct policies and guidelines as well as health research priority areas. The Office of NIH Manager is committed to helping NIH increase quality output by strengthening research governance and technical support.

The Unit of Research Management and Fund plays a role in processing research allocation applications from NIH and MOH researchers. For year 2022, a total of RM22,945,149 (91%) has been distributed spent to implement projects according to the following clusters:

Table 7.15
Projects Conducted under Research and Development Allocation for Year 2022

Cluster	No. of Projects	Total Allocations
Communicable Diseases	23	RM3,000,000
Non-Communicable Diseases	23	RM3,000,000
Sustainable Environment and Climate Change	5	RM1,180,000
Universal Access of Quality Healthcare	10	RM700,000
Biomedical	32	RM4,329,200
Aged Population	7	RM1,181,242
Innovation and Health Technology	5	RM739,993
NHMS 2022: Adolescent Health (NHS1)	3	RM2,661,200
NHMS 2021: Maternal & Child Health (NHS2)	1	RM5,713,280
National Oral Health Surveys (NHS3)	1	RM440,234
Total	110	RM22,945,149

Source: National Institutes of Health, MOH

SECTOR FOR ETHICS AND RESEARCH SURVEILLANCE (SEPP)

SEPP under the Office of the Manager NIH is responsible for the processing of research applications, ethical approval applications to conduct research at MOH and the processing of clinical research activities reports. Throughout the year 2022, the National Medical Research Register (NMRR) has processed as many as 1,520 research registrations. 1,438 of these were considered as Investigator Initiated Research (IIR) while 82 were from Industry Sponsored Research (ISR). The breakdown of the Research Type for Research Registered with NMRR in the year 2022 were as shown in the table below.

Table 7.16
Type for Research Registered with NMRR for Year 2022

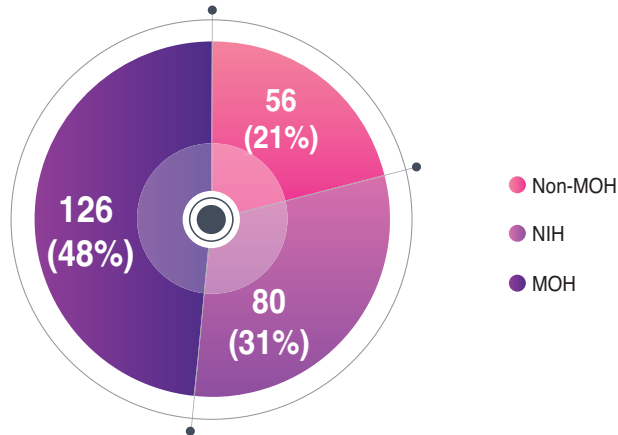
Research Type	ISR	IIR
Applied Research	2	58
Clinical Audit/Quality Assurance/ Quality Control	0	14
Interventional	75	54
Mixed Method Research	0	51
Observational	5	1,172
Proof of Concept/ Theoretical Research	0	9
Qualitative Research	0	55
Registry/ Biobanking/ Clinical Database	0	7
Special Write Up	0	2
Systematic Review / Scoping Review/ Rapid Review/ Meta-analysis/ Meta Synthesis	0	16
Total	82	1,438

Source: National Institutes of Health, MOH

SECTOR FOR BIOSTATISTICS AND DATA REPOSITORY (SBDR)

SBDR serves to provide consultancy services related to research methodology and data analysis. This sector also functions as Data Repository Center that stores and supplies research data based on requests from researchers. For year 2022, a total of 262 consultation sessions had been conducted through the platform ebiostatistics.nih.gov.my (**Figure 7.21**).

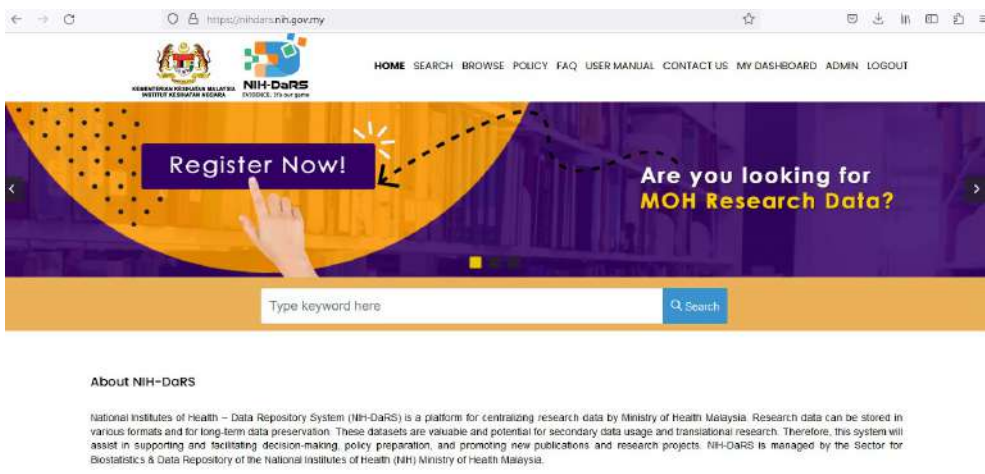
Figure 7.21
Number of Consultation for Year 2022



Source: National Institutes of Health, MOH

In addition, SBDR in collaboration with the Information Technology Sector and vendors have developed data repository system known as NIH-DaRS which was launched on 21 April 2022. Throughout year 2022, a total of 15 study data were submitted into the system and 17 data requests were processed. SBDR also received and processed 36 National Registration Department Death Record Matching Data applications.

Image 7.24
NIH-DaRS Homepage



Source: National Institutes of Health, MOH

SECTOR FOR EVIDENCE-BASED HEALTHCARE (SEBH)

SEBH provides a focal point for promoting the principles of evidence-based practice through engagement, knowledge sharing, research and education. This sector conducts systematic reviews, meta-analysis, evidence maps, scoping reviews and other scientific research.

Figure 7.22
Activities and Achievements



Source: National Institutes of Health, MOH

SECTOR FOR INFORMATION RESEARCH RESOURCES (SSMP)

SSMP or NIH library supports NIH research activities by providing reference sources needed by NIH members. To meet the information needs of NIH constituents, the SSMP subscribed to three (3) e-journal databases and two (2) reference databases in year 2022, including ScienceDirect (e-journal), Wiley Online Library (e-journal), SpringerNature (e-journal), Proquest/IG Library (e-book), Scopus (reference database) and Cochrane Library (reference database). Access to the Cochrane Library database is open to all Malaysians. Numbers for full-text article downloads from subscribing e-journal databases in year 2022 are ScienceDirect (157,770), Wiley Online Library (38,126) and SpringerNature (41,096), whereas Scopus (3,873) and Cochrane Library (92,302) usage for reference databases.

SSMP has subscribed to MyLOFT web hosting to allow researchers to access subscribed databases outside the NIH site and Turnitin App is a paper similarity-checking service. The Turnitin application, a research assistance tool, was used to review a total of 31 manuscripts for review requests from the NIH, sections at the MOH Headquarters and ILMOH. Other research support activities executed are systematic review and scoping review clinics, CME, user education and research article searches.

HEALTH PERFORMANCE UNIT (HPU)

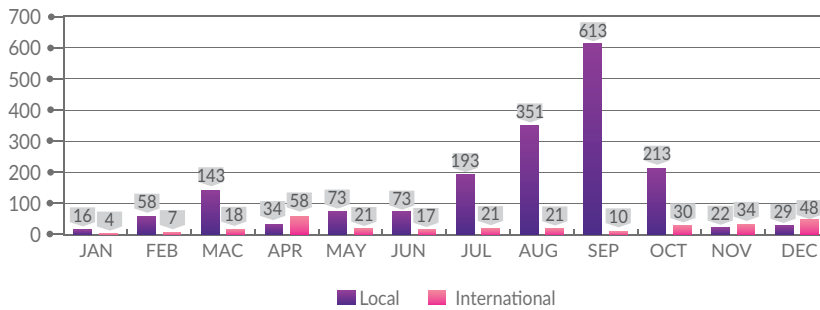
HPU has developed a Health System Performance Dashboard (HSPD) that displays healthcare performance at the national, facility and individual levels. HSPD is a Public Sector Big Data (DRSA) 2.0 product which co-sponsored by MAMPU from year 2019 to 2023. This big data analysis was made possible with data expertise from NIH, Planning Division, BPP and BPM.

HSPD is also developing a framework for monitoring the performance of individual professionals by developing benchmarks for the efficiency of service delivery within the ministry. This framework includes continuous monitoring and evaluation of the professional development of healthcare workers, in an effort to deliver patient-centred healthcare services.

SCIENTIFIC COMMUNICATION AND DISSEMINATION UNIT

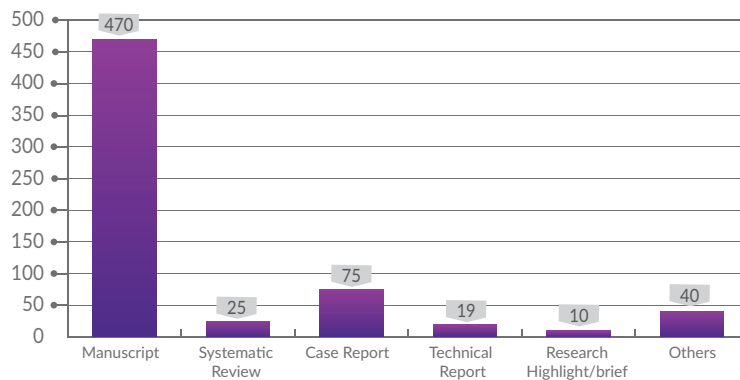
The Scientific Communication and Dissemination Unit is responsible in processing the applications, reviews and approval of scientific publications in the MOH. Throughout year 2022, a total of 2,107 applications for local and international scientific presentations as well as 639 applications for scientific publications have been approved as shown in **Figure 7.23**.

Figure 7.23
Scientific Presentation for Year 2022



Source: National Institutes of Health, MOH

Figure 7.24
Scientific Publications in Year 2022



Source: National Institutes of Health, MOH

OCCUPATIONAL SAFETY & HEALTH UNIT (OSH)

OSH responsible to ensure occupational safety and health in NIH. In year 2022, OSH has successfully carried out activities such as COVID-19 booster injection for first and second booster, Influenza vaccination, Hepatitis B vaccination, Tuberculosis screening, chemical biological monitoring, health screening (KOSPEN WOW 2022), *Kursus Minda Sihat*, Good Manufacturing Practice (GMP), Good Laboratory Practice (GLP) and blood donation campaign.

In regard to safety, OSH successfully performs activities such as laboratory, cafeteria and kindergarten audit, fire safety talk, briefing of Emergency Response Team (ERT) members, evacuation and mock fire drill, chemical emergency preparedness course, Basic Occupational First Aid, CPR and AED Certification (BOFA-C) course, basic fire training course and medical standby committee during NIH inauguration ceremony.

OSH also carried out research projects in collaboration with other NIH institutes such as:

- i. COVID-19: RTK Antigen (RTK-Ag) kit validation with Institute for Medical Research (IMR);
- ii. Portable breathalyser for Rapid COVID-19 Detection (Traxie 2.0) with Institute for Clinical Research (ICR);
- iii. COVID-19 antibody surveillance through blood taking collaborate with IMR (for NIH staff) and Institute for Public Health (IKU) (for Malaysian citizen);
- iv. As Field Supervisor in Sabah to completed NHMS MCH 2022 survey; and
- v. Collaborate with *Kelab NIH*, Puspanita IMR and *JK Gaya Hidup Aktif NIH* in successfully organising *Bulan Malaysia Sihat Sejahtera (BMSS)*.

COLLABORATION AND INNOVATION UNIT

The Collaboration and Innovation Unit serves to propagate research collaboration and innovation activities within MOH as well as national and international collaborative efforts. It also supports the administrative process of research collaboration and innovations within its scope.

Coordination of networks for collaborative research and its activities, managing collaborations for innovations between the institute and other agencies including national and international organisations.

- The unit has prepared informative flow charts of procedures of collaboration.
- Coordinated the Technical Working Group members in NIH for Public Expenditure Review by The World Bank Group.
- Prepared Cabinet Memorandums (CM) for Precision Medicine, Clinical Trial Hub and Digital Health and CM for Exception for International Research Collaborations.

Data and information on MOU, intellectual properties, innovative products and commercialisation

- Coordinating the Anugerah Inovasi Kementerian Kesihatan Malaysia 2022 and coordinating the nomination process for the Due Diligence Workshop for the Malaysian Commercialisation Year (MCY) 2022 and management of the intellectual property (IP).

Registration and management of IPs for research products

- The IP registration and management including the annual renewal of IP using the Research Management Funds in NIH.

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CONSULTATION (MOU/RA)

Innovation and commercialisation activities

- Various programmes including the six (6) IP Commercialisation Webinar in collaboration with Malaysian Research Accelerator for Technology & Innovation (MRANTI).
- Negotiation Skills in Research Collaboration course.
- National Technology and Innovation Sandbox (NTIS) collaboration between MOH and MOSTI via MRANTI.
- Various situational analyses to create a business wing in NIH.

INSTITUTE FOR CLINICAL RESEARCH (ICR)

ICR has been providing research-related services to achieve the MOH vision and mission by focusing on clinical trials, research training and research collaboration. In the COVID-19 pandemic, ICR has been leading several vaccine and drug trials, and collaborating with MONASH University, University Medical Centre Utrecht, National Institutes of Health United State (NIH, US), UNICEF and many more.

In year 2022, ICR published 139 manuscripts, of which 110 manuscripts were published in international peer-reviewed journals and the rest in local journals. One key publication in the JAMA Internal Medicine (impact factor 44.4) titled *Efficacy of Ivermectin treatment on disease progression among adults with mild to moderate COVID-19 and comorbidities: The I-TECH randomized clinical trial* received over 842,000 views with 51 citations.

ICR maintains a very high level of Research Consultation Clinics (RCC) within the 37 CRCs network in MOH hospitals. In addition, ICR served as the secretariat for Good Clinical Practice (GCP) and conducted 63 GCP workshops including examinations from both the public and private sectors. In year 2022, a total of 2,659 participants attended GCP workshops, while 2,982 underwent GCP examinations.

WORLD NEGLECTED TROPICAL DISEASES (NTD) DAY 2022

World NTD Day has been observed on 30 January annually since 2019 as part of a campaign to raise awareness and efforts to end NTDs. The third World NTD Day 2022 with the theme **100% Committed** which calls upon global leaders to show they are 100 per cent committed to ending neglected tropical diseases. ICR took charge of educational activities, social media promotions and the *Light Up* campaign. Over 50 landmarks in 28 countries worldwide were lit up in orange and purple hues on 30 January 2022, including the Saloma Link in Kuala Lumpur, Malaysia.

Image 7.25
The Light Up Campaign at the Kuala Lumpur Saloma Link



Source: Institute for Clinical Research, MOH

COLLABORATION WITH THE INSTITUTE OF MEDICAL BIOLOGY CHINESE ACADEMY OF MEDICAL SCIENCES (IMBCAMS)

Randomized, Double-blinded, Placebo Controlled Phase III Clinical Trial for the Evaluation of Efficacy and Safety of SARS-CoV-2 Vaccine, Inactivated (Vero Cell) in Healthy Population Aged 18 years and Above in Malaysia is the first COVID-19 vaccine trial in Malaysia with collaboration of IMBCAMS, ICR and eight (8) hospitals including the Centre for Clinical Trial (CCT) in Ampang Hospital. This trial involved vaccine trial and recipient of placebo with total volunteers enrolled initially were 375 while only 190 volunteers were remained in crossover trial.

COLLABORATION WITH CANSINO BIOLOGICS INC. FOR PHASE III CLINICAL TRIAL - THE WORLD'S FIRST INHALED FORM OF COVID-19 VACCINE

MOH has launched another research collaboration of clinical trial COVID-19 vaccine involving Cansino Biologics Inc. and CRC. The CCT Ampang Hospital is one of the three (3) clinical trial sites involved in the research. The phase III clinical trial is to test the efficacy and safety of an inhaled vaccine (Recombinant Adenovirus Type 5 Vector vaccine, Convidecia Air™ from Cansino) as a second booster in a head-to-head comparison to Pfizer's mRNA vaccine outside China. The trial involved 540 participants aged 18 years and above with 353 participants recruited CCT Ampang Hospital. The trial officially commenced in August 2022 and was scheduled to be completed by May 2023.

Image 7.26
Official Visit of Cansino Biologics Inc. Representatives



Source: Institute for Clinical Research, MOH

THE LAUNCH OF MALAYSIA COUNTRY REPORT FOR THE STRENGTHENING OF MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT (MHPSS) SYSTEMS AND SERVICES FOR CHILDREN AND ADOLESCENTS IN THE EAST ASIA AND PACIFIC REGION RESEARCH

The ICR, in collaboration with UNICEF and the Burnet Institute Australia, led a regional MHPSS research project in Malaysia, Thailand, the Philippines, and Papua New Guinea. The research findings are disseminated in a country report and infographic which were launched on 29 August 2022 by Deputy Minister of Health I.

Image 7.27
The Launch of MHPSS Report and Infographic



Source: Institute for Clinical Research, MOH

THE NATIONAL INSTITUTES OF HEALTH (NIH) UNITED STATES OFFICIAL VISIT

ICR coordinated an official visit by Dr. Aaron Neal to Malaysia from 5 until 22 September 2022. Dr. Aaron Neal is an internationally trained infectious disease scientist working at the intersection of science, medicine, public health and diplomacy. He serves as a Clinical Research Specialist at the National Institute of Allergy and Infectious Diseases, NIH US. The visit also explored potential research collaborations between NIH US and research organisations in Malaysia.

15TH NATIONAL CONFERENCE FOR CLINICAL RESEARCH

The 15th National Conference for Clinical Research (NCCR) was held on 18 to 20 October 2022, at the St. Giles Wembley Hotel in Penang, Malaysia. The theme of the conference was **Data to Decisions** and was officiated by the Deputy Director-General of Health (Research and Technical Support) followed by the launch of a COVID-19 cough screening app (Cof'e) developed by ICR and a coffee table book commemorating ICR's 22 years of journey. Attended by around 300 participants, the conference featured 20 local and international speakers which showcasing 80 abstracts from researchers nationwide.

3RD CLINICAL EPIDEMIOLOGY WORKSHOP: DIAGNOSTIC AND PROGNOSTIC RESEARCH

In collaboration with *Julius Centre for Primary Care and Health Sciences* in University Medical Centre Utrecht (UMCU), Netherlands, the Centre for Clinical Epidemiology (CCE), ICR organised 3rd Clinical Epidemiology Workshop with a focus on diagnostic and prognostic research. It was held from 18 to 20 October 2022. A total of 40 participants from various MOH and Ministry of Higher Education (MOHE) attended the workshop. Three (3) invited academicians from UMCU gave the lectures for the workshop which aimed to develop an understanding of predictive study designs within clinical epidemiology with hands-on practical sessions.

Image 7.28
3rd Clinical Epidemiology Workshop 2022



Source: Institute for Clinical Research, MOH

COF'E



Cof'e is an online COVID-19 pre-screening application powered by artificial intelligence (AI). It was invented to ease the burden of screening and detecting asymptomatic COVID-19 cases in the Malaysian population. The AI model of Cof'e has achieved more than 85 per cent accuracy in detecting COVID-19 cough including asymptomatic carriers. This application provides an easy screening test for public and saves screening cost for the country. Cof'e can be accessed freely from coughsound.dhri.my.

DETECTION, DIAGNOSIS AND CANCER TREATMENT TIMELINE IN MALAYSIA (DEDICATE) STUDY

This was a multicentre cross-sectional study which aimed to assess the timeliness of cancer detection and treatment in Malaysia by exploring time intervals from cancer detection to treatment. The study sites involved seven (7) public hospitals providing cancer care services in the Peninsular Malaysia. It was a collaborative project between the Centre for CCE, ICR with clinicians from MOH hospitals, Non-Communicable Disease Division and Cancer Research Malaysia. Data collection spanned from the year 2020 with some interruptions during the COVID-19 pandemic and was completed in year 2022.

Image 7.29
DEDICATE Team for Year 2022



Source: Institute for Clinical Research, MOH

LONG COVID SCIENTIFIC SYMPOSIUM

The first Long COVID Scientific Symposium was organised by the Centre for Clinical Outcome Research (CCORe), ICR on the 2 November 2022. Findings from a total of five (5) large studies related to Long COVID were presented, with speakers from the MOH and academia (UKM and UiTM) with total of 85 participants from MOH and private sectors. This symposium was officiated by The Deputy Director General of Health Research and Technical Support (P&ST).

Image 7.30
Long COVID Scientific Symposium



Source: Institute for Clinical Research, MOH

HUMORAL IMMUNITY RESPONSE OF BNT162B2 MRNA VACCINATION AMONG HEALTHCARE WORKERS IN MALAYSIA (VIGILANCE) STUDY

This longitudinal serosurveillance study was conducted on the first batch of COVID-19 mRNA recipients in Malaysia who are the healthcare workers. It was initiated at a time where the sustainability of COVID-19 mRNA vaccine-induced antibody in human was unknown. This study is a collaboration between ICR and IMR with three (3) study sites located across peninsular and Sabah. The project started in year 2021 and is due to complete its 3rd data collection in March 2023.

Image 7.31
Subject Recruitment for VIGILANCE Study



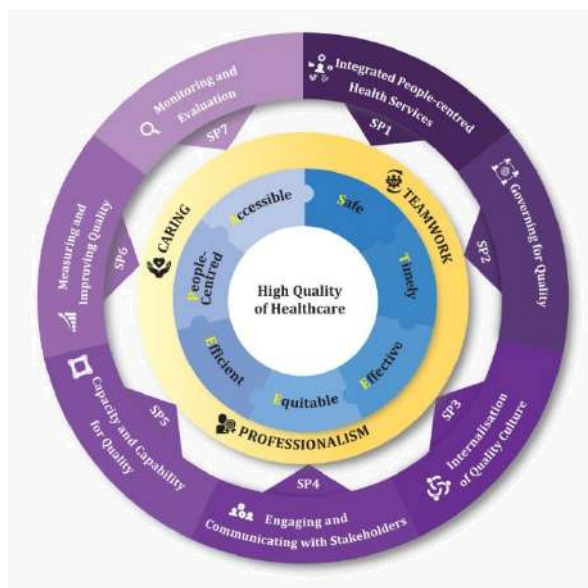
Source: Institute for Clinical Research, MOH

INSTITUTE FOR HEALTH SYSTEMS RESEARCH (IHSR)

THE NATIONAL POLICY FOR QUALITY IN HEALTHCARE (NPQH)

The NPQH was developed upon a comprehensive situational analysis of the quality of healthcare in Malaysia using both data and feedback from stakeholders. This led to formation of seven (7) Strategic Priorities (SP) to address identified areas for improvement. Policies were created to improve each SP area over a five (5) year period (2022-2026) which was documented in a comprehensive action plan, NPQH (Bridging Silos, Accelerating Improvements), which can be accessed from IHSR's website.

Figure 7.25
NPQH Implementation Framework



Source: Institute for Health Systems Research, MOH

11TH NATIONAL QUALITY ASSURANCE (QA) CONVENTION

With the theme of *Revolutionising Quality Towards People-Centred Care*, the 11th National QA Convention 2022 aimed to sustain quality improvement activities in the health system. This platform enables healthcare workers to exchange information, knowledge, ideas, and experience in the implementation of quality improvement activities. The convention was collaboratively organised by IHSR, Penang Health Department, and Malaysian Society for Quality in Health (MSQH) at The Light Hotel in Penang from 4 to 6 October 2022. 130 projects were presented in the oral, poster and short video categories. The QA/QI Champion Awards were given out to 25 health workers who greatly contribute to the development and implementation of health quality activities at the state, national, and international levels.

Images 7.32
11th National QA Convention



Source: Institute for Health Systems Research, MOH

Q BULLETIN

The Q Bulletin is a peer-reviewed journal whose publication was centred on current issues relating to healthcare quality in Malaysia. It aims to serve as a medium for the exchange and dissemination of knowledge on QA topics. All healthcare professionals in Malaysia were encouraged to submit their manuscripts for this annual bulletin publication. Abstracts from the National QA Convention 2022 were also featured in a special Q Bulletin issue. More information can be found by scanning the QR code in **Image 7.33**.

Image 7.33
QR Code for Q Bulletin



Source: Institute for Health Systems Research, MOH

THE COVID-19 CHRONICLES OF MALAYSIA | REVITALISING RECOVERY

Efforts on documenting the events leading up to the COVID-19 pandemic in Malaysia as well as government efforts to overcome the pandemic and its accompanying challenge was continued with *The COVID-19 Chronicles of Malaysia | Revitalising Recovery*, published on 12 September 2022. This report was the fifth in the series, which can be accessed from IHSR's website.

Image 7.34
The COVID-19 Chronicles of Malaysia



Source: Institute for Health Systems Research, MOH

THE PRIMARY HEALTH CARE SYSTEMS (PRIMASYS) EVALUATION

The PRIMASYS project aimed to reflect on the inception and development of PHC in the Malaysian context, and to share experiences and lessons learned with other countries. This was a collaborative effort between IHSR, BPKK and Monash University Malaysia which was funded by the Alliance for Health Policy and Systems Research (AHPSR) of WHO. The project strategy was based on the PRIMASYS framework which focuses on the building blocks of the health system, as well as the processes within and between its structural elements and how their interconnections lead to outcomes. The project employed a multi-method approach for generating evidence.

The final report provided a brief overview of the history and development of PHC in Malaysia, including funding, service delivery methods, descriptions of PHC healthcare personnel, initiatives aimed at empowering people and the response to the COVID-19 pandemic. Emphasis was placed on the ongoing strengthening of PHC as it serves as the first point of contact for healthcare and aims to meet the needs of the entire health continuum.

BEST PRACTICES FOR HEALTHY AND ACTIVE AGEING INITIATIVES

IHSR hosted a workshop on Best Practices for Healthy and Active Ageing, sponsored by the Asia-Pacific Economic Cooperation (APEC) Health Working Group to foster the sharing and cross-fertilisation of ideas and solutions from member economies. Five (5) member economies attended the virtual workshop which comprised policymakers, researchers and champions of Active Ageing. The workshop aimed to harness the best practices (such as policy and experience development, innovative approaches and implementation challenges) from participating economies which may contribute to positive impact of healthy and active ageing.

HEALTH POLICY AND SYSTEMS RESEARCH (HPSR)

Since year 2020, IHSR collaborated with the London School of Hygiene and Tropical Medicine, the United Nations University-International Institute for Global Health, Malaysia (UNU-IIGH) and University of Philippines, Manila to accelerate HPSR capacity building in the Western Pacific Region for health systems strengthening. HPSR is an interdisciplinary field that studies health systems to improve health outcomes and increase efficiency. It draws on multiple health disciplines and aims to inform policies and practices. In year 2022, IHSR represented Malaysia in the 7th Global Symposium on Health Systems Research held in Bogota, Colombia. The presentation on *Strategic Development for Accelerating HPSR Capacity Building in Malaysia: An Experience* shared methods for strategic plan development as well as the challenges and facilitates in the training implementation.

REGIONAL TRAINING CENTRE FOR IMPLEMENTATION RESEARCH (RTC-IR) FOR THE WESTERN PACIFIC REGION

In collaboration with the University of Malaya (UM) and the UNU-IIGH, IHSR formed the Malaysian Global Health Consortium which responsible to be the Regional Training Centre for Implementation Research (RTC-IR) in WHO Western Pacific Region. One of the duties is to provide implementation research training for the region. In year 2022, the RTC-IRs for the Western Pacific and African Regions joined forces to organise a six (6) week Massive Open Online Course on implementation research, with aiming to educate participants on the process of creating implementation research projects that enhance access to effective health interventions for those at risk of diseases due to poverty.

Additionally, an IR workshop was organised locally with the JKN Terengganu. The purpose of this booklet is to provide readers with a basic understanding of IR and guidance for conducting IR research.

Image 7.35
IR Booklet



Source: Institute for Health Systems Research, MOH

INSTITUTE FOR PUBLIC HEALTH (IKU)

NATIONAL HEALTH AND MORBIDITY SURVEY (NHMS) 2022: ADOLESCENT HEALTH SCOPE

The National Adolescent Health Survey 2022 was a nationwide cross-sectional study targeted at secondary school students in Malaysia. The objective of the survey was to determine the prevalence of health risk behaviours and protective factors among adolescents aged 13 to 17 years. The data collection was conducted from June to July 2022 using validated self-administered questionnaire, repeating a similar methodology as in 2012 and 2017. A total of 239 schools out of 240 schools participated in the study, with a total of 33,523 students responded resulting in an overall response rate of 89.0 per cent.

Image 7.36
Adolescents Health Survey Activities



NHMS 2022



Data collection workshop: Practical session for the anthropometry measurement



Classroom situation during the actual data collection



Data processing: Verification of scanned students' answer form

Source: Institute for Public Health, MOH

NATIONAL HEALTH AND MORBIDITY SURVEY (NHMS) 2021: MATERNAL AND CHILD HEALTH (MCH) SCOPE

The second NHMS MCH was planned to be executed in 2021, however, the study was postponed and only successfully conducted from 3 August to 31 October 2022. The aim of the study was to collect information on the latest health status of women of reproductive age between 15 to 49 years, maternal health and under-five health status in Malaysia. The information was needed for the WHO global monitoring under the United Nations' SDG and UHC Indicators. A total of 15,000 randomly selected living quarters and 26,000 respondents participated in the survey.

Image 7.37
The Official Launching of NHMS 2021



Source: Institute for Public Health, MOH

ORANG ASLI HEALTH SURVEY (OAHS)

OAHS has been successfully conducted for the first time in Malaysia to determine the health status of the Orang Asli in Malaysia, which covers seven (7) health scopes: maternal and child health, communicable diseases, non-communicable diseases and their risk factors, nutritional status, oral health status, health service utilisation and environmental pollution. OAHS was officially launched on 16 July 2022 by the Minister of Health at the Sahom Community Hall, Kampar. This survey involved 68 villages with 4,200 living quarters and 16,000 respondents. The data collection was completed in 2 months from July to September 2022.

Image 7.38
OAHS Activities



Source: Institute for Public Health, MOH

EPIDEMIOLOGICAL STUDY ON MORTALITY AND SELECTED MORBIDITY RATES PRE AND POST COVID-19 VACCINATION IN MALAYSIA

Excess mortality is widely accepted as the gold standard to determine the true burden of the COVID-19 pandemic. IKU carried out the estimation of excess mortality in Malaysia, from March 2020 to June 2022. Time series forecasting models were used to determine the expected deaths and were compared with the number of actual deaths that occurred during the time frame. The findings of the study were presented to the Minister of Health, leading to public dissemination of the findings via a press release. The findings of the study were also endorsed by the WHO and presented at the International Association of Official Statistics (IAOS) Conference in Poland in April 2022. The study reported that during the first two (2) years of the COVID-19 pandemic, Malaysia recorded low excess mortality with a P-score of 2.8 per cent. Excess mortality was observed particularly among males of Malay ethnicity with aged 40 and above.

Image 7.39
The IAOS Conference 2022



Source: Institute for Public Health, MOH

THE 2022 UPDATE FOR POST-VACCINATION COVID-19 IMMUNITY AND DISEASE SURVEILLANCE IN MALAYSIA (IMSURE) STUDY

IMSURE study started in June 2021 to primarily monitor the immune response over time following COVID-19 vaccination among more than 2,600 vaccine recipients from the general population in Malaysia. It serves as an evaluation of the COVID-19 National Immunisation Programme and aims to provide evidence for booster policy. The study found that the immune response to the first vaccination waned after three (3) months and this waning was more prominent in some people. A further waning of the immune response was observed at six (6) months but a booster dose substantially increased antibody levels even exceeding previous peaks among heterologous vaccine recipients. The follow-up study was concluded at the end of November 2022, when almost all participants still had detectable COVID-19 antibodies due to either a booster dose or prior infection. IMSURE highlights the importance of evidence in health policy making and demonstrates the extent of MOH's concerted effort to ensure success of the largest immunisation campaign in Malaysia.

Image 7.38
IMSURE Data Collection



Source: Institute for Public Health, MOH

INSTITUTE FOR MEDICAL RESEARCH (IMR)

IMR conducts biomedical research, specialised diagnostic tests, consultation, training and technology transfer activities. This institute consist of eight (8) centres which are:

- i. Infectious Diseases Research Centre (IDRC);
- ii. Allergy and Immunology Research Centre (AIRC);
- iii. Cancer Research Centre (CaRC);
- iv. Environmental Health Research Centre (EHRC);
- v. Herbal Medicine Research Centre (HMRC);
- vi. Nutrition, Metabolism and Cardiovascular Research Centre (NMCRC);
- vii. Specialised Diagnostic Centre (SDC); and
- viii. Special Resource Centre (SRC).

STEM CELL RESEARCH AND REGENERATIVE MEDICINE

Stem cells are unspecialised cells of the human body. They have the ability of self-renewal and potential to differentiate into many types of cells. IMR conducts research on umbilical cord mesenchymal stem cells (MSC) and induced pluripotent stem cells in order to understand the mechanisms of action, therapeutic effects of stem cells and its derivatives. With the support of a new Good Manufacturing Practice (GMP) Laboratory, the institute collaborates with industrial and university counterparts in pre-clinical and clinical research in this area. Two (2) biological products that are under development are exosome eye drops derived from MSC and collagen patches for burns and wound healing. New projects in 2023 will include application of genetically modified MSC in eliminating the COVID-19 virus and attenuation of acute respiratory syndrome, while induced pluripotent stem cells will be used in developing a heart disease model.

Image 7.39
Stem Cell Research and Regenerative Medicine



Incubating Stem Cells in the GMP Laboratory



Processing Umbilical Cord Tissue in the GMP Laboratory



Freeze Dryer Machine for Exosomes Project



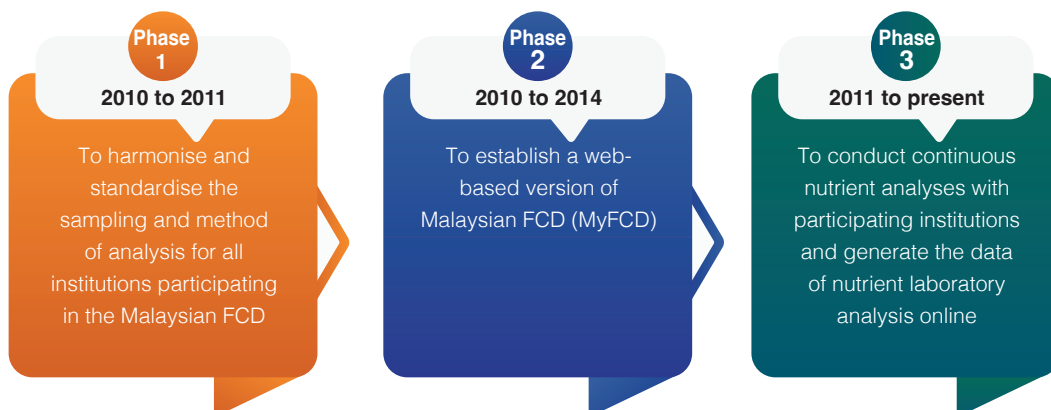
Experiment on Rabbit's Eye

Source: Institute for Medical Research, MOH

MALYSIAN FOOD COMPOSITION DATABASE (FCD) PROGRAMME

IMR began developing the Malaysian FCD in 1980. The Malaysian Food Composition Table was published in 1988 and revised in 1997. Malaysia is a member of the Association of Southeast Asian Nations network of food data systems (ASEANFOODS) which has good collaboration with the International Network of Food Data System (INFOODS). The Malaysian FCD was updated with additional nutrients due to the importance of nutrients in the aetiology and prevention of diseases. Sugar content in foods were needed for reformulation for food products and nutritional advice. The updated Malaysian FCD provides better quality nutrient data especially for health professionals, scientists, food preparation and food industries. A total of 26 agencies including MOH, universities, Department of Chemistry Malaysia, Malaysian Agricultural Research and Development Institute (MARDI), Malaysian Palm Oil Board (MPOB) and Department of Fisheries are involved in this work. The current updated version of Malaysian FCD contains 29 mandatory and 11 optional nutrients that are important to human health. It also includes the addition of 441 raw and processed foods and 668 prepared foods.

Figure 7.26
Malaysian FCD Updates



Source: Institute for Medical Research, MOH

The third phase is ongoing and IMR is the focal point for food sampling prior to analysis at designated institutions and universities. The Malaysian FCD Programme also received funding from the International Life Science Institute (ILSI) for the Determination of Sugar Content of Sweetened Foods and Beverages in Malaysia project in collaboration with the Nutrition Division, MOH. Data from food analysis are published at the MyFCD website. Currently, 234 food items are featured in the Malaysian FCD website.

Image 7.40
Sampling Foods, Labelling and Serving Size Measurement



Source: Institute for Medical Research, MOH

Image 7.41 Sample Processing, Homogenising, Freeze Drying and Nutrient Analyses



Source: Institute for Medical Research, MOH

Image 7.42 MyFCD Website



Source: Institute for Medical Research, MOH

BIOBANKING INITIATIVE FOR IMPACTFUL BIOMEDICAL RESEARCH

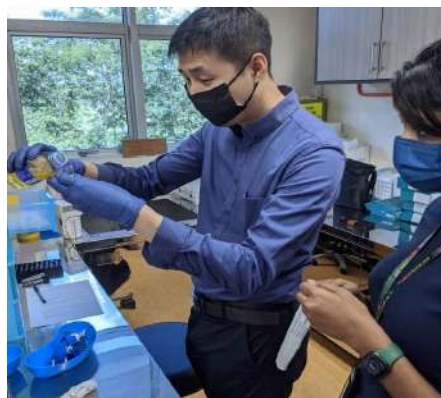
Impactful biomedical research is crucial for the advancement of healthcare in Malaysia. This requires a large number of high-quality biospecimens and associated data. MOH hospitals and facilities are valuable resources for the procurement of diverse biospecimens for biomedical and translational research. In year 2022, the MOH Biobank located at IMR started a national level biobanking initiative to organise, manage and oversee the collection of biospecimens from consenting patients/donors at MOH hospitals and facilities.

The primary focus of collection in year 2022 was non-communicable diseases, such as cancers of national interest (colorectal and breast cancers). The initiative involved hospital surgical teams, pathology services, CRC network and the MOH Biobank. Preceded by meetings, seminars, and hands-on training sessions, the biobanking initiative began at HKL followed by Hospital Sultanah Bahiyah, Kedah. This initiative will be expanded to other hospitals in the Northern Region of Peninsular Malaysia in year 2023.

Image 7.43 Biobank Initiative Presentation and Sample Processing Training



Training at Hospital Kuala Lumpur



Training at Hospital Sultanah Bahiyah, Kedah

Source: Institute for Medical Research, MOH

GENOMIC MEDICINE TO EXPLORE PERSONALISED TREATMENT IN INDIVIDUALS WITH RARE DISEASE OR CANCER

Genomic medicine holds immense potential in significantly improving healthcare outcomes for individuals diagnosed with rare diseases or cancers. The Primary Immunodeficiency Unit at IMR is actively utilizing whole exome sequencing (WES) techniques to identify specific gene mutations in pediatric patients with unidentified Primary Immunodeficiency Diseases (PID). This innovative approach not only enables early and accurate diagnoses but also allows for genotype-based risk stratification and personalized treatment options.

In year 2022, IMR initiated a project that aimed to produce and validate the efficiency of clinical grade CD19 CAR-T cells for ALL treatments. IMR obtained an automated cell-processing platform that offers advanced integrated solutions to streamline cell processing workflows from cell separation and culture to formulation of the final product. This makes it possible to generate gene-modified T cells in a standardised and automated process. IMR envisages expanding the production of CAR-T cells to explore effective therapies for various malignancies and other diseases in Malaysia.

Image 7.44 CAR-T Cell Therapy Exhibition



Courtesy: New Straits Times

DRUGS FOR NEGLECTED DISEASES INITIATIVE (DNDi) DENGUE ALLIANCE

Malaysia is currently participating in the Drugs for Neglected Diseases Initiative (DNDi) Dengue Alliance with Thailand, India and Brazil. The project aims to repurpose compounds/drugs that are already in use by conducting relevant preclinical studies, which could lead to future clinical trials. This follows a similar model which was used in the development of Ravidasvir, a Hepatitis C medication, via another South-South Cooperation. The collaboration increases the capacity of sharing knowledge, skills and techniques, enabling countries to pool results for better understanding of dengue therapy.

The current preclinical research in dengue focuses on antiviral activities. This encompasses in vitro studies, in vivo studies, pharmacokinetic studies and pharmacokinetic-pharmacodynamic modelling. IMR is establishing its own data on the local dengue viruses (DEN1-4) and also contributing to available data. In vitro efficacy studies are conducted by the Virology Unit and the Bioassay Unit at IMR.

Image 7.45
Signing Ceremony of MoU Between Malaysia and DNDi



Source: Institute for Medical Research, MOH

INSTITUTE FOR HEALTH MANAGEMENT (IHM)

TALENT GROOMING PROGRAMME (TGP) INSPIRATIONAL LEADERSHIP PODIUM 1/2022

The TGP Inspirational Leadership Podium Series 1/2022 was held on the virtual platform for the first time on the 3 March 2022 and it was streamed to a total of 1,337 participants from the MOH. This podium was co-organised by the TGP Secretariat, the NIH Information Technology Sector and TGP Cohort 11 Talents.

The theme of the Podium was *Leadership in Adversity and Crisis* with the aim to showcase great leadership that steered the country through the COVID-19 pandemic. The invited speakers were prominent leaders in their own fields: Ms Nadiah Wan, the Chief Executive Officer of Thomson Hospital Kota Damansara and Dato' Prof Dr. Adeeba binti Kamarulzaman, Consultant Medical Specialist in Infectious Diseases, UM.

Image 7.46
TGP Inspirational Leadership Podium 1/2022



Source: Institute for Health Management, MOH

TALENT GROOMING PROGRAMME (TGP) INSPIRATIONAL LEADERSHIP PODIUM 2/2022

Following the first TGP Podium in March 2022, the TGP Inspirational Leadership Podium Series continued with a second virtual podium on 16 June 2022 organised by TGP Cohort 9 Talents in collaboration with the TGP Secretariat and the NIH Information Technology Sector. The chosen theme was *Transformational Leadership: Redesigning Healthcare to Current Nuances*. TPr Ts Norliza binti Hashim, a Registered Town Planner and a Registered Professional Technologist (Building and Construction Technology) who is also the Chief Executive of Urbanice Malaysia, was the distinguished speaker on this podium.

In the same event, three (3) landmark publications of TGP were launched by the Minister of Health, namely TGP Journey 2014-2022, TGP The Way Forward, and TGP Guideline 3.0. The TGP Journey 2014-2020 details the story of the acclaimed programme in its early years.

Image 7.47
TGP Inspirational Leadership Podium 2/2022



Source: Institute for Health Management, MOH

Image 7.48
Launching of TGP publications



Source: Institute for Health Management, MOH

WORKSHOP ON THE PILOT IMPLEMENTATION OF STATE LEAN FLYING SQUAD IN THE MOH AND SITE VISIT TO HOSPITAL TENGGU AMPUAN RAHIMAH (HTAR), KLANG

As part of the initiative to sustain lean implementations within the MOH, the BPP and IHM has co-organised a workshop on 1 to 2 June 2022 to introduce the concept of State Lean Flying Squad. In total, there were 32 participants chosen as representatives from the four (4) states in Malaysia namely Selangor, Kedah, Kelantan and Negeri Sembilan. It was envisioned that through this workshop, the JKNs would be able to formulate and spearhead strategic plans for the sustainability of lean implementation in their respective health facilities.

The second day of the workshop involved a site visit to HTAR which enabled participants to observe and glean ideas on the governance and operational aspect of lean sustainability. HTAR was chosen as the point-of-reference due to their success in acquiring the accreditation from MPC as the first Lean Hospital in Malaysia.

Image 7.49
State Lean Flying Squad Workshop and HTAR Site Visits



Source: Institute for Health Management, MOH

WORKSHOP ON ACTION RESEARCH (AR)

In year 2022, all training and consultation efforts have been focused on strengthening AR awareness, knowledge and skill for Cluster Hospital development and initiative. There were several workshops organised by IHM with respective Cluster Hospitals and JKNs. Participants from vary professions and level of involvement learned to apply AR in the implementation and expansion of activities for the Cluster Hospital initiative.

Image 7.50
Workshop on Action Research and Design Thinking Cluster Hospital Sarawak State



Source: Institute for Health Management (IHM), MOH

Image 7.51
Workshop on Action Research New Liaison Officer Cluster Hospital 2022



Source: Institute for Health Management, MOH

Image 7.52
Workshop on Training of Trainers (TOT) Action Research Cluster Hospital Selangor State



Source: Institute for Health Management, MOH

INSTITUTE FOR HEALTH BEHAVIOURAL RESEARCH (IHBR)

RESEARCH

IHBR has been successful in conducting a diverse range of health behaviour studies despite the challenges posed by the COVID-19 pandemic. The range of topics covered highlights the breadth and depth of the research being conducted in the field of health behaviour and the importance of understanding various health behaviours and the factors affecting them. Efforts are being made to address various issues and improve community health outcomes. IHBR has conducted 29 health behavioural-related studies as shown in **Table 7.17**.

Table 7.17
Research Conducted for Year 2022

Group	Quantity
Psychosocial	8
Preventative behaviour	1
Vaccine-related	2
Digital technologies in assessing risk behaviour	2
Non-communicable diseases	3
Healthy lifestyle components	3
Health communication	1
Environmental health	1
Substance use	3
Communicable diseases	3
Marginalised community	1
Complementary medicine	1
Total	29

Source: Institute for Health Behavioural Research, MOH

PUBLICATION

Table 7.18
Articles Publication as First Author for Year 2022

ARTICLE	JOURNAL
Development of an Assessment Tool to Measure Children’s Knowledge of Dengue Prevention Activities in Malaysia.	Journal of Tropical Medicine
Development And Validation of a Cognitive, Affective and Behaviour (CAB) Questionnaire on Dengue in Malaysia.	Malaysian Journal of Medicine and Health Sciences
Exploring parental refusal of the vaccine in Selangor.	SEARCH Journal of Media and Communication Research
An Insight on Social Distancing During COVID-19: Online Survey on Public’s Understanding, Practice, and Perception.	Malaysian Journal of Social Sciences and Humanities (MJSSH),
Scoping Review: Barrier to The Knowledge, Attitude, and Practice on Dengue Prevention.	Malaysian Journal of Social Sciences and Humanities (MJSSH)

Source: Institute for Health Behavioural Research, MOH

RESEARCH MENTAL HEALTH STATUS AMONG ADOLESCENTS LIVING IN KUALA LUMPUR AND SELANGOR PEOPLE’S HOUSING PROJECT (PPR) DURING THE COVID-19 PANDEMIC

The goal of this UNICEF-funded study was to examine the coping mechanisms, influencing variables, and help-seeking behaviour of children and adolescents who were residing in PPR in FT of Kuala Lumpur and Selangor during the COVID-19 pandemic. This study examined 1,578 children and adolescents between the ages of 10 and 17, using both quantitative and qualitative methodologies. This study is in collaboration with UNICEF, NIH, the National Centre of Excellence for Mental Health (NCEMH), Kuala Lumpur City Hall (DBKL), Ministry of Local Government Development (KPKT) and Selangor Housing and Real Estate Board (LPHS).

Image 7.53
Research Team Members from Various Agencies



Source: Institute for Health Behavioural Research, MOH

THE DIABETES BEHAVIORAL DIAGNOSIS INSTRUMENT (DBDI): DEVELOPMENT OF AN INSTRUMENT FOR ENHANCING HEALTHY LIFESTYLE AMONG TYPE 2 DIABETES MELLITUS (T2DM) PATIENTS

This study aims to develop DBDI for the Malaysian community, which is a reliable assessment related to the cognitive, affective, and psychosocial domains of diabetic patients. This study will also produce an intervention package called the Behavioural Insights Intervention Module (BIIM).

Image 7.54
DBDI Presentation



Source: Institute for Health Behavioural Research, MOH

INDIGENOUS YOUTH EMPOWERMENT PROGRAMME

In conjunction with previous intervention research on OA in Kuala Krai, Kelantan, another intervention programme has been kicked off on 12 November 2022 at the Hospital Orang Asli Gombak. The main objective is to promote and empower indigenous youth with a healthy lifestyle in Selangor. This programme also involves inter-agency collaboration, such as the Malaysian Health Promotion Association (MAHEO), IHBR, Hospital Orang Asli Gombak, JKN Selangor, Institut Darul Ehsan and Asyik FM.

Image 7.55
Intervention Activities at Hospital Orang Asli Gombak



Source: Institute for Health Behavioural Research, MOH

RESEARCH ON AGENDA NASIONAL MALAYSIA SIHAT (ANMS) & LET'S TALK MEDIA CAMPAIGN EVALUATION

This study was conducted to evaluate the ANMS programme and the Let's Talk Media Campaign which was implemented by the BPK. The main objective of this study is to assess the exposure, understanding, and encouragement among Malaysians aged 15 and above to adopt the suggested messages promoted in the ANMS and Let's Talk.

ESTABLISHMENT OF BEHAVIOURAL INSIGHTS UNIT

IHBR has presented a proposal for establishing a Behavioural Insights Unit in July 2022. On 6 September 2022, the BSM approved the proposal paper. Despite the unit's recent establishment, several activities were carried out.

Table 7.19
Behavioural Insights Activities

Activities
Behavioural Insights Action Plan Formation Meeting for Health Screening Initiative
Workshop on WHO Resolution for Behavioural Science
Consultation Session to Draft Resolution for Behavioural Science
Behavioural Insights workshop for health promotions officers
WHO-MOH Risk Communication and Community Involvement Working Group Meeting
Bilateral Meeting with Brunei Darussalam Delegation and WHO Consultants on Behavioural Insights
Courtesy visit of the WHO delegation

Source: Institute for Health Behavioural Research, MOH

Image 7.56
Activities Behavioural Insights Unit with WHO



Source: Institute for Health Behavioural Research, MOH



Chapter 8
ORAL HEALTH

COLLABORATION OF THE ORAL HEALTH PROGRAMME MINISTRY OF HEALTH (OHP MOH) WITH WORLD HEALTH ORGANIZATION (WHO)

OHP MOH has participated in the Technical Discussion Session at the WHO Western Pacific Region Level held on 15 June 2022 organised by the WHO Collaborating Centre for Translation of Oral Health Science, Niigata University, Japan. The programme aims to inform the latest Global Oral Health Agenda (WHA75) pertaining to the Resolution on Oral Health (WHA 74.5), draft monitoring framework and the indicators involved. Malaysia has provided feedback on the draft of the Global Oral Health Action Plan and the feasibility of data collection in relation to the indicators. The participants comprised of Chief Dental Officers (CDOs) and focal points from the MOH, the WHO Oral Health Programme, the WHO Western Pacific Regional Office and the WHO Member States.

The collaboration and leadership capacity of CDOs and other focal points for the implementation of WHA75 was strengthened through this discussion. Recent initiatives to promote oral health and sharing of experience from member states were deliberated. Malaysia has made a presentation entitled Applying Global Strategy on Oral Health in Malaysia: Current Progress and Challenges by the Principal Director (Oral Health) MOH. The feasibility of the draft monitoring framework and indicators involving member states as part of the draft Global Oral Health Action Plan and the five (5) key areas of the monitoring framework towards UHC for Oral Health by 2030 were discussed. It comprises of evidence-based policy; oral health policy environment; oral disease prevention and control as integrated health services; outcomes and health & well-being.

MALAYSIA-JAPAN COOPERATION FOR THE ORAL HEALTHCARE TRAINING PROGRAMME 2022

The OHP MOH, the Ministry of Economy, Trade and Industry (METI) of Japan in cooperation with the Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS) had organised the Oral Healthcare Training Programme 2022 at Eastin Hotel, Selangor on 1 to 2 November 2022. This programme aims to provide support in the development of oral healthcare policies in each country through sharing sessions between participants. A total of 36 delegates from Vietnam, Japan and Malaysia were present. A total of 314 participants from Malaysia attended the programme virtually consisting of public dental health specialists, policy makers, general dental practitioners, dental therapists in government sector as well as industry players.

8TH CHINA-ASEAN FORUM ON DENTISTRY

The OHP MOH as the Malaysian secretariat has collaborated with Guangxi Medical University to organise the 8th China-ASEAN Forum on Dentistry (CAFD) from 17 to 19 November 2022 in Nanning, Guangxi, China. With the theme All on “Cloud Silk Road” for Oral Health, the forum involved dental officers from China and ASEAN Member States, dental association representatives, dental specialists and dental students to discuss future development strategies for dentistry. The programme encouraged the exchange of knowledge, experience, latest research and cooperation between ASEAN Member States and China.

TACKLING ORAL HEALTH DISEASES IN MALAYSIA THROUGH COLLABORATION WITH ASIAN COUNTRIES

The OHP MOH as the Malaysian Secretariat has jointly organised the 12th Asian Chief Dental Officers' Meeting 2022 (ACDOM) together with the Bureau of Dental Health, Ministry of Public Health and the Dental Health Foundation, Thailand. ACDOM took place from 26 to 28 March 2022 in Phuket, Thailand with the theme The Global Strategy on Oral Health. What Impact on The Oral Health Agenda in The Asia Region Towards 2030? which was attended by CDOs from nine (9) countries namely Thailand as host, Malaysia (as co-secretariat), India, Indonesia, Lao People's Democratic Republic (Lao PDR), Nepal, Philippines, Sri Lanka and Vietnam.

Through ACDOM, the aspects given attention for regional cooperation include: issues and challenges in oral healthcare and the dental profession; strengthening regional cooperation and cooperation between Asian countries; improving knowledge and expertise; sharing of best practices, strategies and policies for population health; promoting evidence-based research in public health dentistry; and supporting the activities of the World Health Organization-Global Oral Health (WHO-GOH).

NATIONAL ORAL HEALTH POLICY (NOHP) AND NATIONAL ORAL HEALTH STRATEGIC PLAN 2022 – 2030

NOHP is the first ever national policy produced by the OHP MOH in collaboration with the dental fraternity and key stakeholders. This document acts as a reference towards a better oral health outcome and quality of life for all Malaysians. This policy was approved by the Cabinet on 18 May 2022 and implemented via the National Oral Health Strategic Plan 2022-2030. The monitoring of the strategic plan achievements will be undertaken annually with all stakeholders to improve and strengthen the implementation in order to achieve the goals by 2030.

NATIONAL HEALTH AND MORBIDITY SURVEY 2020: NATIONAL ORAL HEALTH SURVEY FOR ADULTS 2020 (NHMS 2020: NOHSA 2020)

NHMS 2020: NOHSA 2020 is the fourth national oral health survey of adults aged 15 and above which is conducted periodically every 10 years. For the first time, this survey was conducted under the NHMS cluster in collaboration with the IKU and was supposed to be conducted in 2020. However, its implementation was delayed due to the COVID-19 pandemic. This survey has been successfully implemented with a response rate of 82.5 per cent in 2022. There was a total of 16,173 respondents who were successfully examined and interviewed by 65 state research teams trained specifically for this survey. The results of this survey will be used as baseline data in the National Oral Health Strategic Plan 2022-2030.

Image 8.1
Field Data Collection for NHMS 2020: NOHSA 2020



Source: Oral Health Programme, MOH

WORLD CAVITY-FREE FUTURE DAY 2022

Symposium Sugar and Early Childhood Caries was held in conjunction with the celebration of World Cavity-free Future Day 2022 at the International Islamic University Malaysia, Kuantan, Pahang on 31 October 2022. This programme, with the theme Let's Get Brushing! was hosted by the Alliance for a Cavity Free Future Malaysia Chapter. This global organisation aims for a cavity-free generation in 2026 in Malaysia.

Kuantan Declaration 2022 on Sugar and Dental Caries-Cavities was announced in conjunction with the celebration of World Cavity-free Future Day 2022 which urges the need for urgent action by the Malaysian Government, non-governmental organisations and private sectors to come together in protecting and promoting the health of all Malaysians.

IMPLEMENTATION OF PROOF OF CONCEPT (POC) IN FABRICATING DENTURES USING 3D TECHNOLOGY

Timely delivery of dentures particularly to the elderly is a challenge in busy dental clinics as the process requires between five (5) to seven (7) visits. As a standard procedure, all dental technologists in 531 government dental laboratories employ the conventional method to fabricate dentures. In year 2022, the OHP MOH introduced an initiative to fabricate dentures using 3D printing technology for patients who have lost their natural teeth. This initiative was implemented as POC for three (3) months in two (2) dental clinics, namely Bandar Botanik Dental Clinic, Klang, Selangor and Kuala Lumpur Dental Clinic, FT of Kuala Lumpur from 15 August to 15 November 2022.

Image 8.2
POC of Denture Production Using 3D Technology



Source: Oral Health Programme, MOH

This POC approach was done in collaboration with two (2) private companies providing 3D technology equipment and free training throughout the POC period. Through this initiative, a total of 150 patients have received dentures faster with an average period of less than two (2) weeks compared to the existing period which is eight (8) to 10 weeks. Meanwhile for simpler cases, patients could have the dentures fitted within one (1) week. The frequency of visits could also be shortened from five (5) visits to only two (2) visits.

EXPANDING THE IMPLEMENTATION OF THE ELECTRONIC MEDICAL RECORD (EMR) SYSTEM

Teleprimary Care - Oral Health Care Information System (TPC-OHCIS) is a clinical information system used at 31 dental clinics in Negeri Sembilan. In year 2022, procurement process for the Deployment, Configuration and Testing of TPC-OHCIS project at 23 dental clinics with the necessary IT infrastructure in Johor, Selangor and FT of Kuala Lumpur was initiated with installation expected in year 2023. As part of the project preparation, a Change Management and User Awareness Workshop was conducted in June 2022.

COMMUNITY SERVICE IN SCHOOL DENTAL CLINIC (PPKPS)

Image 8.3
Opening and Visits to SDC with PPKPS



Source: Oral Health Programme, MOH

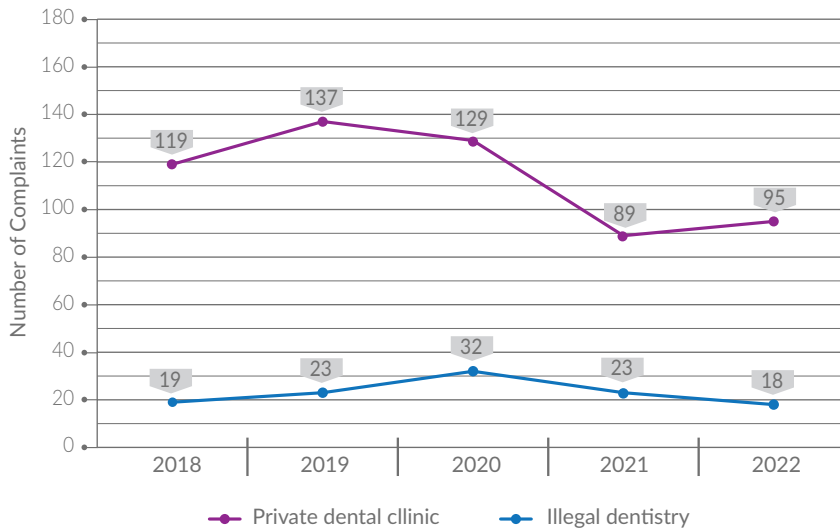
The concept of PPKPS was introduced in schools with School Dental Clinics (SDC) where the delivery of dental services is not only limited to school children but is also extended to the local community, parents, teachers, supporting staff and their family members. The rationale for the PPKPS initiative is to optimise the use of dental facilities in SDC, expand the role of dental staff in SDC and promote the oral health services to the local community.

In July 2022, the PPKPS pilot project was carried out in 30 schools involving seven (7) states. Approval was granted by the MOE for the PPKPS pilot project until April 2023. Following this, 30 SDCs were selected based on several criteria, namely complete dental equipment and assets, water supply and electrical power source that complies with the standards, adequate human resources as well as the approval and permission from the school authorities. The scope of services delivered through PPKPS includes promotion and prevention of dental diseases, basic dental treatment and referrals for specific cases for further management. 27 additional SDCs were identified on 20 December 2022, bringing the total number of 57 PPKPS in 2023.

ENFORCEMENT OF THE DENTAL ACT 2018 [ACT 804]

After 50 years of the Dental Act 1971 [Act 51] regulating the nation's dental practice, 1 January 2022 marks the pivotal date when the Dental Act 2018 [Act 804] was enforced to replace Act 51, in line with the development of practice and technology in the field of dentistry. However, three (3) provisions from the Act will come into force on 1 January 2025. Throughout the year 2022, a total of 113 complaints have been received, of which 95 complaints due to illegal dental practices while the rest related to patient dissatisfaction with private dental clinics (Figure 8.1).

Figure 8.1
Complaints from Year 2018 to 2022



Source: Oral Health Programme, MOH

A total of 23 raids involving illegal practices within unregistered premises were successfully conducted. Various methods are used to publicise and disseminate information related to illegal dental practice activities that need to be eradicated, especially in making the public aware of the dangers of this activity. Collaboration has been done with the printed media such as national newspapers (Harian Metro, The Star and Sinar Harian) and electronic media such as coverage by the 999 TV Programme for several series of raids as well as interviews on the Malaysia Hari Ini (MHI) TV Programme on TV3 and on several radio stations.

The highlight for 2022 was the beginning of a strategic collaboration with the e-commerce company, Shopee Malaysia being one of the main platforms for selling products online. As the result of the discussion held on 13 December 2022, Shopee Malaysia agreed to work hand in hand with OHP MOH in curbing the illegal dental practices by restricting the sale of dental equipment on their platform and to support efforts to enhance awareness regarding professional dental services to the people.

PATIENT SAFETY SYMPOSIUM 2022

The OHP MOH held an inaugural Patient Safety Symposium on 23 May 2022 with the theme Patient Safety, Our Priority. This one-day event was conducted successfully via hybrid which enabled discussion on patient safety issues and also served as a medium for sharing incident reports among representatives from all states, federal territories and institutes.

The main objective of the symposium was to increase awareness of patient safety, besides providing wider exposure regarding incidents involving dental patients since year 2019. The specific objectives were to present and share the analyses of the incident reports from year 2019 to 2022, recommend implementation of improvements at state and OHP MOH levels and to obtain a resolution to avoid the repetition of sentinel cases.

ORAL HEALTH PROGRAMME QUALITY CONVENTION 2022

The OHP MOH successfully conducted the second biennial Oral Health Programme Quality Convention from 10 to 11 May 2022. The Oral Health Programme Quality Convention 2022 was mainly organised on a competitive stage; whereby the three (3) main quality improvement initiatives namely; Innovations, New Horizon Innovative and Creative Circles (KIK Horizon Baru) and QA projects were evaluated by a pool of honourable panellists respectively. There was active participation from all 13 states, three (3) federal territories and the Children's Dental Centre and MOH Training Institute (Dental), Pulau Pinang, Malaysia. This convention aimed to provide exposure and awareness to participants on producing quality projects which meet the standard criteria and scoring schemes.

Table 8.1
Oral Health Programme Quality Convention 2022

Category	Place	Project Name	Organisation
Innovation	First	Portable Waterline System (PWLS)	PKPD Yan, Kedah
	Second	OKU Assessment and Examinations Tool (O.A.T)	PKPD Besut, Terengganu
	Third	Denplify	PKPD Muar, Johor
Innovative and Creative Group New Horizon (KIK)	First	A-Muse-C	PKPD Gua Musang, Kelantan
	Second	Smart Sink	PKPD Kuala Kangsar, Perak
	Third	Smart Smile Wheel (SSW)	PKPD Jempol, Negeri Sembilan
Quality Assurance (QA)	First	To Reduce Pain in Adult Patients During Local Anaesthesia in Klinik Pergigian Chemor	PKPD Kinta, Perak
	Second	Put A Full Stop to Fake Braces! Achieving Zero Number of Fake Braces Usage Among School Children in SMK Pantai	PKP Zon Lembah Pantai, FT of Kuala Lumpur
	Third	Towards Increase of Appropriate Antibiotic Prescriptions in Klinik Pergigian Baling	PKPD Baling, Kedah

Source: Oral Health Programme, MOH

COCHRANE SEMINAR ON ORAL HEALTH

OHP MOH collaborated with Cochrane Malaysia in organising Cochrane Oral Health Seminar for dental officers in public and private sectors on the 3 and 10 August 2022. The seminar aimed to provide exposure on Cochrane Library and systematic reviews, empowering knowledge of Cochrane systematic reviews of clinical cases and improving delivery of dental health services to citizens in both public and private sectors.

The online seminar was conducted over two (2) sessions with 206 participants during the first session on 3 August 2022 and 104 participants during the second session on 10 August 2022. These seminars were beneficial for all dental officers in understanding the use of Cochrane systematic reviews in daily clinical cases thus, helping each category of participants to empower appropriate systematic review searches on the Cochrane Library website.

GLOBALISATION AND LIBERALISATION OF ORAL HEALTH SERVICES

The ASEAN Joint Coordinating Committee on Dental Practitioner (AJCCD) meeting was held online on 9 February 2022 and 28 October 2022. The meetings were held twice a year to discuss matters related to facilitating cooperation in Mutual Recognition Agreement (MRA) on Dental Practitioners. In addition, officers from the Oral Health Accreditation and Globalisation Section also attended a workshop on foreign equity participation in private healthcare facilities from 8 to 9 June 2022 in Putrajaya. Among the issues discussed were the proposed improvement of the Foreign Equity Participation Policy from the policy agreed in 2015. This section was also involved in providing feedback for dental services in bilateral or multilateral negotiations between Malaysia and countries such as Türkiye, United Kingdom and the European Free Trade Association (EFTA). Input was also provided for the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) negotiations.

ACCREDITATION OF POST-GRADUATE DENTAL DEGREE PROGRAMME

With the enforcement of the Dental Act 2018 [Act 804] from 1 January 2022, the duties and role as secretariat to the Joint Technical Committee for Evaluation of Dental Specialist Programme (JTCEDSP) was handed over by the Malaysian Qualifications Agency (MQA) to the Oral Health Accreditation and Globalisation Section. The newly formed committee is chaired by the Director of Oral Health Policy and Strategic Planning Division. The Code of Practice for Programme Accreditation - Post-graduate (COPPA-PG) Committee was established to develop the COPPA - Dental Specialty Programme document which will serve as the main reference for the Panel of Assessors and Higher Education Provider (HEP) during the accreditation process of a dental specialty programme.

PERIODONTAL SCREENING FOR SECONDARY SCHOOL CHILDREN (15-17 YEARS OLD)

Periodontal disease is one of the most common oral diseases contributing to the global burden of chronic disease and are associated with cardiovascular diseases (CVDs), diabetes and chronic obstructive pulmonary diseases (COPDs) through tobacco use, particularly smoking. In year 2022, a feasibility study was conducted in four (4) secondary schools in Selangor on the implementation of periodontal screening as part of incremental dental care among 15 to 17 years old school children. The study was carried out from August to October 2022 involving eight (8) dental officers with 416 students being screened.

The benefit of periodontal screening would far outweigh the cost of periodontal probe. As such, implementation of periodontal screening year 2023 will start in stages, to enable enough time for states to purchase additional periodontal probes. With the introduction of periodontal screening among secondary schoolchildren, management and treatment are tailored to individual periodontal conditions. It is hoped that the prevalence of severe periodontitis among Malaysian will be reduced in NOHSA 2030.

PROPOSAL FOR LATERAL ENTRY OF DENTAL OFFICERS

Proposal paper for application of lateral entry requirement for the Dental Officer's scheme in MOH was submitted to the Central Agencies for approval with the existing provision to be amended for the creation of grade UG41, UG43/44, UG47/48, UG51/52, UG53/54 and Specialist UG55/56. The creation of lateral entry requirement will:

- i. Provide more space for MOH and PSC to identify and select the best talents from the market towards strengthening the delivery of the services in accordance to today's and future needs;
- ii. Enable permanent or contract appointments to be offered at a higher grade, taking into consideration relevant experience, academic qualifications and the rate for the job; and
- iii. To enable PSC to offer appointment that is parallel to the officer's career pathway.

EXTENSION OF CONTRACT FOR DENTAL OFFICERS

Beginning year 2022, contract Dental Officers who have completed compulsory services have been offered extension of contract for a further two (2) years for continuity of services and preparation for specialist training. Officers who received training offers will be offered extension of contract for further four (4) years maximum to complete their training. This decision was agreed upon during the Ministries Council Meeting on 14 July 2021.

DEVELOPMENT PROJECTS UNDER MALAYSIA PLAN

There were 13 oral health facility development projects approved under 10MP and 11MP. Out of 13 projects, six (6) successfully completed in the year 2022 namely:

- i. Upgrading of Klinik Pergigian Tronoh, Kinta, Perak;
- ii. Upgrading of Klinik Pergigian Kluang, Johor;
- iii. Upgrading of six (6) Klinik Kesihatan (Type 5) with no dental component in Sarawak;
- iv. Klinik Pergigian Pasir Akar, Besut, Terengganu;
- v. Kuarters Klinik Pergigian Chiku 3, Gua Musang, Kelantan; and
- vi. Hospital Cyberjaya.

Apart from that, there are three (3) non-MP projects (public-private partnership) which include:

- i. Redevelopment of Klinik Pergigian Cahaya Suria (Pusat Pakar Pergigian Kuala Lumpur);
- ii. Redevelopment of Klinik Pergigian at Klinik Kesihatan Dato' Keramat; and
- iii. Land Swap Project of Klinik Pergigian Bangsar.

GAZETTEMENT OF SPECIALISTS IN ORAL HEALTHCARE

Public Health Dental Officer and Clinical Dental Specialist need to be gazetted to become specialists prior to be qualified as Dental Specialists. There are nine (9) dental specialties in the MOH, namely Oral and Maxillofacial Surgery, Orthodontics, Paediatric Dentistry, Periodontics, Oral Pathology and Oral Medicine, Restorative Dentistry, Special Care Dentistry, Forensic Dentistry and Dental Public Health. A total of 52 Dental Specialists were gazetted in year 2022, bringing to a total of 465 Dental Specialists serving in MOH with 24 per cent increment within 5 years (Table 8.2). Even though there is an increase in the number of Dental Specialists every year, it is still not enough to cater the needs of MOH and the country. Therefore, offer slot for Hadiah Latihan Persekutuan (HLP) need to be increased for MOH dental specialty training.

Table 8.2
Dental Specialists Serving in MOH from Year 2018 to 2022

Specialty	Year				
	2018	2019	2020	2021	2022
Hospital Based Specialist					
Oral and Maxillofacial Surgery	77	81	84	90	101
Paediatric Dentistry	45	46	49	53	58
Oral Pathology and Oral Medicine	15	15	15	17	19
Special Care Dentistry	6	6	7	6	7
Forensic Dentistry	1	2	3	3	4

Specialty	Year				
	2018	2019	2020	2021	2022
Non-Hospital Based Specialist					
Orthodontics	70	70	80	81	90
Periodontics	41	44	49	58	68
Restorative Dentistry	34	37	40	46	49
Dental Public Health	86	80	72	70	69
Total Number of Dental Specialist	375	381	399	424	465

Note: Not inclusive of dental specialist undergoing gazettement

Source: Oral Health Programme, MOH

MAPPING OF SPECIALISTS IN ORAL HEALTHCARE

Mapping of specialist services was done to ensure appropriate distribution of existing specialists based on needs and also to identify future training requirements for all specialties. The expansion of six (6) dental specialist services was undertaken for 15 dental facilities in 2022 (Table 8.3).

Table 8.3
Expansion of Specialist in Oral Healthcare Services in Year 2022

Specialty	Facilities
Oral and Maxillofacial Surgery	Hospital Cyberjaya, Selangor
Pediatric Dentistry	Hospital Cyberjaya, Selangor Hospital Keningau, Sabah Hospital Tawau, Sabah
Forensic Dentistry	Hospital Tengku Ampuan Afzan, Pahang
Orthodontics	Klinik Pergigian Pakar Jalan Putra, Perak Klinik Pergigian Jasin, Melaka Klinik Pergigian Ulu Tiram, Johor Klinik Pergigian Penambang, Kelantan Klinik Pergigian Pasir Puteh, Kelantan Klinik Pergigian Tudan, Sarawak
Periodontics	Klinik Pergigian Air Putih, Pulau Pinang Klinik Pergigian Sandakan, Sabah
Restorative Dentistry	Klinik Pergigian Bandar Perda, Pulau Pinang Klinik Pergigian Sandakan, Sabah

Source: Oral Health Programme, MOH

Service data has been collected through Health Information and Management System (HIMS), except for Special Care Dentistry and Forensic Dentistry which are still being done manually. The workload of dental specialists was reflected by the ratio of specialists to patients. Overall, the COVID-19 pandemic had an impact on the Specialist Oral Healthcare services from year 2020 to 2021. However, the successful nationwide vaccination program has enabled the services to resume as usual in year 2022 (Table 8.4).

Table 8.4
Workload of Dental Specialist by Disciplines from Year 2017 to 2022

Oral Health Specialty	Year					
	2017	2018	2019	2020	2021	2022
Hospital Based Specialist						
Oral and Maxillofacial Surgery	3,554	3,680	3,716	2,986	2,471	2,977
Paediatric Dentistry	3,005	2,854	2,541	2,044	1,749	2,179
Oral Pathology and Oral Medicine	833	864	951	770	648	767
Special Care Dentistry	1,159*	1,297*	1,413*	819*	892*	1,166
Forensic Dentistry	141*	110*	88*	59*	63*	102
Non-Hospital Based Specialist						
Orthodontics	3,556	3,423	3,711	2,026	2,436	2,703
Periodontics	1,466	1,349	1,373	712	805	1,008
Restorative Dentistry	1,294	1,308	1,327	1,228	828	1,025

Note: *Oral Health Programme, MOH

Source: Health Informatics and Management System, MOH

AGENDA NASIONAL MALAYSIA SIHAT (ANMS): MYCHAMPION – IKON GIGI (IGG)

Malaysia Health Community Agent (MyCHAMPION) is a collaboration of volunteer services across ministries and agencies in an effort to empower communities to practice a culture of healthy living, self-health control while facilitating an environment that supports Agenda Nasional Malaysia Sihat (ANMS). iGG which is a special programme under the OHP MOH is also included under MyCHAMPION. In year 2022, a total of 194 iGG have registered as MyCHAMPION and have been trained with specific modules using Buku Ke Arah Kesejahteraan Kesihatan: Peranan MyCHAMPION. This module also contains information related to oral health that covers the topics of effective toothbrushing, the proper use of dental floss and oral health services provided by the MOH.

ORAL HEALTH PROMOTION WEEK (MPKP) 2022

MPKP with the theme Cegah dan Rawat, Serlah Senyuman Sihat was successfully implemented from 28 July to 3 August 2022. The MPKP 2022 was launched by the Principal Director (Oral Health) virtually on Official OHP MOH Facebook Live on 28 July 2022. The event was a collaboration between the OHP MOH and the Perlis Oral Health Division.

MyBrushHour 2022 was one of the activities in the run-up to MPKP. This activity was well received by the public and was carried out on 5 July 2022 simultaneously throughout Malaysia involving 1,433 various facilities including government dental clinics, schools and kindergartens with 68,559 participants. The activity aims to encourage, guide and increase the awareness of the Malaysian community about the importance of maintaining good oral health by educating on the proper technique of tooth brushing.

ACCREDITATION OF BACHELOR OF DENTAL SURGERY (BDS) PROGRAMME

In year 2022, accreditation assessments through physical visits have resumed after being conducted online throughout the pandemic. A total of one (1) assessment for the renewal of the accreditation certificate and a total of six (6) accreditation compliance assessments have been carried out. All reports were presented at the Joint Technical Accreditation Committee (JTAC) meeting which held every two (2) months. Total of seven (7) recommendation papers were submitted by JTAC to the Malaysian Dental Council (MDC) following the accreditation evaluation reports presented. In addition to that, proposal papers were prepared, related to applications for curriculum review, evaluation for temporary accreditation, application for the addition or amendment of student intake quota and proposal paper for the credit transfer application.

The Code of Practice for Programme Accreditation (COPPA) Committee had organised a workshop to finalise the COPPA document on 23 to 25 March 2022. The updated COPPA document named COPPA BDS 2.1 was certified at the fourth MDC meeting on 2 August 2022. Upon completion of the COPPA BDS 2.1 review, a workshop to train the Panels of Assessors (accreditation assessment) based on the standards and criteria in COPPA BDS 2.1 was held on 5 to 7 October 2022 in Ipoh, Perak.

This workshop is important to increase the number of dental specialists trained to carry out the accreditation assessment of dental degree programmes, which is currently very small and critical. The number of Panels of Assessors has decreased with the retirement of some trained panels. The workshop successfully trained a new panel of assessors in addition to improving the skills of the existing panel of assessors. A total of 14 Dental Specialists from the MOH and 26 Dental Specialists from 13 local HEP, making a total of 40 Dental Specialists from various fields of expertise participated in the workshop.





Chapter 9

PHARMACY



INTRODUCTION

The Pharmaceutical Services Programme (PSP) is responsible to ensure pharmaceutical products used in the country complying with standards, safe, efficacious and of quality. The programme safeguards the nation by enforcing relevant medicine legislations and regulations, while also facilitating access to medicines and advocating for rational use of medicines by both healthcare providers and consumers. The programme consists of five (5) main divisions, namely the Pharmacy Policy and Strategic Planning Division (BDPSF), the Pharmacy Practice and Development Division (BAPF), the Pharmacy Enforcement Division (BPF), the Pharmacy Board Malaysia Division (BLFM) and the National Pharmaceutical Regulatory Agency (NPRA).

LEADING THE PHARMACEUTICAL SECTOR IN LINE WITH THE COUNTRY'S HEALTHCARE PRIORITIES

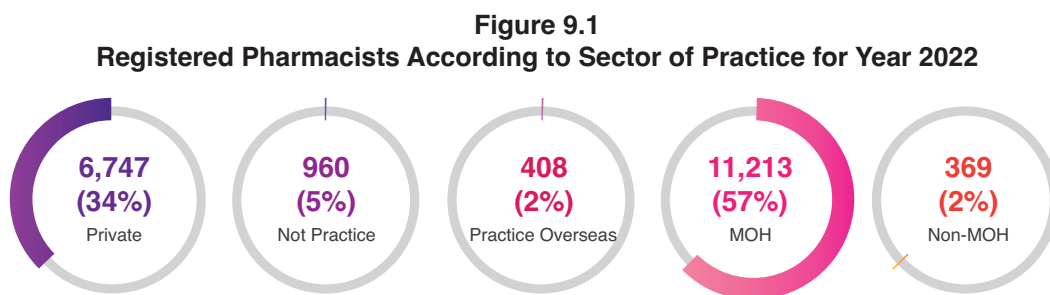
NATIONAL MEDICINES POLICY (DUNAS) 2022-2027

DUNas outlines the goals of the pharmaceutical sector in Malaysia. This policy is a commitment and collaboration between the government and stakeholders from public and private agencies to achieve the objective of enabling equitable access to essential medicines, encouraging rational use of medicines and ensuring the quality, safety, efficacy and affordability of medicines as well as ensuring the management of services and human resources is efficient and competent.

DUNas is divided into five (5) components of Governance in Medicines; Quality, Safety and Efficacy of Medicines; Access to Medicines; Quality Use of Medicines and Partnership and Collaboration for the Healthcare Industry. The implementation and achievement of this policy is evaluated through monitoring, review and improvement from time to time. This policy was revised in 2022 to meet the current needs and changes faced in the country's health system.

REGISTERED PHARMACIST IN MALAYSIA

There were a total of 19,697 registered pharmacists renewing their annual certificate for the year 2022 according to their sector of practice.



Source: Pharmacy Board Malaysia Division, MOH

ENSURING SUSTAINABLE ACCESS TO MEDICINES AND PHARMACEUTICAL SERVICES

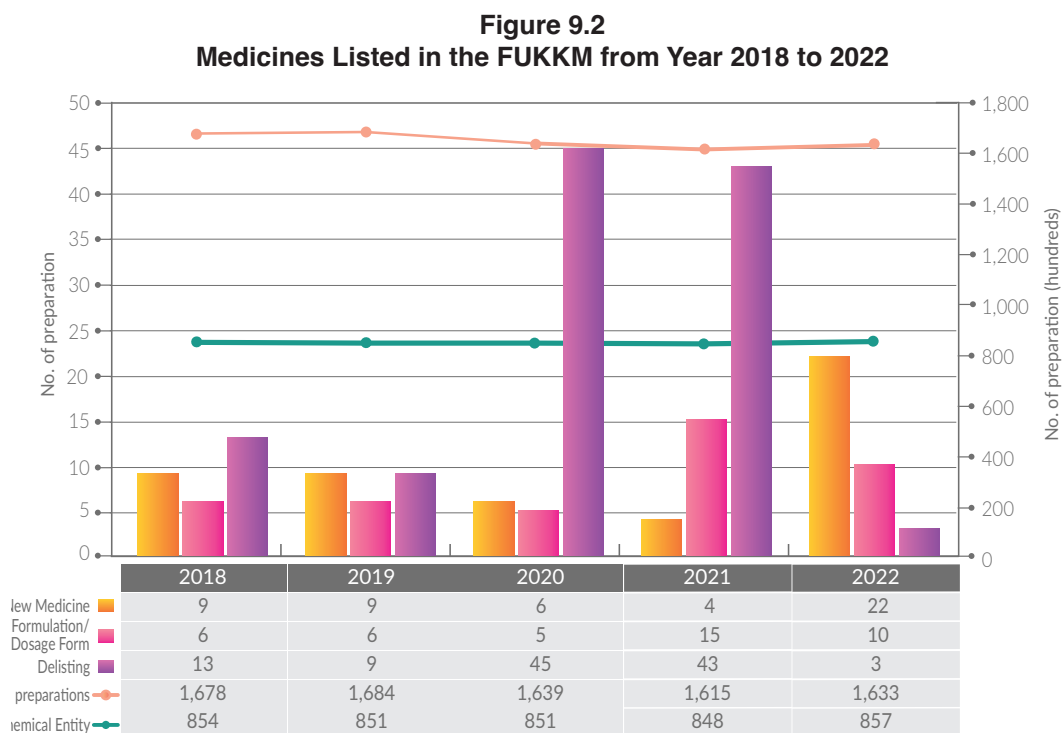
MEDICINES PROCUREMENT AND EXPENDITURE IN MOH

The total cost of medicines procured for all MOH hospitals, institutions and health clinics was RM3,193.15 million. The expenditure increased by 25.1 per cent as compared to the total cost in year 2021. Approved Products Purchase List (APPL) medicines expenditure through concessionaire companies was RM1,295.41 million (40.6 per cent), MOH contract at the expense of RM1,209.35 million (37.9 per cent) as well as direct purchase and quotations at the expense of RM689.35 million (21.6 per cent).

LISTING OR AMENDMENT TO MINISTRY OF HEALTH MEDICINES FORMULARY (FUKKM)

FUKKM is a list of medicines that have been approved for use in all MOH facilities which serves as a guide for MOH healthcare professionals in determining medicines for the treatment of patients. Applications to list or amend the FUKKM will be tabled in the FUKKM Panel Meeting which convenes three (3) times a year. BAPF is responsible for processing and evaluating the applications for listing or amendment to FUKKM.

There is a total of 1,633 preparations comprising 857 chemical entities listed in the FUKKM as of December 2022. The number of medicines listed in the FUKKM from the year 2018 to 2022 as shown in **Figure 9.2**.

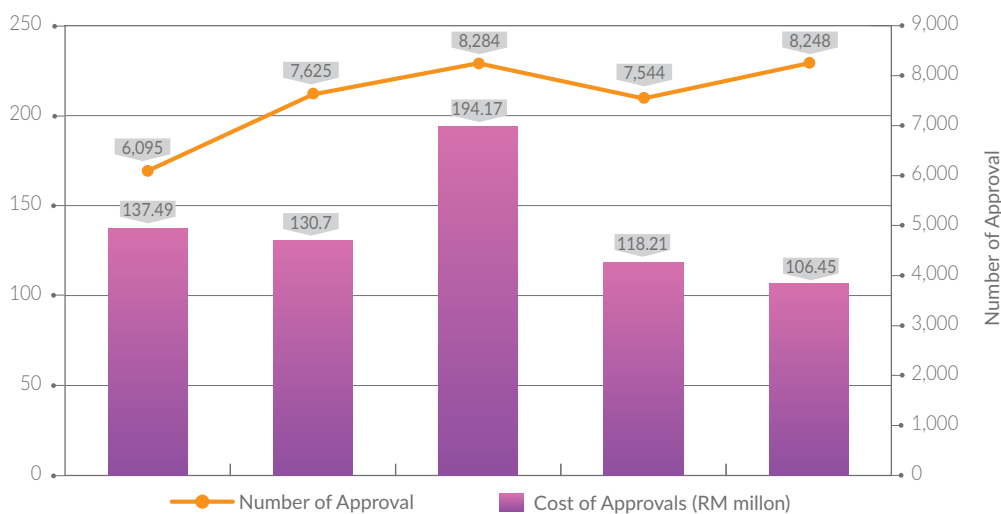


Source: Pharmacy Practice and Development Division, MOH

SPECIAL APPROVAL MEDICINES

Medicines which are not listed in the FUKKM are required to obtain special approval prior to the use of the medicine. This is applicable for both registered and unregistered medicines which are not listed in the FUKKM. The applications for special approval are considered as alternative treatments where priority will be given to use the medicines available in the FUKKM. Throughout the year 2022, a total of 9,163 applications were received for the usage in MOH facilities of which 8,248 applications (90.0 per cent) were approved with an estimated cost of RM106.45 million.

Figure 9.3
Special Approval Medicines from Year 2018 to 2022



Source: Pharmacy Practice and Development Division, MOH

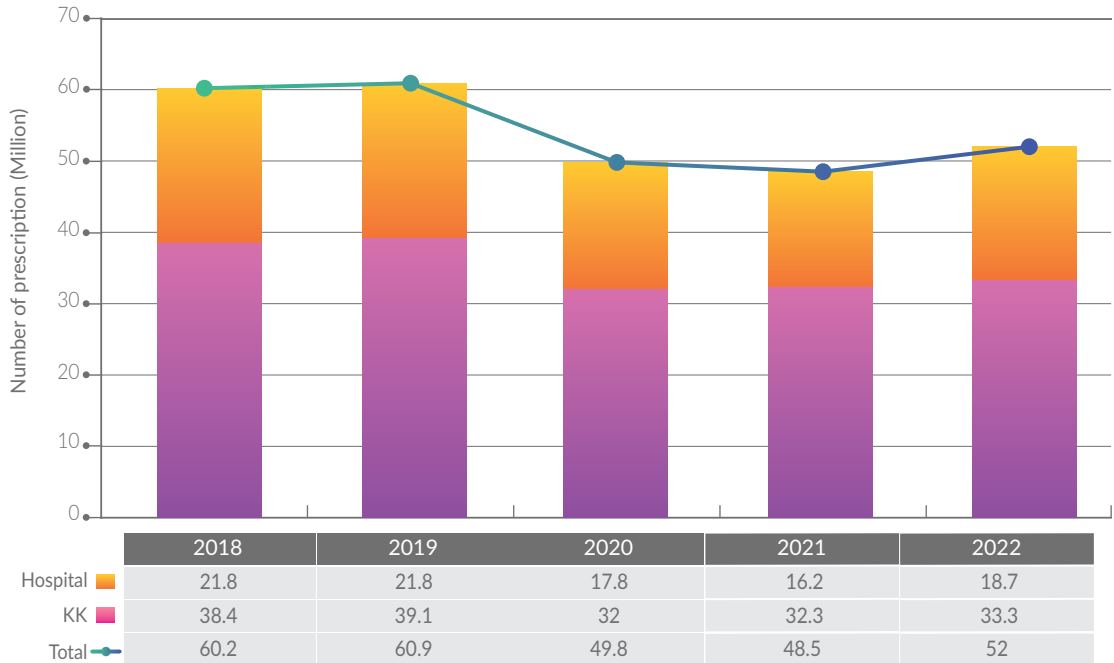
DISPENSING OF MEDICINES IN MOH HOSPITALS AND HEALTH CLINICS

Pharmacy Value Added Services (VAS) was aspired through the principle delighting the customer. The implementation was done by following the new norm in order to reduce congestion and patients' number of visits to the outpatient pharmacy as well as to facilitate patient in obtaining their follow-up medication supply. The available VAS are Integrated Drug Delivery Service (SPUB), Appointment System, Medicine by Post (UMP), Drive-Through Pharmacy, Locker4U and the latest is the Supply of Repeated Medicines Through Third Party (UM3).

UM3 service is introduced in 2022 to deliver patient's follow-up medication supply from healthcare facilities to desired location within the same day by the third party with minimal delivery charges paid by patients. This service includes more variation of medicinal products to be delivered such as cold chain medications and it was first implemented in Perlis and subsequently expanded to HKL.

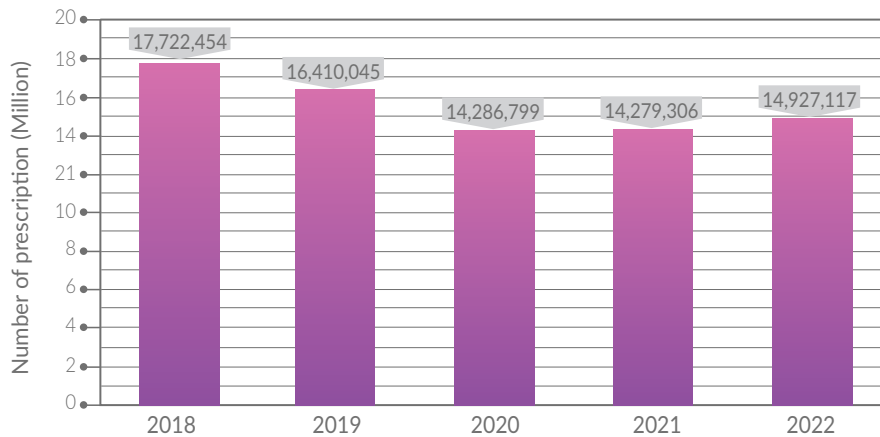
In year 2022, there was an increment about 6.7 per cent following the COVID-19 pandemic in the number of outpatient prescriptions received in hospitals and KK as compared to the previous year. The number of prescriptions received at MOH facilities was 52 million, of which 33.3 million prescriptions were received in KK and 19.7 million prescriptions in hospitals, respectively. Number of inpatient prescriptions received at the hospital showed slight increase by 4.0 per cent from 14.3 million in year 2021 to 14.9 million in year 2022.

Figure 9.4
Outpatient Prescriptions Received from Year 2018 to 2022



Source: Pharmacy Practice and Development Division, MOH

Figure 9.5
Inpatient Prescriptions Received from Year 2018 to 2022



Source: Pharmacy Practice and Development Division, MOH

IMPLEMENTATION OF PHARMACY INTEGRATED COMMUNITY CARE (PICC) PROGRAMME FOCUSING ON DIABETES

PICC is an initiative introduced by the Pharmaceutical Services Division, JKN Terengganu to optimise the treatment of diabetes patients in the community. From year 2020, it has been improved and expanded to the whole country to allow the people to benefit from this initiative. PICC includes medication management activities, healthy lifestyle practices and a balanced diet. PICC is implemented through the collaboration of healthcare professionals and Know Your Medicine Ambassadors.

The National Pharmacy Practice Conference 2022 highlighted the exemplary methods of implementing PICC. Notably, in the state of Kelantan, the implementation of PICC has been identified as a best practice based on the decrease in HbA1c readings observed in 84 per cent of participants after completing the PICC session. The PICC best practice was also presented in the Post-Cabinet Meeting on 29 July 2022 and Mesyuarat Khas Ketua Pengarah Kesihatan on 23 August 2022.

The PICC programme has been selected as one of the indicators for KPI Dimensi Daya Saing Agensi 2023, which is the percentage of type 2 diabetes patients who achieve a reduction in HbA1c after completing the PICC session \geq 65 per cent.

DETERMINATION OF COVID-19 VACCINE MAXIMUM PRICE

The free vaccination of the COVID-19 vaccine began in Malaysia in February 2021, followed by the sale of the COVID-19 vaccine in the private sector in May 2021, as a public option and a government's effort to boost vaccination rates. The government has implemented the Maximum Pricing of the COVID-19 Vaccine to control the price of the vaccine as a result of the high demand during the COVID-19 pandemic as well as to increase accessibility and to promote vaccine price sharing through price transparency as an informed choice to the people.

The Medicines Pricing Panel consisting of government agencies including the Ministry of Domestic Trade and Consumer Affairs (KPDNHEP), consumer associations and insurance associations have been established to carry out the function of assessing and proposing the price control for the COVID-19 vaccine.

The maximum price for the two (2) COVID-19 vaccine, namely CoronaVac and COVIL0, were gazetted, effective 15 January 2022 through the Price Control and Antiprofitteering (Maximum Price Determination) Order 2022 under the Price Control and Anti-Profiteering Act 2011 [Act 723]. Thereafter, the Amendment of Maximum Price for COVIL0 came to effect on 20 May 2022.

MOH Pharmacy Officers have been appointed as Deputy Price Controller and Assistant Price Controllers to obtain information and carry out price control enforcement specific for the COVID-19 vaccine effective 15 January 2022.

Table 9.1
Maximum Wholesale and Retail Price of the COVID-19 Vaccine

No.	Product	Maximum price per dose (RM)	
		Wholesale	Retail
1.	CoronaVac Suspension for Injection SARS-CoV-2 Vaccine (Vero Cell), Inactivated (MAL No.- MAL21036010ARZ & MAL21046125ACSZ)	62.00	77.00
2.	COVIL0 Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL No.- MAL21076098AZ)	62.00	77.00

Source: Pharmacy Practice and Development Division, MOH

INTERNATIONAL COLLABORATION WITH THE JOINT LEARNING NETWORK (JLN) FOR UNIVERSAL HEALTH COVERAGE (UHC)

PSP has actively established collaboration at the international level through the JLN for UHC in the preparation of the Negotiated Solution for Purchasing High-Cost Medicines: A Practitioner’s Guide. The purpose of preparing this guide is as a reference to the government and representatives of health insurance agencies in starting a negotiation session or being involved in the negotiation process in their respective countries.

This guide was the result of a collaboration between the World Bank Group’s Health, Nutrition and Population team and the JLN for UHC involving several sessions of information sharing as well as discussion by representatives of the countries involved starting from October 2021 until January 2022. This comprehensive guide provides essential insights into negotiation fundamentals, terminology, available agreement options and effective preparation and management of negotiations with the industry involving the procurement of high-cost medicines. This guide was published on 29 September 2022 and is available on the website:

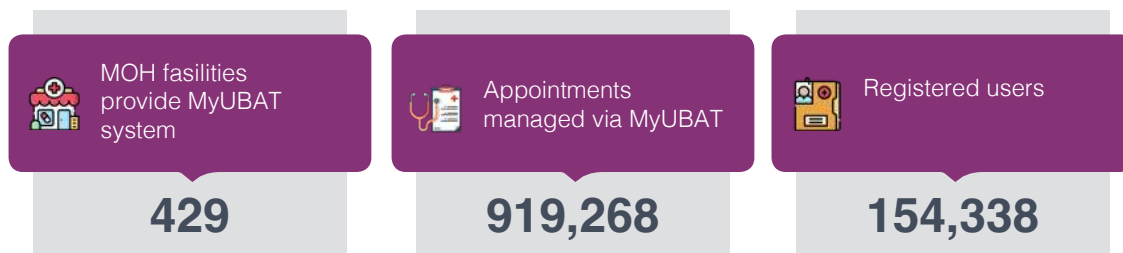
<https://www.jointlearningnetwork.org/resources/negotiated-solutions-for-purchasing-high-cost-medicines-a-practitioners-guide/>

ACHIEVEMENT OF MOH PHARMACY FOLLOW-UP MEDICINE SUPPLY SERVICE SYSTEM (MyUBAT)

MyUBAT was launched on 28 April 2021 with the main goal of creating a centralised management platform to coordinate follow-up drug supply activities by appointment at MOH health facilities and to improve communication efficiency between pharmacy staff and patients.

Since the launch of MyUBAT, two (2) methods of drug supply have been offered through this system namely Appointment at Pharmacy Counter and the Follow-up Medicines Delivery by Post. As of 31 December 2022, a total of 429 health facilities use this system, with a total of 154,338 users registered and 919,268 appointments managed through this system.

Figure 9.7
Performance of MyUBAT System for Year 2022



Source: Pharmacy Practice and Development Division, MOH

This system won first place in the 2021 Malaysian Ministry of Health Innovation Award for the Process Category and is currently in the process of being upgraded for two (2) more methods of follow-up drug supply, namely Drive-Through Pharmacy and Locker4U.

ASSURING QUALITY, SAFETY AND EFFICACY OF PHARMACEUTICAL PRODUCTS

REGISTRATION OF COVID-19 VACCINE

To expedite the access of COVID-19 vaccines and in preparation for the roll-out of the National COVID-19 Immunisation Programme (PICK), the NPRA has issued a directive on the Guidance and Requirements on Conditional Registration of Pharmaceutical Products During Disaster at the end of 2020. Since the inception of PICK on 24 February 2021, the Drug Control Authority (DCA) has granted approval for conditional registration of 17 COVID-19 vaccines, based on this guidance.

Table 9.2
COVID-19 Vaccines Granted Approval for Conditional Registration

No.	Name of vaccine (MAL number)	Manufacturer
Product Registration Holder: Pfizer (Malaysia) Sdn. Bhd.		
1.	COMIRNATY Concentrate for Dispersion for Injection (MAL21016022AZ)	Pfizer Manufacturing Belgium NV, Belgium
2.	COMIRNATY Concentrate for Dispersion for Injection (MAL21036039ASZ)	BioNTech Manufacturing GmbH, Germany
3.	COMIRNATY 10mcg Concentrate for Dispersion for Injection (MAL22016037AZ)	BioNTech Manufacturing GmbH, Germany
4.	COMIRNATY (Tris/Sucrose) 30 mcg Solution for Injection (MAL22016036AZ)	BioNTech Manufacturing GmbH, Germany
5.	Comirnaty Original/Omicron BA.4-5 (15/15 micrograms)/dose Dispersion for Injection (MAL22126012AZ)	BioNTech Manufacturing GmbH, Germany

No.	Name of vaccine (MAL number)	Manufacturer
Product Registration Holder: AstraZeneca Sdn. Bhd.		
6.	Vaxzevria Solution for Injection (MAL21036009ACZ)	Astrazeneca Nijmegen B.V., Netherlands
7.	Vaxzevria Solution for Injection (MAL21066001ACSZ)	Siam Bioscience Co., Ltd., Thailand
Product Registration Holder: COVAX-KKM (COVAX Facility)		
8.	COVID-19 Vaccine AstraZeneca Solution for Injection (The product approved by EMA is supplied under the commercial name: Vaxzevria) (MAL21046001AZ)	SK Bioscience Co. Ltd, South Korea Catalent Anagni S.R.L, Italy CP Pharmaceuticals Ltd, United Kingdom IDT Biologika GmbH, Germany Seqirus Pty Ltd, Australia Daiichi Sankyo Biotech Co., LTD., Kitamoto Site, Japan KM Biologics Co. Ltd. Koshi Production Center, Japan ASTRAZENECA NIJMEGEN B.V., Netherlands Amylin Ohio LLC (AZ), United States Universal Farma, S.L. ("Chemo"), Spain For: Astrazeneca AB Sweden
9.	COVID-19 Vaccine Janssen Suspension for Injection (MAL21066049AZ)	Janssen Biologics B.V. The Netherlands Janssen Pharmaceutica NV, Belgium Aspen SA Sterile Operations, South Africa Catalent Indiana LLC, USA Grand River Aseptic Manufacturing Inc, USA Catalent Anagni S.R.L., Italy Merck Sharp & Dohme (MSD) Corp., United States For: Janssen-Cilag International NV, Belgium

No.	Name of vaccine (MAL number)	Manufacturer
Product Registration Holder: Pharmaniaga LifeScience Sdn. Bhd.		
10.	CoronaVac Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL21036010ARZ)	Sinovac Life Sciences Co. Ltd., China
11.	CoronaVac Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL21046125ACSZ)	Pharmaniaga LifeScience Sdn. Bhd., Malaysia
Product Registration Holder: Solution Biologics Sdn. Bhd.		
12.	Convidecia™ Recombinant Novel Coronavirus Vaccine (Adenovirus Type 5 Vector) Solution for Injection (MAL21066050AZ)	Cansino Biologics Inc, China
13.	Convidecia™ Recombinant Novel Coronavirus Vaccine (Adenovirus Type 5 Vector) Solution for Injection (MAL22126013ASZ)	Solution Biologics Sdn. Bhd., Malaysia
Product Registration Holder: Duopharma (M) Sdn. Bhd.		
14.	COVILO Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL21076098AZ)	Beijing Institute of Biological Products Co., Ltd. (BIBP), China
Product Registration Holder: Zuellig Pharma Sdn. Bhd.		
15.	Spikevax 0.20 mg/mL dispersion for injection COVID-19 mRNA Vaccine (nucleoside modified) (MAL21086001ACZ)	Rovi Pharma Industrial Services, S.A. San Sebastian de los Reyes, Spain
Product Registration Holder: Johnson & Johnson Sdn. Bhd.		
16.	Janssen Covid-19 Vaccine Suspension for Injection (MAL21076097ACZ)	Janssen Pharmaceutica N.V., Belgium
Product Registration Holder: Averroes Pharmaceuticals Sdn. Bhd.		
17.	COVAXIN® (Whole Virion, Inactivated Coronavirus (SARS-CoV-2) Vaccine) Suspension for Intramuscular Injection (MAL22026024AZ)	Bharat Biotech International Limited, India

Source: National Pharmaceutical Regulatory Agency, MOH

COVID-19 VACCINE SAFETY MONITORING

Close monitoring of the COVID-19 vaccines continued into year 2022 to ensure that the benefits of these vaccines persist to outweigh the risks. Communicating accurate safety information was crucial to allay safety concerns from the public and to ensure successful roll-out of the vaccination programme to this group of recipients. Pharmacovigilance activities conducted by the NPRA in year 2022 to monitor the safety of COVID-19 vaccines and to disseminate the relevant safety information are outlined as follows:

Adverse Events Following Immunisation (AEFI) Reports Collection and Monitoring

In year 2022, the NPRA continued to monitor the safety of all registered vaccines used in Malaysia, including COVID-19 vaccines, mainly through passive surveillance of AEFI reported locally. Monitoring of AEFI reports also included the PICK for five (5) to 11 years old children (PICKKids) to monitor the adverse effects experienced by children who received the COVID-19 vaccine.

AEFI reports collected are spontaneous reports received from healthcare professionals, pharmaceutical companies and vaccine recipients via the existing Reporting System in NPRA (PhIS-QUEST3+). Additionally, vaccine recipients may also self-report or notify common and minor adverse events in the MySejahtera. This information enables NPRA to monitor the trends of documented adverse events among vaccine recipients and to identify any safety issues during vaccine administration.

There are five (5) COVID-19 vaccines currently used for the PICK, which are Comirnaty (Pfizer), CoronaVac (Sinovac), Vaxzevria (AstraZeneca), Convidecia (CanSino) and Covilo (Sinopharm). The summary of AEFI reports received since the inception of PICK on 24 February 2021 up to 31 December 2022 as shown **Table 9.3**.

Table 9.3
AEFI Data for PICK

		Comirnaty (Pfizer)	CoronaVac (Sinovac)	Vaxzevria (AstraZeneca)	Convidecia (CanSino)	Covilo (Sinopharm)	Cumulative
Total doses administered	PICK (PICKKids)	44,826,965 (3,309,111)	21,531,578 (3,775)	5,697,765	227,957	42,339	72,326,604 (3,312,886)
Reporting Via Existing NPRA Reporting System							
Total reports received	PICK (PICKKids)	20,153 (514)	5,099 (9)	1,374	48	2	26,676 (523)
Reporting rate (per million doses)	PICK (PICKKids)	449.6 (155.3)	236.8 (2384.1)	241.1	210.6	47.2	369.8 (157.9)
Non-serious AEFI reports received	PICK (PICKKids)	18,991 (480)	4,548 (9)	1,223	45	2	24,809 (489)
Serious AEFI reports received	PICK (PICKKids)	1,162 (34)	551 (0)	151	3	0	1,867 (34)
Serious AEFI/ Total AEFI reports (%)	PICK (PICKKids)	5.8 (6.6)	10.8 (0)	11.0	6.3	0	7.0 (6.5)
Serious AEFI reporting rate (per million doses)	PICK (PICKKids)	25.9 (10.3)	25.6 (0)	26.5	13.2	0.0	25.8 (10.3)

Note: The numbers presented here are the number of reports received by NPRA. The causal links of the event to the vaccination in these reports have not been ascertained meaning that the vaccines do not necessarily cause the adverse events.

Source: National Pharmaceutical Regulatory Agency, MOH

Safety Signal Detection and Risk Management

AEFI reports recorded in the databases are constantly reviewed to identify unexpected adverse events or potential safety signals for further evaluation, including Adverse Events of Special Interest (AESI) for COVID-19 vaccines. In addition to that, NPRA with the cooperation of Product Registration Holders (PRH) continuously monitor and identify any emerging safety issues locally and globally. PRH are required to provide monthly safety summary reports and Periodic Benefit Risk Evaluation Reports (PBRERs) every six (6) months. This reporting is crucial to ensure that the balance of benefits and risks of the COVID-19 vaccines used in Malaysia remains positive and that NPRA is promptly informed of any new risks pertaining to COVID-19 vaccines.

The systematic and comprehensive approach in detecting safety issues pertaining to COVID-19 vaccines ensures that appropriate and timely administrative or regulatory actions can be taken to mitigate the new risks identified.

COVID-19 Vaccine Special Pharmacovigilance Committee (JFK)

As part of the pharmacovigilance preparedness for PICK, the JFK was established in early year 2021 under the National Immunisation Policy and Practice Committee. JFK members include health experts from various disciplines from both public and private health sectors.

Dissemination of Information on COVID-19 Vaccines

The NPRA played a significant role in relaying timely and accurate facts concerning COVID-19 vaccines selected for use in PICK to provide assurance on their safety, quality and efficacy. Communication of various regulatory and safety information pertaining to COVID-19 vaccines to the general public, healthcare professionals and the industry also continued in year 2022 to ensure the smooth roll-out of PICK. Efforts include the set-up of COVID-19 vaccine-specific information page on the NPRA website, which links the visitors to the relevant frequently ask questions (FAQ), circular and directives, press statements, safety alerts, bulletins and infographics on COVID-19 vaccines.

NPRA had published summary reports and press statements on the AEFIs of COVID-19 vaccines. The intention is to inform the public on the latest safety data on COVID-19 vaccines as well as the efforts undertaken by NPRA in vaccine safety monitoring. The summary reports presented the analysis of AEFI data collected by NPRA and the processes involved in COVID-19 vaccine AEFI reports and safety monitoring.

In year 2022, NPRA had successfully organised two (2) training workshops for healthcare professionals virtually on how to improve COVID-19 vaccine-specific AEFI reporting, case investigation and risk communication. Additionally, to combat infodemics, NPRA participates in talks and seminars to provide accurate information on COVID-19 vaccines to healthcare professionals. NPRA officers also participated in numerous public engagement and educational activities through a variety of media channels including interviews on television, radio, live on social media and webinars.

COVID-19 VACCINE QUALITY MONITORING

MANAGEMENT OF QUALITY REPORTING OF COVID-19 VACCINES

Besides pharmacovigilance activity, NPRA continuously monitor the quality of registered vaccines in the market through the management of quality reporting of registered COVID-19 vaccines in Malaysia. Vaccines with a quality defect, including suspected defect are assessed and investigated by relevant parties to ensure there are no safety concerns arising from the defective products. It is important for such cases to be notified to NPRA in a timely manner for requisite actions to be carried out effectively.

Since the inception of the PICK on 24 February 2021 to date, NPRA has received 2,497 quality defect reports of registered COVID-19 vaccines. Quality defects may be defined as attributes of a product or component which may affect the quality, safety and/or efficacy of the product which were not in line with the approved specifications or regulatory requirements. Based on investigation and assessment, 201 (9.1 per cent) of the cases reported were concluded as minor quality defect that has no impact on the safety and efficacy of the vaccines. Although no regulatory or market action taken for the defective products, manufacturers were required to take appropriate actions to prevent recurrence of the defect. On the other hand, 2,296 (92.0 per cent) of the reports received were associated with handling and unsubstantiated issues.

Table 9.4
Vaccine Quality Defect for PICK

	Comirnaty (Pfizer)	CoronaVac (Sinovac)	AstraZeneca	Convitecia (CanSino)	Covilo (Sinopharm)	Cumulative
Total number of reports received	349	2,141	3	4	0	2,497
INVESTIGATION OUTCOMES						
Quality defect	21	180	0	0	0	201
Non-quality defect	328	1,961	3	4	0	2,296

Source: National Pharmaceutical Regulatory Agency, MOH

NPRA INVOLVEMENT IN THE NATIONAL VACCINE DEVELOPMENT ROADMAP (NVDR)

Malaysia launched the NVDR on 1 November 2021 to guide the country in achieving its vision for self-sufficiency and security in vaccine manufacturing and research & development (R&D) within 10 years. The aim is to ensure the country's readiness for future pandemics and to reduce dependency on vaccine producing countries.

The governance structure of the roadmap consists of the Malaysian Vaccine Sectoral Working Group (MVSWG) which is led by the MOSTI with MOH, overseeing technical aspects of the strategies such as clinical infrastructure and taking the role of the regulator.

While there are many different departments within the MOH who are actively involved in the NVDR, the NPRA plays an important role within the framework by providing regulatory approval for vaccine development, manufacturing and logistics. Below are some of the subcommittees established and activities conducted under the MVSWG which the NPRA officers has participated in:

i. Malaysian Vaccine Sectoral Working Group (MVSWG)

While the working group meeting is jointly chaired by the Secretary-General of MOSTI and MOH, the Director of NPRA is also a member in this working group which monitors the implementation of strategies and initiatives outlined in the NVDR.

ii. Vaccine Collaborative Network (VCN)

This subcommittee is led by the IMR. The VCN helps the MVSWG in identifying the research direction and become the platform for manufacturers and researchers to collaborate in vaccine R&D. Four (4) officers from NPRA with varying expertise in Clinical trials, Good Manufacturing Practice (GMP) and Good Laboratory Practice (GLP) inspections as well as registration of vaccine products were appointed as members to this subcommittee.

iii. Expert Council Consortia (ECC): National Vaccine Research and Development

The Malaysian Genome and Vaccine Institute (MGVI) which functions as the National Vaccine Research Centre has established the ECC which consists of experts from various fields to assist in the vaccine development. Several NPRA officers were appointed to the consortia to contribute to vaccine discovery, pre-clinical, clinical and process development.

NPRA'S ROLE IN STRENGTHENING THE SUSTAINABILITY OF MEDICINE SUPPLY DURING NATIONAL HEALTH CRISIS

In May 2022, Malaysia experienced shortages of fever, cold and cough medicines. The rise of COVID-19 and HFMD cases in early year 2022 contributed to the overwhelming demand for those medicines. The shortage of these medicines is also attributed to consumer preferences on a certain brand despite availability of other brands on the market.

Other factors contributing to global pharmaceutical supply chain disruptions include delays in the supply of Active Pharmaceutical Ingredients (API), excipients and packaging materials due to the war in Ukraine and lockdowns imposed in China.

PSP had undertaken early measures to mitigate the impact of medicines shortage which include sharing information on the list of medicines that have been disrupted and alternative product recommendations for those medicines to government and private hospitals, private medical practitioners as well as community pharmacies.

The immediate actions that have been taken to reduce the impact on the current situation as follows:

- i. MOH had released the buffer stock of Paracetamol Tablets 500mg from Pharmaniaga Logistic Sdn Bhd for purchase by the private health facilities;
- ii. Obtaining stock level status of products reported to experience supply issues or shortages by communicating with Product Registration Holders (PRH) involved;
- iii. Monitoring of existing medicines supply stock level and requesting all PRH to update their product stock levels regularly; and

- iv. Allowing the importation of fever, cough and cold medicines via the Special Approval Medicines mechanism.

The PSP has also begun planning long term initiatives to ensure medicines security and self-reliance especially in crisis situations as follows:

- i. Encouraging local pharmaceutical companies to produce their own medicines including API through public-private partnership;
- ii. Development of the QUEST5 Online Registration System as an upgrade from the current Registration System (QUEST3+) which would allow the PRH to update marketing status of products in real-time to enable monitoring by authorities on the availability of products in the market;
- iii. Development of a Pharmaceutical Track & Trace System to improve the traceability of the drug supply chain as well as to monitor the availability of products in the market;
- iv. Strengthening ASEAN Regional Cooperation through the ASEAN Drug Security and Self-Reliance Framework (ADSSR) which is a Malaysian-led project that aims to improve access to medicines. One of the strategies under the ADSSR framework is the method of bulk procurement of medicines for countries in the ASEAN region; and
- v. A framework is being refined to establish strategic cooperation with the world's leading API producing countries such as India and China to guarantee the supply of API for national use including during a crisis.

EMPOWERMENT OF LEGAL PROVISIONS AND ENFORCEMENT

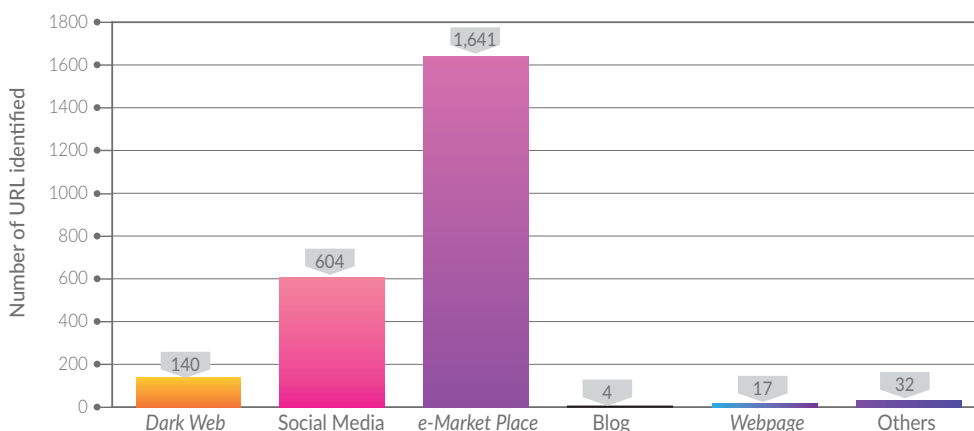
POISONS (AMENDMENT) ACT 2022 [ACT A1666]

The Poisons (Amendment) Act 2022 was enacted to amend the Poisons Act 1952 [Act 366] to ensure that Act 366 remains relevant to current needs. This amendment to Act 366 involves amendment of 16 sections, amendment of one (1) Schedule and delete one (1) section as well as insertion of 12 new sections. Act A1666 was passed in the House of Representatives on 21 July 2022 and in the Senate on 10 August 2022. The royal assent of the Seri Paduka Baginda Yang di-Pertuan Agong was obtained on 7 September 2022 and subsequently gazetted on 20 September 2022. Act A1666 will come into operation on 1 January 2023 (except provisions relating to compounding of offences).

OPERATION PANGEA XV

BPF coordinated the operation in Malaysia that involved collaboration between MOH and other agencies including INTERPOL Malaysia, the Royal Malaysian Customs Department (RMC), the Malaysian Communications and Multimedia Commission (MCMC), Pos Malaysia and CyberSecurity Malaysia. A total of 2,438 websites, including those on the Dark Web, were identified for selling pharmaceutical products that violated existing laws. Requests were made to MCMC and platform providers to block access of these links. The list of Dark Web links has been submitted to INTERPOL for further action. The operation revealed an increase in the illegal sale of controlled medicines such as psychotropic substances, painkillers, antibiotics and others. Additionally, 686 medical devices like face masks, thermometers, pulse oximeters and sphygmomanometers were found to be sold online without approval from the Medical Devices Authority.

Figure 9.8
Categories of Websites Detected with Illegal Sales of Pharmaceutical Products in Year 2022



Source: Pharmacy Enforcement Division, MOH

During the operation period, a total of 1,059 postal packages were inspected. Of that amount, 73 postal packages found to contain 315,916 units of unregistered pharmaceutical products were confiscated. The value of the seizure was RM887,024. More than 70 per cent of the seized pharmaceutical products consisted of medicines controlled under the Poisons Act 1952. 90 per cent of the controlled medicines seized were under the category of psychotropic substances. While the rest were antibiotics, painkillers, medicines for colds and coughs and others which are not registered with the MOH. Most of these controlled medicines were smuggled in from Bangladesh, India and several other countries. Inspections were conducted at all major entry points across the country involving air cargo, airports, border posts and ferry terminals.

Other enforcement activities carried out during the operation were targeted raids on sellers and business premises involving online trading. During this operation, 75 premises selling unregistered pharmaceutical products including residential houses, beauty salons, gymnasiums and shops selling pet products were raided. 244,299 units of pharmaceutical products that violated the provisions of the law were seized. The value of the seizure was estimated at RM1,707,040. The raid targeted traditional slimming products adulterated with Sibutramine. In a series of other raids, the BPF seized controlled medicines such as analgesics and antibiotics. Besides that, unregistered health supplements, vitamins and traditional products were also found and seized.

WAY FORWARD

PSP remains committed to ensuring that medicines and pharmacy services provided to the public are of high quality, accessible and affordable. PSP is always ready to provide cooperation and solid support to all programmes, divisions and agencies under the MOH and other related sectors in order to achieve the goal of empowering the quality of the healthcare services to the people.



Chapter 10

FOOD SAFETY AND QUALITY



INTRODUCTION

The Food Safety and Quality Programme (PKKM) is mandated as the competent authority for national food safety and quality that responsible for the whole food supply chain control. PKKM is responsible to protect the public against health hazards and fraud in the storage, preparation, processing, packaging, transportation, sale and consumption of food; and to facilitate the trade. The Food Act 1983 and its regulations forms the backbone of the food safety programme. The Programme is headed by a Senior Director of Food Safety and Quality which consists of Policy, Strategic Planning and Codex Standard Division, Compliance and Industrial Development Division and Malaysian Food Analyst Council.

POLICY, STRATEGIC PLANNING AND CODEX STANDARD DIVISION

CELEBRATION OF WORLD FOOD SAFETY DAY 2022

The World Food Safety Day is celebrated yearly on 7 June. The celebration in year 2022 was officiated by Minister of Health at the Sama-Sama Hotel, KLIA with the theme Safer Food, Better Health. The celebration was organised in collaboration with the Malaysian Food Safety Association (MAFSA) and strategic partners of p-hailing delivery companies Foodpanda, Grab and ShopeeFood in addition to the joint involvement of the Bikers MOH.

Image 10.1
World Food Safety Day Celebration 2022



Source: Food Safety and Quality Programme, MOH

SAFE FOOD EXPO (eMAS) 2022

For the first time, the Food Safety and Quality Division MOH in collaboration with the MAFSA has organised the Safe Food Expo (eMAS) on 26 to 28 October 2022 with the theme Empowering the Nation's Safe Food Industry. This expo promotes food safety to the public and also helps to empower Small and Medium-sized Enterprises (SMEs) in the production of food products that complies with the food safety and quality requirements. In conjunction with eMAS 2022, the National Clean, Safe, and Healthy Food Court Competition Award Ceremony 2022 was also held.

Image 10.2
The Closing Ceremony of The Safe Food Expo eMAS 2022



Source: Food Safety and Quality Programme, MOH

Image 10.3
Clean, Safe and Healthy Food Court Award 2022



Source: Food Safety and Quality Programme, MOH

Various other activities are also carried out in conjunction with eMAS 2022 such as Food Safety Seminar, product showcases by the industry, food safety exhibitions, and a series of pocket talks related to food safety entrepreneurs. Several awards were given to the food entrepreneurs who participated in the expo.

Image 10.4
Safe Food Expo Awards 2022



Source: Food Safety and Quality Programme, MOH

FOOD SAFETY SEMINAR 2022: GOAL TO SAFER FOOD

Image 10.5
Food Safety Seminar 2022



Source: Food Safety and Quality Programme, MOH

Food Safety Seminar 2022: Goal to Safer Food in conjunction with the eMAS 2022 was held on 26 October 2022 in collaboration with MAFSA. The seminar was attended by 148 participants from various government and private agencies as well as industry involved in the food industry in Malaysia.

WORKING VISIT OF THE SENIOR DIRECTOR TO THE STATE HEALTH DEPARTMENT

The Senior Director of Food Safety and Quality had a working visit to the Food Safety and Quality Division in the JKN, PKD, Entry Point and Food Safety and Quality Laboratory as a top management initiative to monitor the implementation of food safety activities at the field level while also facilitating administrative issues. Throughout 2022, working visits were held in JKN Sarawak from 28 to 31 March 2022, JKN Kelantan from 21 to 22 May 2022, and JKN Kedah on 29 to 30 May 2022. The visit was a sign of appreciation to all the members in the field for giving support and hard work to ensure the success of national food safety control.

Image 10.6
Working Visit of Senior Director of Food Safety and Quality Year 2022



Source: Food Safety and Quality Programme, MOH

NATIONAL FOOD SAFETY POLICY (DKMK) REVIEW

DKMK was launched in 2003 with an approach along the food supply chain and provides direction and emphasis to all stakeholders in the formation and implementation of food safety measures based on cooperation to protect the health of consumers. DKMK needs to be strengthened and is currently being improved in line with the development of global food safety and international policies. DKMK Review Meeting at the PKK level was held on 22 to 24 May 2022 in Kota Bharu, Kelantan. Engagements with stakeholders were held to ensure a thorough review.

Image 10.7
The DKMK Review Meeting



Source: Food Safety and Quality Programme, MOH

RECOGNITION OF THE BEST FOOD SAFETY AND QUALITY DIVISION (BKMM) AT THE STATE LEVEL

The recognition of the Best BKMM has been introduced in 2020 to recognize the excellence of achievements at the JKN. Evaluation criteria are based on the achievement of the implementation of the action plan, key performance indicator, client charter, innovation activities and financial management in the previous year. The recognition of the Best BKMM of the Year 2021 was given to BKMM Pahang which retained the championship for two (2) years in a row followed by BKMM Selangor in the second place and BKMM Sabah in the third place. Through this recognition, all states continue to strive for healthy competition to improve excellence to reach national food safety control goals.

Image 10.8
Recognition of The Best BKMM Year 2021



Source: Food Safety and Quality Programme, MOH

THE 45TH SESSION OF CODEX ALIMENTARIUS COMMISSION (CAC45)

CAC45 held from 21 to 25 November 2022 in Rome, Italy was attended by Senior Director for Food Safety and Quality to represent Malaysia. CAC is the body responsible for the implementation of food standard-related programs under Food and Agriculture Organization/World Health Organization (FAO/WHO).

Image 10.9
The 45th Session of Codex Alimentarius Commission (CAC45)

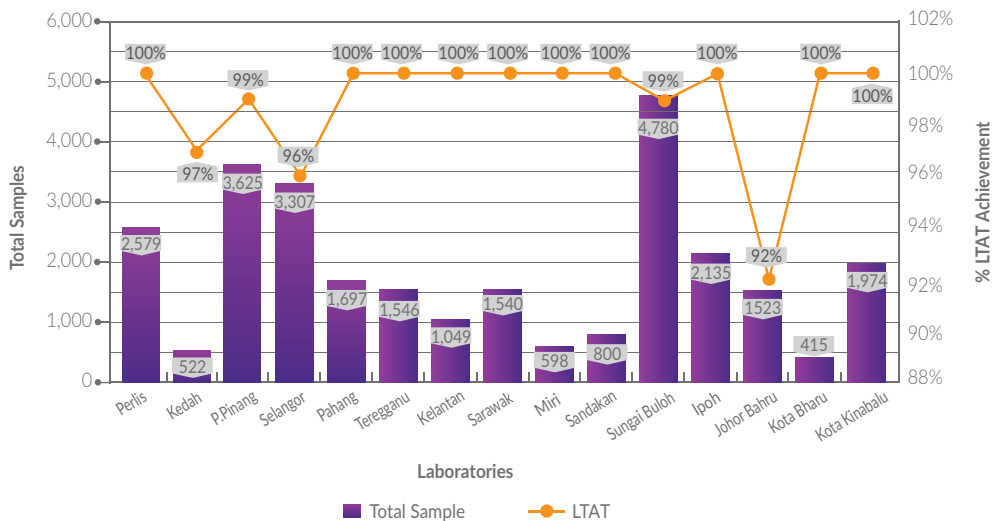


Source: Food Safety and Quality Programme, MOH

FOOD ANALYSIS SERVICE

Food Safety and Quality laboratories provides food analysis services and receives samples from JKN, Entry Points and PKD for monitoring and enforcement activity. A total of 28,090 food samples were analysed in 2022. To ensure the credibility of laboratory services, the results of the analysis should be generated within the prescribed Laboratory Turn-around-Time (LTAT).

Figure 10.1
Total of Samples Analysed and LTAT Achievement for Year 2022



Source: Food Safety and Quality Programme, MOH

FOOD SAFETY SURVEILLANCE

In 2022, there were five (5) surveillance activities consisting of planned surveillance, active surveillance and three (3) research were conducted as shown in **Table 10.1**.

Table 10.1
List of Food Safety Surveillance Activity Conducted in Year 2022

Planned Surveillance			
Surveillance on the Contamination of Heavy Metals (Plumbum and Cadmium) in Food Products for Infants and Young Children at The Local Market	Surveillance on the Contamination of Aflatoxin in Rice and Processed Cereal-based Foods for Infants and Young Children at The Local Market	Surveillance on Acrylamide in Various Foods at The Local Market	Surveillance On Polycyclic aromatic hydrocarbon (PAH) (Benzo(a)pyrene) in Edible Oil at The Local Market
Active Surveillance			
Surveillance on the Contamination of Dithiocarbamate in Petai at the International Entry Point and Local Market.			
Food Safety Research			
An evaluation of Bacillus cereus contamination on selected hermetically sealed home-based food products (Sambal in retort pouch) and its shelf-life stability.	A study on microbiological contamination on selected hermetically sealed home-based food products (Sambal in glass or plastic jar) and its shelf-life stability.	A Pilot Geographical Information System (GIS) Mapping for Microbiome Risk using Next Generation Sequencing (NGS) in Seafood Factories at Various Food Safety Certifications in Penang, Malaysia	

Source: Food Safety and Quality Programme, MOH

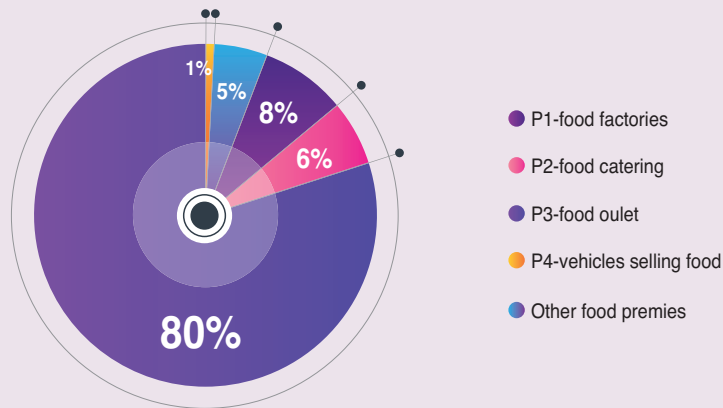
A total of four (4) exposures to food hazards (dietary exposure) were carried out, namely ethylene oxide (ETO) in food, dithiocarbamate (CS₂) in petai, cyclamate in Baby Pineapple and stanum in canned foods. The results of the assessment found that the Malaysian adult population is not at risk of unwanted health effects through the consumption of the food.

COMPLIANCE AND INDUSTRIAL DEVELOPMENT DIVISION

FOOD PREMISE REGISTRATION

All food premises shall be registered with the Ministry of Health (MOH) as required under Food Hygiene Regulations 2009. In 2022, a total of 25,565 food premises have been registered in the system under MOH. The number includes 2,145 food factories (category P1), 1,414 food premises involved in catering or mass catering of food (category P2), 20,532 food outlet premises (category P3), 232 vehicles selling food (category P4) and 1,242 other food premises (category P0).

Figure 10.2
Registration of Food Premises

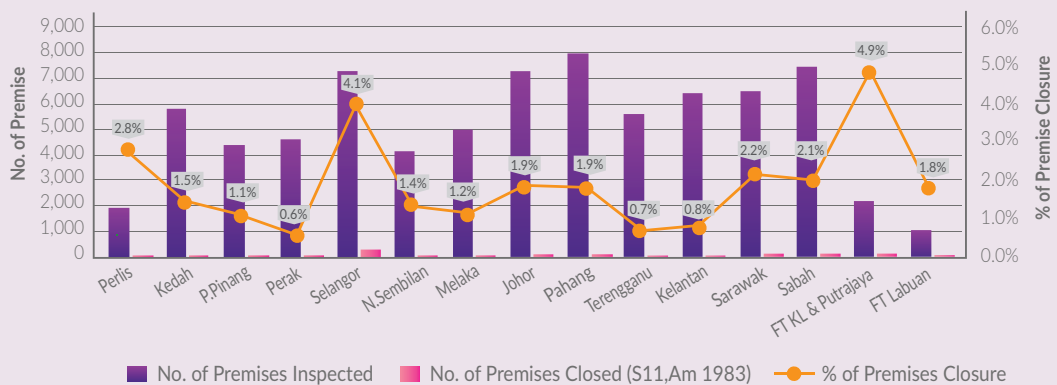


Source: Food Safety and Quality Programme, MOH

FOOD PREMISES INSPECTION

Food premise inspection is to ensure the cleanliness of the premise and complied with the requirement of the Food Act 1983 and the Food Hygiene Regulations 2009. In year 2022, a total of 78,207 food premises were inspected, with 1,439 (1.8 per cent) of premises were instructed to temporary closed under Section 11, Food Act 1983.

Figure 10.3
Number of Food Premises Inspected and Percentage of Closure of Food Premises by State for Year 2022



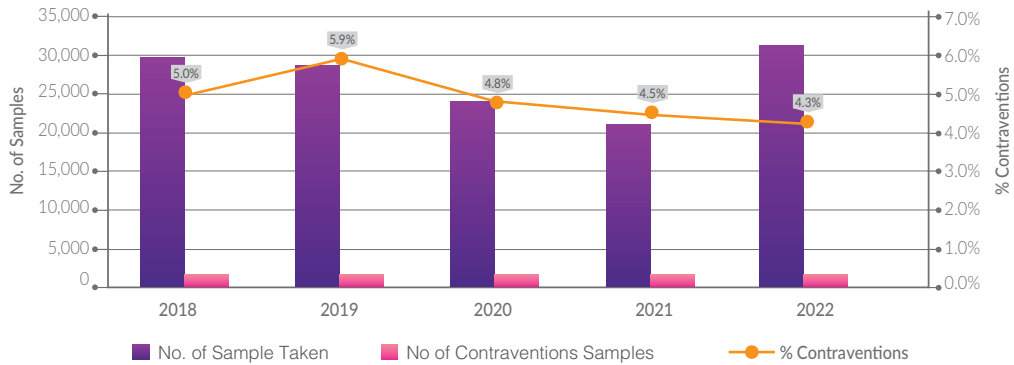
Source: Food Safety and Quality Programme, MOH

FOOD SAMPLING

Food sampling is conducted to ensure that food prepared and sold in Malaysian markets comply with the requirements of the Food Act 1983 and the Food Regulations 1985. In year 2022, a total of 31,342 food samples were taken and a total of 1,351 samples or 4.3 per cent were found contravened under the Food Act 1983 and the Food Regulations 1985. From 2019 to 2022, there was a decreasing trend for contravention samples.

Figure 10.4

Number of Samples Taken and Percentage of Contravene Samples for Year 2018 to 2022



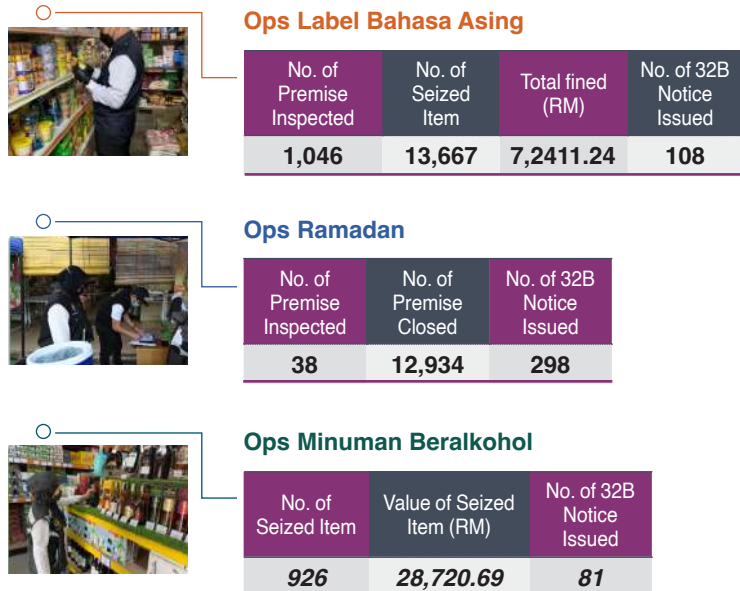
Source: Food Safety and Quality Programme, MOH

SPECIAL OPERATION

In year 2022, PKKM has coordinated Special Operations at the national level as a proactive measure to address food safety issues namely Ops Foreign Language Label, Ops Ramadan and Ops Alcoholic Beverages.

Figure 10.5

Special Operation for Year 2022

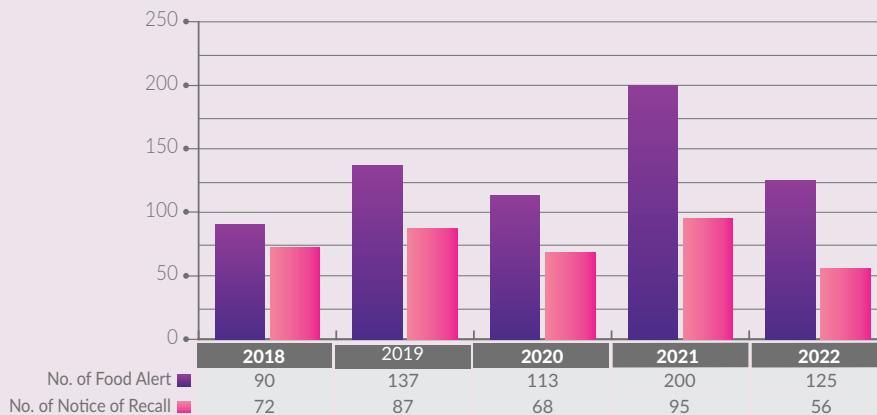


Source: Food Safety and Quality Programme, MOH

FOOD ALERT AND FOOD RECALL

In year 2022, a total of 125 Food Alert notifications were recorded and 56 orders to withdraw products from the market (Food Recall) were issued.

Figure 10.6
Number of Food Alerts and Notices of Recall from Year 2018 to 2022

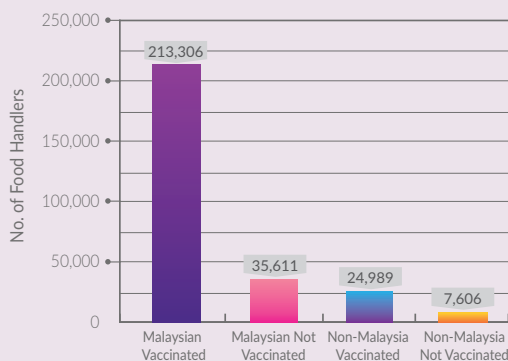


Source: Food Safety and Quality Programme MOH

FOOD HANDLER INSPECTION

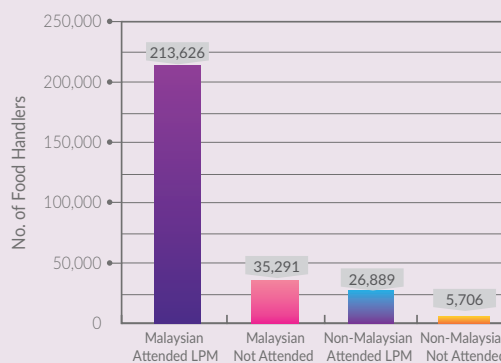
All food handlers are required to attend Food Handler Training (LPM) at the Food Handler Training School accredited by the MOH and are required to obtain anti-typhoid vaccination.

Figure 10.7
Food Handlers Vaccination Status Inspection for Year 2022



Source: Food Safety and Quality Programme, MOH

Figure 10.8
Food Handlers Inspection for LPM for Year 2022

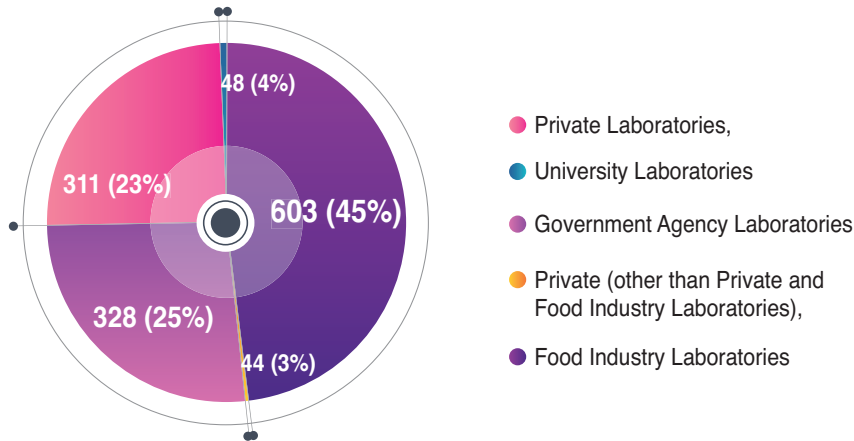


Source: Food Safety and Quality Programme, MOH

ENFORCEMENT OF FOOD ANALYST ACT 2011

Food analysts are required to be registered under the Food Analyst Act 2011 and to have a valid Annual Practising Certificate (APC). As of year 2022, the total cumulative number of registered food analysts was 1,334, of which 757 were holders of the APC. In year 2022, enforcement activities under the Food Analyst Act 2011 and the Food Analyst Regulations 2013 have been carried out by inspection activities on 216 laboratories and 624 food analysts. Out of that number, 14 food analysts have been prosecuted in court.

Figure 10.9
Total Number of Registration of Food Analysts by Sectors

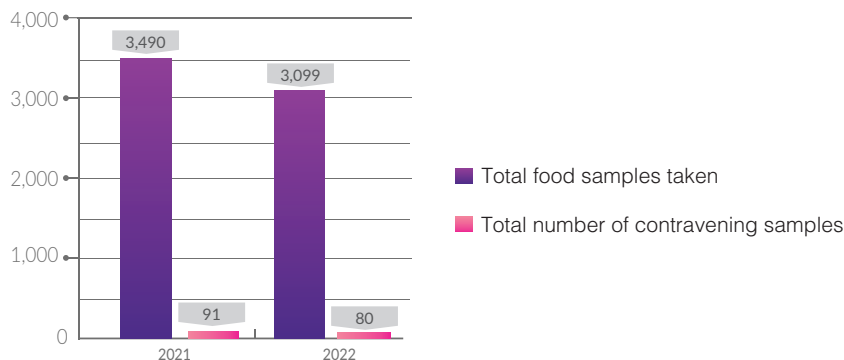


Source: Malaysian Food Analyst Council, MOH

FOOD IMPORT CONTROL

Food import control activities were implemented through 57 entry points throughout Malaysia. A total of 364,961 food consignments were imported into Malaysia in year 2022 compared to 336,545 food consignments in 2021. From the total of year 2022, 348,576 (96 per cent) consignments were document inspected and 3,099 (0.9 per cent) consignments were sampled for analysis of various types of parameters.

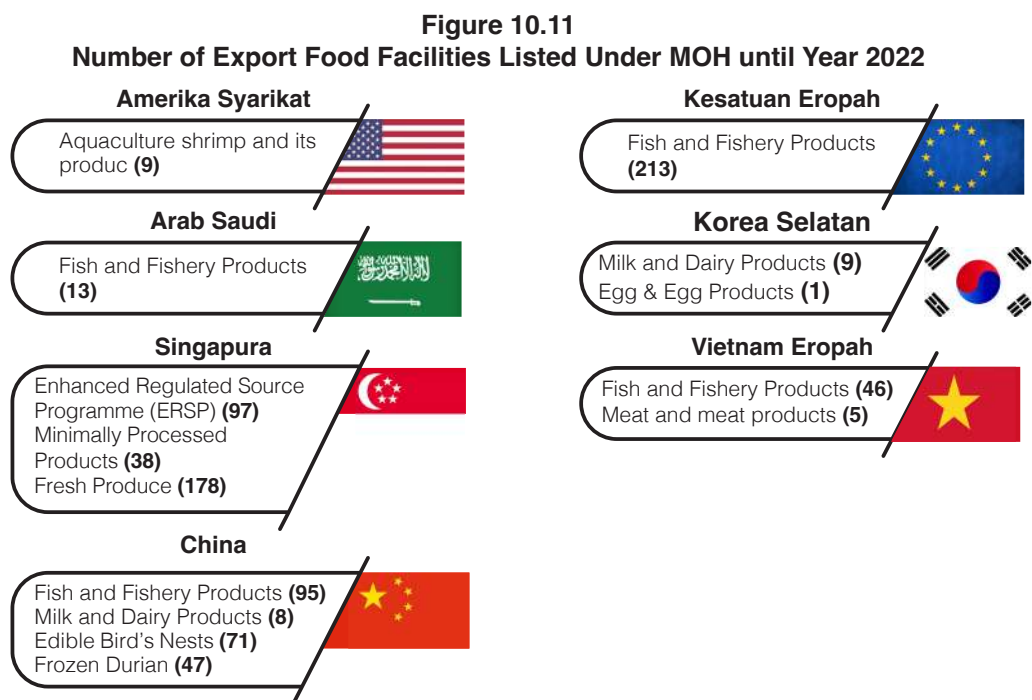
Figure 10.10
Contravention of Imported Food Samples for Year 2021 and 2022



Source: Food Safety and Quality Programme, MOH

FOOD EXPORT CONTROL

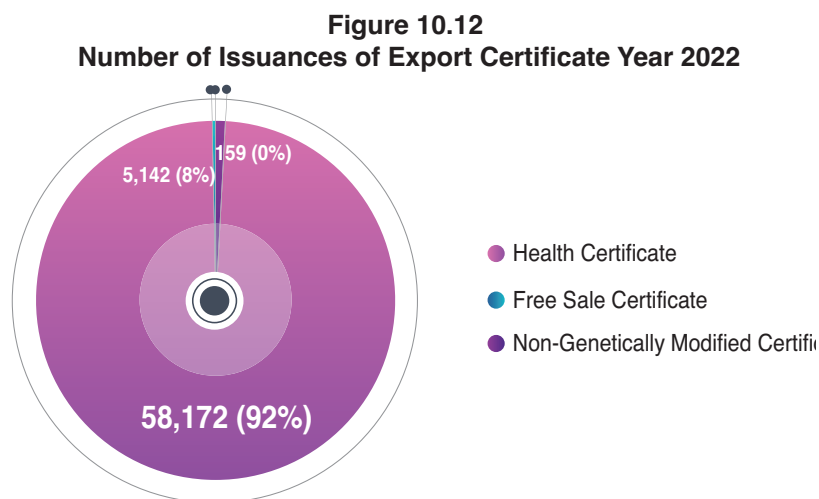
The export monitoring program is an official control developed specifically according to the commodities and the requirements of the importing country. PKKM has also listed export food facilities approved by the importing countries.



Source: Food Safety and Quality Programme, MOH

ISSUANCE OF EXPORT CERTIFICATE

Issuance of export certificate by PKKM for exporter is in accordance to the requirement imposed by the importing countries. The total of export certificate issuance in year 2022 was 63,474.



Source: Food Safety and Quality Programme, MOH

FOOD EXPORT REJECTION NOTIFICATION

For the year 2022, MOH had received 71 notifications with 167 food rejection cases. The summary of food rejection notification is as follows:

Figure 10.13



Export Rejection Notification for Year 2022

Source: Food Safety and Quality Programme, MOH

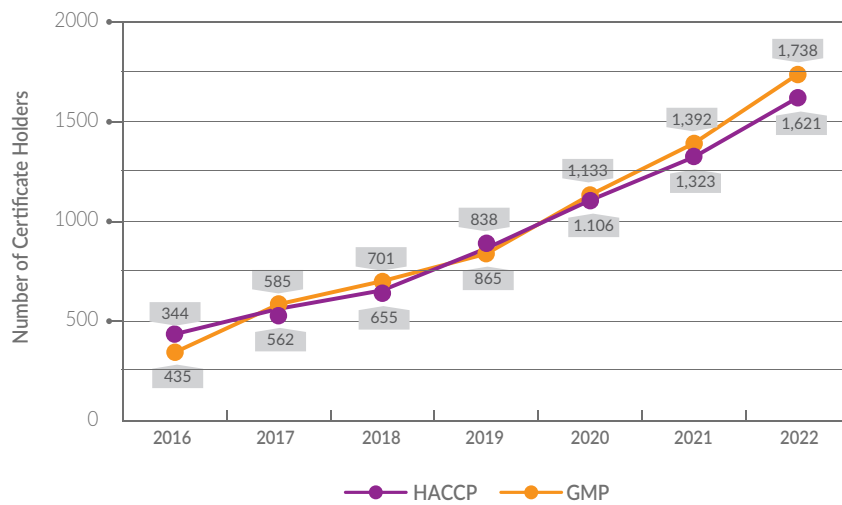
LICENSING

Issuances of four (4) licensing categories required under the Food Regulations 1985 which is Water Vending Machine, Ice, Natural Mineral Water and Packaged Drinking Water. In year 2022, the total number of licenses issued was 3,404 water selling machine licenses, 180 ice licenses, 101 natural mineral water licenses and 279 packaged drinking water licenses.

CERTIFICATION OF FOOD SAFETY ASSURANCE PROGRAM

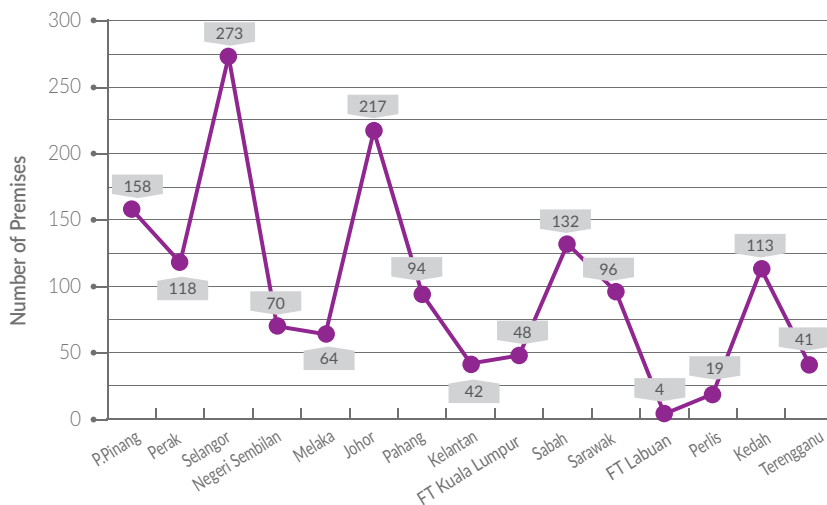
The implementation of food safety assurance program certification is implemented to assist the food industry in complying with the requirements of the Food Act 1983 and its regulations through certifications such as Hazard Analysis Critical Control Point (HACCP), Good Manufacturing Practice (GMP) and Makanan Selamat Tanggungjawab Industri (MeSTI). In year 2022, the trend and achievements for the certification of food safety systems as in **Figure 10.14** and **Figure 10.15**.

Figure 10.14
Cumulative of HACCP and GMP Certificate Holders for Year 2016 to 2022



Source: Food Safety and Quality Programme, MOH

Figure 10.15
Number of Food Manufacturing Premises that Obtained MeSTi Certificate Year 2022



Source: Food Safety and Quality Programme, MOH

In year 2022, the number of food safety-related certifications and listings under PKKM are as follows:

Figure 10.16
Number of Food Safety-Related Certifications and Listings



Source: Food Safety and Quality Programme, MOH

HOME-BASED FOOD OPERATORS LISTING

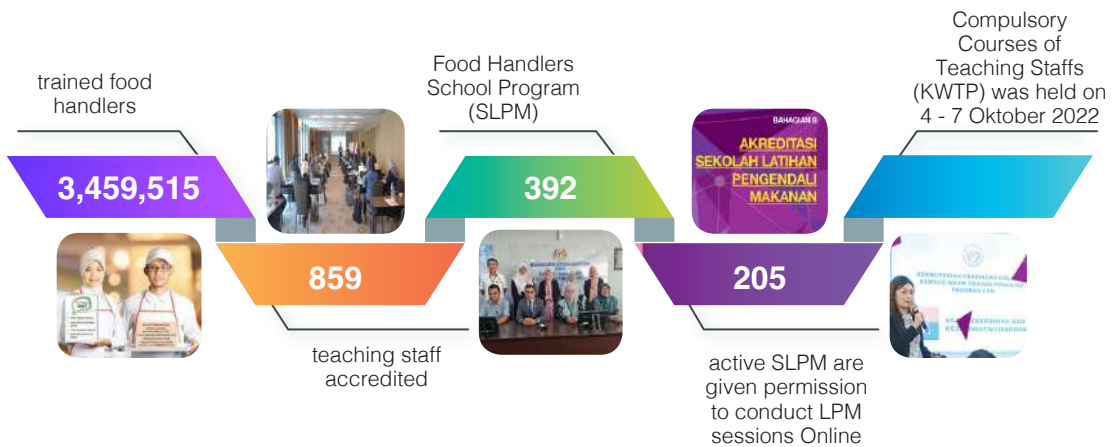
In year 2022, a total of 3,030 home-based food premises were registered under Food Safety Information System of Malaysia (FoSIM) and a total of 253 operators were listed under the Home-Based Food Operators Listing Program. A series of talk shows, webinars, Facebook Live, seminars, talks, exhibitions as well as television and radio broadcasts related to home-based food listing promotion have been carried out. Highlight for year 2022 were talk shows program of *Sembang Tingkap* Home-Based Food involving agencies and home-based food operators nationwide.



FOOD POISONING PREVENTION

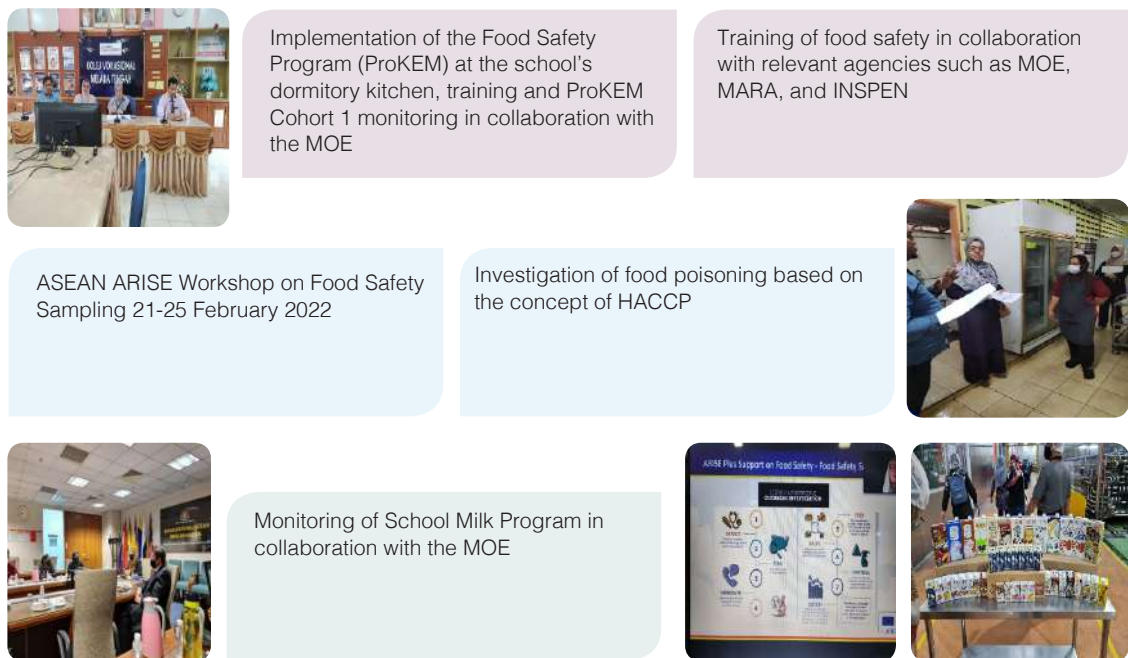
A total of 390 episodes of food poisoning occurred throughout Malaysia in year 2022. As a preventive measure for food poisoning incidents, PKKM continuously monitors the training of food handlers provided through the Food Handlers Training School and Instructors accredited by MOH. Collaborations with various agencies were held to prevent the incidence of food poisoning.

Figure 10.17
Achievements of Food Handler Training Program Year 2022



Source: Food Safety and Quality Programme, MOH

Figure 10.18
Food Poisoning Prevention Activities Year 2022



Source: Food Safety and Quality Programme, MOH

WAY FORWARD

PKKM will always be committed to strengthening food safety and quality control throughout the food supply chain through accountability with stakeholders to ensure that the people get safe and quality food.



A modern office interior with a purple overlay. The background shows a hallway with white walls, a white ceiling with recessed lighting, and a row of white chairs with metal bases. The purple overlay is a semi-transparent band across the middle of the image, containing the chapter title in white text.

CHAPTER 11

DEVELOPMENT

INTRODUCTION

The Development Division is responsible for managing activities related to the management such as planning, implement, control, monitoring and evaluate development programmes and projects of MOH's health facilities implemented under the 12MP. The division was formerly known as the Planning and Development Division, but later was separated into two (2) new entities namely the Planning Division and the Development Division with different functions after the organisational restructuring took place on 1 September 2012. Subsequently on 27 September 2018, the Development Division went through the rebranding of its organisation in which the responsibilities and functions were reorganised into three (3) main sections and supported by 12 units as follows:

a. Section of Project Management I:

- i. Project 1 (North Region) Unit;
- ii. Project 2 (Central Region) Unit;
- iii. Project 3 (East Region) Unit; and
- iv. Public, Private and Partnership Unit.

b. Section of Project Management II:

- i. Project 4 (South Region) Unit;
- ii. Project 5 (Sabah and Sarawak) Unit;
- iii. Budget RMK Unit; and
- iv. Technical and Procurement Unit.

c. Section of Resource Management:

- i. Land Unit;
- ii. Finance and Administration Unit;
- iii. Coordination (Visits/Parliament) Unit; and
- iv. Coordination (Meeting Secretariat) Unit.

ACTIVITIES AND ACHIEVEMENTS

DEVELOPMENT EXPENDITURE YEAR 2022

Under the 12MP Rolling Plan 2 (RP2) Year 2022, Development Expenditure (DE) of MOH was RM4.379 billion for 387 projects under development health facilities that involved 121 new projects and 266 continuing projects. This budget was allocated for the implementation of physical and non-physical development projects. As of 31 December 2022, the spending performance of DE was RM4.337 billion (99.1%) from current year allocation RM4.379 billion. Details of MOH's development expenditure is stated in **Table 11.1**.

Table 11.1
MOH Development Expenditure for Year 2022

Project No. / Name	Development Expenditure (RM)	Liability (RM)	Expenses (RM)	Liability & Expenses (RM)	Percentage (%)
BP 100 - TRAINING	25,009,935.00	750.00	24,758,750.51	24,759,500.51	99
101 New College	258,865.00	-	258,854.34	258,854.34	100
102 Upgrading Training Projects	3,477,217.00	-	3,459,032.15	3,459,032.15	99
105 In-Service Training	21,273,853.00	750.00	21,040,864.02	21,041,614.02	99
BP 200 – PUBLIC HEALTH	369,269,012.00	-	355,082,409.11	355,082,409.11	96
201 Public Health Service (Rural)	142,546,390.00	-	133,598,465.43	133,598,465.43	94
202 Water Supply and Environmental Sanitation (BAKAS)	9,523,934.00	-	9,413,740.87	9,413,740.87	99
203 Public Health Service (Urban)	217,197,688.00	-	212,070,202.81	212,070,202.81	98
204 Mobile Clinic	1,000.00	-	-	-	0
BP 300 – HEALTH FACILITIES	2,800,431,103.00	75,743.30	2,793,623,920.34	2,793,699,663.64	100
BP 400 – NEW HOSPITAL	364,586,637.00	-	361,466,323.96	361,466,323.96	99
BP 500 - RESEARCH & DEVELOPMENT (R&D)	21,344,648.00	-	20,842,567.84	20,842,567.84	98
BP 600 - UPGRADING & MAINTENANCE	97,274,405.00	155,733.45	94,563,705.94	94,719,439.39	97
BP 700 - LAND ACQUISITION & MAINTENANCE	11,202,421.00	-	10,286,868.08	10,286,868.08	92
BP 800 - INFORMATION & TECHNOLOGY (ICT)	38,489,695.00	-	38,162,212.62	38,162,212.62	99
BP 900 – STAFF FACILITIES	85,475,412.00	-	85,397,135.21	85,397,135.21	100
901 Quarters (Rural)	9,003,888.00	-	8,978,887.24	8,978,887.24	100
902 Quarters (Urban)	27,533,335.00	-	27,481,970.55	27,481,970.55	100
904 State Health Office	48,938,188.00	-	48,936,277.42	48,936,277.42	100
BP 1100 – EQUIPMENT & VEHICLES	489,916,772.00	225,450.00	476,864,002.07	477,089,452.07	97
BP 1200 – PUBLIC PRIVATE PARTNERSHIP PROJECT (PPP)	75,529,771.00	-	75,271,906.42	75,271,906.42	100
BP 9000 - HEALTH TOURISM	1,100,000.00	-	1,100,000.00	1,100,000.00	100
TOTAL	4,379,629,810.00	457,676.75	4,337,419,801.10	4,337,877,477.85	99.1

Source: Development Division, MOH

LAND MANAGEMENT AND MONITORING

The Development Division is also responsible for administering the management and acquisition of land and buildings in accordance with the National Land Code 1965, the Land Acquisition Act 1960 and the relevant Treasury Circulars for the development of health facilities. The land acquisition processes for developing the health facilities of MOH all over the country must be with the consent of the Land Management and Monitoring Committee (JKPPT) chaired by the Secretary-General of MOH. A total of 41 application papers were submitted by various agencies under the MOH for land acquisition and presented in JKPPT. **Table 11.2** indicates the list of JKPPT meetings held for the year 2022.

Table 11.2
List of JKPPT Meeting for Year 2022

Meetings	Date	Numbers of Proposal Papers
MJKPPT Bil. 1/2022	1 April 2022	10
MJKPPT Bil. 2/2022	27 July 2022	7
MJKPPT Bil. 3/2022	16 December 2022	24
Total		41

Source: Development Division, MOH

TRAINING DEVELOPMENT FOR ENHANCING THE COMPETENCY OF OFFICERS

The Development Division also focused on designing, planning and implementing the Training Operation Plan to enhance the competencies of their officers in managing and performing tasks, especially in project management as well as updating information in the MyProjek Monitoring System. The list of the training development activities held throughout the year 2022 is as per **Table 11.3** below.

Table 11.3
List of Training Activities for Competency Development for Year 2022

Activity	Date
Workshop on MOH Land Management 2022	9 - 11 March 2022
Public Project Management Course Series 1 for Officers at Development Division	15 - 16 June 2022
Workshop on Land Demised Premises	27 June 2022
Workshop on Finalising the Terms and Conditions (Salient Terms) of the Lease Agreement for the Operation of Hospital Cyberjaya	27 - 29 June 2022
Workshop on Transfer of Knowledge for MyProjek System Development Division	27 - 29 June 2022
Workshop between Development Division MOH with Programme/ Division/JKN	25 - 27 September 2022
Kajian Penilaian Outcome Meeting	2 - 4 November 2022

Source: Development Division, MOH

Image 11.1
Public Project Management Course Series 1 for Year 2022



Source: Development Division, MOH

THE AWARDS OF COMPLETED HEALTH FACILITY DEVELOPMENT PROJECTS

The process of awarding the completed health facility development projects involved inspection on the projects with the end-user, JKR and the contractors involved. After the facility building was completely built and all related processes were properly undertaken, the key was awarded to the end-user, namely the JKN or health institutes. In year 2022, total 19 of MOH's completed health facility development projects were awarded to end-users as stated in **Table 11.4** below.

Table 11.4
List of MOH's Health Facility Development Projects Awarded for Year 2022

Projects Completed and Awarded	Date
Hospitals	
Hospital Putrajaya Endocrine Institute	22 April 2022
Hospital Bera, Pahang	27 May 2022
Hospital Sri Aman II, Sarawak	15 July 2022
Electricity Supply System Upgrade Hospital Melaka	1 September 2022
Hospital Tanjong Karang, Selangor	26 September 2022
Construction of Hospital Serdang Cardiology Center, Selangor	17 October 2022
Health Clinics, Dental Clinics and Quarters	
Bayu Damai Health Clinic Quarters, Pengerang, Johor	15 March 2022
Kg. Temai Health Clinic (Type 7), Pahang	28 May 2022
Kg. Chegar Perah Health Clinic (Type 7), Lipis, Pahang	10 June 2022
Upgrade Tronoh Dental Clinic, Kinta, Perak	

Projects Completed and Awarded	Date
Pasir Akar Dental Clinic, Besut, Terengganu	21 June 2022
Lenggeng Health Clinic (Type 5), Negeri Sembilan	1 October 2022
Joh Health Clinic (Type 7) with Quarters, Machang, Kelantan	10 October 2022
Sg. Keladi Health Clinic (Type 7) with Quarters, Pasir Mas, Kelantan	
Telok Jering Health Clinic (Type 7) with Quarters, Tumpat, Kelantan	
Upgrade Kluang Dental Clinic, Johor	8 December 2022
Research Institutes	
Upgrade IMR, Phase 2 (Left Wing), FT Kuala Lumpur	20 May 2022
Others	
Replacement Elevator System and Other Works Regarding Seremban Health Clinic, Negeri Sembilan	22 June 2022
Flood Barrier at Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan	10 October 2022

Source: Development Division, MOH



CHAPTER 12

INTERNAL AUDIT

INTRODUCTION

The Internal Audit Division (CAD) of the MOH was established in 1980 following the Treasury Circular No.2 Year 1979. The roles and responsibilities of the CAD have been strengthened through Treasury Circular PS 3.1/2013 which is the Internal Audit Implementation by the Ministry or Department of the Federal and State Government.

The CAD led by the Head of Internal Audit is authorised to conduct independent, fair, and equitable audits and reports directly to the MOH Secretary-General. The CAD also serves as the third line of defence providing independent assurance in assisting the MOH to achieve its objectives by ensuring that internal controls and risk management are sound and systematic.

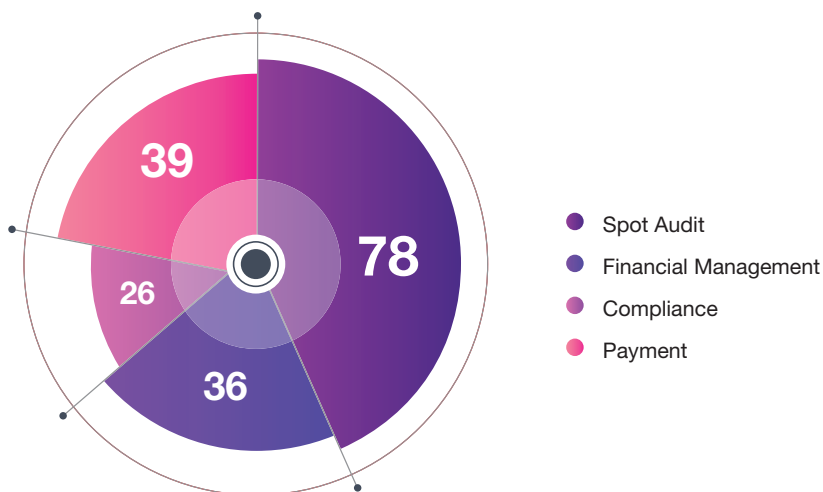
ACTIVITIES AND ACHIEVEMENTS

In accordance with PS 3.1 and the auditing standards of The International Organisation of Supreme Audit Institutions (INTOSAI) and the Chartered Institute of Internal Auditors, CAD has implemented five (5) types of audit programmes throughout the year 2022, involving Financial Auditing, Performance Auditing, Verification of Initial Balance of Asset and Liabilities (Accrual Accounting), Financial Management Risk Assessment and Internal Control Statement for Items in Financial Statements.

FINANCIAL AUDITING

Financial Auditing encompasses a wide range of methods that includes auditing of internal controls, financial or legal regulations compliance including financial records as well as the financial system established in the Responsibility Centres (RCs). In year 2022, CAD has conducted four (4) types of activities under Financial Auditing including Financial Management Auditing, Compliance Audit, Payment Audit and Spot Audit (**Figure 12.1**).

Figure 12.1
Total of Financial Audits Conducted for Year 2022



Source: Internal Audit Division, MOH

FINANCIAL MANAGEMENT AUDITING

Financial management audit is an audit approach to determine whether financial management of RC has been implemented in an orderly manner and in accordance with the prescribed rules. The audit scope covers five (5) major controls, namely receipts control, procurement management, expenditure control, management of assets and stores as well as management of government vehicles.

Financial Management performance is classified into four (4) rating categories, namely good, satisfactory, least satisfactory and unsatisfactory. Based on the Audit Findings Report issued to 36 audited RCs, five (5) RCs were rated as good, 10 RCs were satisfactory, while 21 RCs were rated as least satisfactory.

COMPLIANCE AUDIT

Compliance Auditing focuses in depth on a key audit area or financial management control based on Risk Profiling that is carried out for each RC. This audit uses the 3P1K approach which is to identify the elements of Waste, Extravagance, Misappropriation and Leakage of Public Funds.

In year 2022, CAD has implemented two (2) Compliance Auditing, namely Emergency Procurement at MOH Hospitals and Management of Security Control Services (Without Firearms) at 26 District/Division/Area Health Offices.

AUDIT OF PAYMENT ORDER

Audit of Payment Order is an inspection carried out on all records and transactions generated from the financial and account system to ensure all the relevant records are maintained and recorded in accordance with the prescribed laws and regulations.

A total of 7,529 samples payment vouchers worth RM152.22 million were audited in year 2022, involving 39 RCs and 450 issues were raised.

SPOT AUDIT

The Spot Audit was conducted on three (3) major financial management controls namely Receipt Control, Asset and Store Management as well as the Departmental Vehicles Management in 78 Cost Centres under the PKD/Division/Area. The objective of the Spot Audit is to determine whether all receipts, public money, government assets, records, documents and valuables under the custody of responsible officers are accounted for, controlled and securely stored.

PERFORMANCE AUDITING

CAD had also conducted performance audits to evaluate whether the Federal Government's activities were being carried out efficiently, economically and effectively to achieve its desired objectives. The measurement of inputs, outputs and outcomes will be examined to determine the management and achievement of the programme or activity. In year 2022, a total of 12 performance audits were conducted involving procurement management, programmes or activities management and ICT projects (**Table 12.1**).

Table 12.1
List of Performance Audits Topics

Topics
Management of Dengue Prevention and Control Activities
Management of Value-Added Service Procurement of LOCKER4U
Management of Vacant Land Owned by MOH
Development of Food Safety Information System (FoSIM)
Management of Wellness Hub Upgrade Project
Management of Water Supply and Environmental Cleanliness Program (BAKAS)
Audit of Public Complaints Carried Out Through the Public Complaint Management System (SiSPAA) at the MOH
Management of Maintenance of Total Hospital Information System (THIS) at the IKN
Audit of Community Feeding Program at MOH
Management of Inpatient at MOH Psychiatric Hospital
Audit of Officers Who Are Subject to Disciplinary Actions and Referred to the Medical Board
Management of ICT Equipment Procurement (Personal Computers and Laptops)

Source: Internal Audit Division, MOH

VERIFICATION OF INITIAL BALANCE OF ASSETS AND LIABILITIES (ACCRUAL ACCOUNTING)

As agreed in the Accrual Committee Meeting, CAD needs to perform verification of the initial balance of assets and liabilities in the Ministry's financial statements, which are balance sheet items. In year 2022, CAD had conducted three (3) activities to verify the balance of assets and liabilities on the items of the financial statements in line with the implementation of Federal Government Accrual Accounting. The verification audit performed involves the confirmation of the initial balance data of Assets involving Movable and Immovable Assets, Intangible Assets, Inventories Accounts Receivable and Finance Lease Assets for the cut off 31 December 2021 and 30 June 2022 (**Table 12.2**).

Table 12.2
Verification of Initial Balance Data of Assets and Liabilities

Items	Cut Off 31 December 2021	Cut Off 31 December 2021	Cut Off 30 June 2022
		(Additional)	(Additional)
	(RM)	(RM)	(RM)
Movable Assets	2,796,343.02	-	-
Immovable Assets	239,542,050.00	-	-
Intangible Assets	69,153,343.25	127,703,380.22	-
Inventories	32,441,650.22	17,777,388.06	-
Accounts Receivable	54,028,800.69	5,476,621,567.00	-
Finance Lease Assets	-	-	433,674,654.24

Source: Internal Audit Division, MOH

FINANCIAL MANAGEMENT RISK ASSESSMENT AND INTERNAL CONTROL STATEMENT FOR ITEMS IN FINANCIAL STATEMENTS

Among the responsibilities of CAD stipulated under PS 3.1 is to provide assurance and consulting services to the organisation. For that purpose, CAD needs to carry out a financial management risk assessment involving four (4) main elements such as Revenue Collection Control, Asset Management, Expense Management and Procurement Management.

In year 2022, CAD has carried out two (2) risk assessment audits on the Conditional Approval Activities of the COVID-19 Self-Test Kit and Computer Rental Services at four (4) MOH RCs.

CAD has also issued an Internal Control Statement based on the risk assessment audit that has been carried out. It aims to assess whether the agreements or contract clauses protect the government's interests and also to suggest recommendations for improvement.

WAY FORWARD

The roles and functions of the internal audit carried out by the CAD is accomplished with the support of various levels of management in MOH and the RCs. All the efforts taken by every individual in MOH to rectify and improve shortcomings in processes and procedures as well as upheld governance that helped the MOH to strengthen the public service delivery system in the healthcare sector.



CHAPTER 13

CORPORATE COMMUNICATIONS



CONTRACT

INTRODUCTION

The Corporate Communications Unit (UKK) was established with the objective of enhancing the image of the ministry, promoting the ministry's policies and programmes of the ministry through an organized and effective public relations strategy. Besides, UKK acts as the frontline in managing customer service and public complaints. This unit consists of five (5) sections:

- i. Media Section;
- ii. Strategic Communications Section;
- iii. Corporate Affairs Section;
- iv. Public Response Management Section; and
- v. Administration Section.

MEDIA SECTIONS

The Media Section is responsible for managing the media coverage for each MOH official event and programme. Among the programmes that have been covered are:

LAUNCHING OF THE NATIONAL INSTITUTE OF HEALTH (NIH) COMPLEX

NIH Complex was launched by Yang di-Pertuan Agong and Raja Permaisuri Agong on the 9 August 2022. The institute which started operating in 2020 at Setia Alam, Selangor was established to create a seamless continuum of research from identifying research priorities, conducting research, and utilising research findings for the health services and programme.

Image 13.1
Launching Ceremony of NIH



Source: Corporate Communications Unit, MOH

LAUNCHING OF HOSPITAL BERA

The Prime Minister accompanied by the Minister of Health officiated the opening ceremony of Hospital Bera on the 20 August 2022 in Bera, Pahang. The project, which was approved under the Ninth Malaysia Plan was built on 33 acres of land in Mukim Triang, Bera's construction site. The hospital accommodates 40 beds benefiting about 150,000 residents in Bera District.

Hospital Bera is a non-specialist district hospital placed under the Central Pahang Cluster Hospital Programme alongside Hospital Jengka, Hospital Jerantut and Hospital Bentong, with the Hospital Sultan Haji Ahmad Shah, Temerloh acting as the Lead Cluster Hospital.

Image 13.2
Launching Ceremony of Hospital Bera



Source: Corporate Communications Unit, MOH

LAUNCHING OF HOSPITAL REMBAU

The Minister of Health officiated the opening ceremony of Hospital Rembau, Negeri Sembilan on the 23 September 2022. Hospital Rembau is equipped with 76 beds with 4 ward categories namely the men's ward, women's ward, maternity ward and pediatric ward.

Image 13.3
Launching Ceremony of Hospital Rembau



Source: Corporate Communications Unit, MOH

THE NATIONAL COVID-19 IMMUNISATION PROGRAMME FOR CHILDREN

The Minister of Health launched the National COVID-19 Immunisation Programme for Children (PICKids) for children aged between 5 and below 12 years old at Hospital Tunku Azizah on the 3 February 2022. There are a total of 4 million children between the ages of 5 and under 12 years old who will receive the mRNA Vaccine which is Comirnaty® 10mcg Concentrate for Dispersion (PfizerBioNTech). The vaccine dose is one-third of the adult dose.

Image 13.4
PICKids



Source: Corporate Communications Unit, MOH

MEDIA ENGAGEMENT SESSION WITH THE MINISTER OF HEALTH

A media engagement session involving the Minister of Health together with the Editors-in-Chief was held on the 17 February 2022 with the aim of disseminating information such as the current situation of COVID-19 in Malaysia, MOH's preparedness, the effectiveness of the COVID-19 vaccine and the COVID-19 vaccine booster made available at MOH's facilities. The information shared is intended to increase the media's understanding as well as strengthen the network collaboration from the aspect of channelling legit health information to the community.

Image 13.5
Media Engagement Session with the Minister of Health



Source: Corporate Communications Unit, MOH

LAUNCHING OF HOSPITAL SERDANG CARDIOLOGY CENTRE OPERATION

The Minister of Health attended the Hospital Serdang Cardiology Centre Operation Launch Ceremony on 12 December 2022. This operation is in line with Serdang Hospital's status as a National Tertiary Cardiac Referral Centre and it is a continuation of the MOH's efforts to provide the best world-class cardiac treatment services. The centre consists of an eight-story cardiology block with 262 beds and a nine-story parking block with 536 parking bays. Through its facility, the number of cardiac treatment services can be doubled compared to the existing capacity.

Image 13.6
Launching Ceremony of Hospital Serdang Cardiology Centre



Source: Corporate Communications Unit, MOH

NARATIF KHAS PROGRAMME WITH THE MINISTER OF HEALTH

An interview session with the Minister of Health was held on 16 December 2023 at RTM. This interview session was conducted for RTM's TV programme called Naratif Khas to discuss the topic of Facing Health Challenges.

Image 13.7
Naratif Khas Programme with The Minister of Health



Source: Corporate Communications Unit, MOH

STRATEGIC COMMUNICATIONS SECTION

Strategic Communications Section is responsible for disseminating message to the public via official social media platform.

- a. The Strategic Communication Section focuses on the current developments of post COVID-19 pandemic by highlighting the progress and activities related to current health issues. The main focus is given to the empowerment and stabilization of positive messaging through facts and data that are proactive and strategic, designed to be easily understood by all targeted audiences through a message that is formulated using social media platforms such as, Facebook, Twitter, TikTok, Instagram, Telegram and Youtube.

Table 13.1
MOH's Targeted Number of Followers for Each Social Media Platforms

Activities	Current followers
Facebook (KEMENTERIAN KESIHATAN MALAYSIA)	5.7 million
Twitter (KKMalaysia)	2.03 million
Instagram (kementeriankesihatanmalaysia)	1.4 million
Youtube (Kementerian Kesihatan Malaysia)	62,800
Telegram (OFFICIAL KEMENTERIAN KESIHATAN MALAYSIA)	41,000
TikTok (@kkmputrajaya)	243,900

Source: Corporate Communications Unit, MOH

Table 13.2
Highest Post-Engagement Posting Throughout the Year 2022

Visual Communication	Reach
Relaxation of the COVID-19 SOP	6.80 million
Monkey Pox fake news	5.95 million
Long COVID-19	5.74 million
MySejahtera Check In	5.54 million
Monkey Pox	5.09 million
PICKids Vaccine	4.86 million
HFMD	4.76 million
Microsleep	4.02 million
Festive season safety measures	3.08 million
Prevent HFMD	3.01 million

Source: Corporate Communications Unit, MOH

- b. Provides and coordinates information and trending issues in social media through the facts and data that have been validated to promote MOH's policies, literacy and current issues to society, proactively based on branding/ themes that can ultimately shape a positive public perception.

Image 13.8
Health Policies Promotions and Campaigns for Year 2022



Source: Corporate Communications Unit, MOH

Image 13.9
Generational EndGame (GEG) Campaign



Source: Corporate Communications Unit, MOH

- c. In an effort unnecessary to ensure the latest information towards current activities and overall overview of it; we enhanced the people's understanding of national health policies through Live Facebook broadcast and MOH's important highlights, for instance:
- i. Live broadcast for the Minister of Health and Deputy Minister of Health press conferences;
 - ii. Live broadcast of the Minister of Health's programme;
 - iii. Video snippets of the Minister of Health's press conference; and
 - iv. Video snippets of MOH's top management engagement session with the media.

Image 13.10
Minister of Health Press Conference



Source: Corporate Communications Unit, MOH

CORPORATE AFFAIRS SECTION

The Corporate Affairs Section is responsible for managing the MOH's corporate affairs, such as preparing speeches for the top management, publication of books and e-Bulletin throughout 2022.

PUBLICATION OF E-BULLETIN 2022

The Malaysia Sihat Sejahtera e-Bulletin is the monthly publication produced by the UKK displays activities of the ministry throughout the year 2022. In addition, it also serves as a source of reference for civil servants and public. Starting April 2022, the MOH e-Bulletin will be published quarterly.

Image 13.11
Malaysia Sihat Sejahtera e-Bulletin



Source: Corporate Communications Unit, MOH

PUBLIC RESPONSE MANAGEMENT SECTION

Public Response Management Section is responsible for coordinating complaints received through various platforms. MOH had received a total number of 24,599 public feedbacks in 2022 based on the categories listed in **Table 13.3**.

Table 13.3
Number of Public Feedbacks Received for Year 2022

Type of Feedback	Categories	Received	Total
Complaint	Ordinary	8,872	10,509
	Complex	1,637	
Non-Complaint	Recognition	7,709	14,090
	Report	3,412	
	Inquiries	1,703	
	Application	679	
	Suggestion	587	
		Total	24,599

Source: Corporate Communications Unit, MOH

Overall, MOH has achieved 94.1 per cent in resolving complaints received. Number of received and resolved complaints as shown in **Table 13.4**.

Table 13.4
Number of Received and Resolved Complaints for Year 2022

Categories	Resolve Duration	Received	Resolved (%)	Resolved within 15 Days (KPI) (%)
Ordinary	15 working days	8,872	8,527 (96.1%)	8,030 (90.5%)
Complex	>16 – 365 days	1,637	1,227 (75.0%)	-
Total		10,509	9,754 (92.8%)	

Source: Corporate Communications Unit, MOH

MOH complaints analysis in accordance with categories of complaints set out in the *Sistem Aduan Pengurusan Aduan Awam (SiSPAA)* as shown in **Table 13.5**.

Table 13.5
Percentage of Complaints Received Base on Issued for Year 2022

Complaint Category	Percentage
Patient Management	53.5
Quality of Governance Services	17.4
Administration Management	14.8
Public Health	7.0
Public Facilities	3.9
Clinical Facilities	1.7
Pharmaceutical Services	1.5
Food Safety and Quality Division Services	0.2

Source: Corporate Communications Unit, MOH

In 2022, MOH has achieved the KPI target which is resolving Ordinary complaint within 15 working days above 85 per cent and resolving non complaint feedback (excluding Report feedback) above 90 per cent. As for resolving Ordinary complaint, MOH has reached 90.5 per cent and for resolving non complaint feedback, MOH has reached the target with 95.1 per cent feedback has been resolved. The detailed of the achievement as shown in **Table 13.6**.

Table 13.6
KPI Year 2022

Key Indicator Performance	Target (%)	Achievement (%)
Resolving Ordinary Complaint Within 15 Working Days	85	90.5
Resolving Non-Complaint Feedback (excluding Report feedback) Within 15 Working Days	90	95.1

Source: Corporate Communications Unit, MOH

ADMINISTRATION SECTION

The Administration Section manages and implements work related to administration, human resources, finance, recruitment, assets and security from time to time. In 2022, this section has held two (2) programmes which were Neuro Linguistic Programming (NLP) Workshop and the UKK's Team Building.

The NLP workshop was held on 20 October 2022 at Hotel Royale Chulan, Seremban, Negeri Sembilan. This workshop was attended by a total of 32 staffs from different division in the MOH. The purpose of NLP workshop is to increase competence of civil servant that can create impact on the organisation toward establish on effective image and reputation.

Image 13.12
NLP Workshop



Source: Corporate Communications Unit, MOH





CHAPTER 14

POLICY & INTERNATIONAL RELATIONS

INTRODUCTION

The Policy and International Relations Division (BDHA) consists of three (3) sections which are the Policy and Strategic Planning Section; Cabinet and Secretarial Section; and International Section. BDHA is responsible for managing the following tasks:

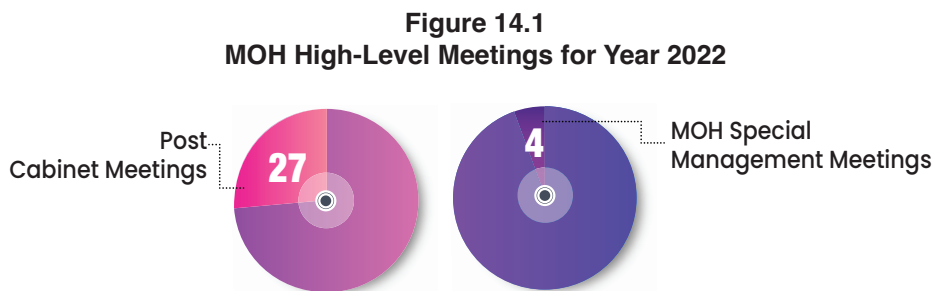
- i. Formulate and implement public health policies;
- ii. As the focal point in international relations and the development of healthcare industries;
- iii. Coordinate international trade issues;
- iv. Ensure Malaysia's health-related interests are voiced and protected diplomatically through international legal instruments;
- v. Coordinate the preparation of Cabinet Papers; and
- vi. Secretariat for MOH High Level Meetings, including the MOH Post-Cabinet Meetings.

CABINET RELATED MATTERS

BDHA has coordinated nine (9) Cabinet Notes and 30 Memorandums for tabling at the Cabinet Meeting. This division has also coordinated and provided input for 94 Memorandums from other ministries, as well as 30 feedbacks on the Cabinet Meeting minutes.

MOH HIGH-LEVEL MEETINGS

Post Cabinet Meeting and MOH Special Management Meeting are among the high-level meetings coordinated by BDHA.



Source: Policy and International Relations Division, MOH

MOH TWELFTH MALAYSIA PLAN (12MP) WEBINAR - THIRD AND FOURTH SERIES

In year 2022, BDHA in collaboration with the Planning Division and Corporate Communications Unit had organised two (2) series of 12MP webinars at the MOH level. The series involved MOH top management as panellists with external panellists from various backgrounds such as the academia, private sector and NGOs. The webinar series aimed at promoting the government's development plans related to the health sector during the 12MP term.

Image 14.1
MOH 12MP Webinar - Third and Fourth Series



Source: Policy and International Relations Division, MOH

FOCUS GROUP DISCUSSION (FGD) ON THE RE-ALIGNMENT OF MOH INITIATIVES FOR THE IMPLEMENTATION OF THE NATIONAL FOURTH INDUSTRIAL REVOLUTION (4IR) POLICY

A FGD for the re-alignment of MOH initiatives for the implementation of the National 4IR Policy was organised in collaboration with MyDIGITAL Corporation on 23 to 24 May 2022.

Image 14.2
FGD on the Re-Alignment of MOH Initiatives for the Implementation of the National 4IR Policy



Source: Policy and International Relations Division, MOH

FOREIGN EQUITY PARTICIPATION IN PRIVATE HEALTHCARE FACILITIES POLICY

In light of Malaysia's growing healthcare industry, MOH is reviewing the Foreign Equity Participation in Private Healthcare Facilities Policy which was enforced since 2014.

In this regard, BDHA has conducted several engagement sessions as part of the Regulatory Impact Analysis (RIA) process to gather inputs from relevant stakeholders to develop a more relevant policy. The first engagement session with associations was held on 27 September 2022, and the second session was held on 21 October 2022 with the industry players in the Klang Valley. On 9 November 2022, a webinar involving participants from the healthcare industry from all over Malaysia including Sabah and Sarawak was held.

Image 14.3
Foreign Equity Participation in Private Healthcare Facilities Policy Engagement Sessions



Source: Policy and International Relations Division, MOH

MEMORANDUM OF UNDERSTANDING (MOU)

MOH has established strategic bilateral relations through MoUs with multiple countries. In year 2022, Malaysia had signed three (3) MoUs as follows:

- MoU between the Government of Malaysia and the Government of the People's Republic of China on Cooperation in the Field of Traditional Medicine on 31 March 2022;
- MoU between the Government of Malaysia and the Government of the Republic of Türkiye in the fields of Health and Medical Sciences on 7 July 2022; and
- MoU between the Government of Malaysia and the Government of the State of Palestine on Co-operation in the Field of Health on 23 September 2022.

Image 14.4
MoU for Year 2022



Source: Policy and International Relations Division, MOH

MOU BETWEEN MOH AND IHH HEALTHCARE IN RELATION TO TREATMENT OF GOVERNMENT'S PATIENTS FOR RADIOTHERAPY SERVICES WITHIN IHH HEALTHCARE MALAYSIA'S NETWORK OF HOSPITALS

MOH had signed an MoU with IHH Healthcare Malaysia on 14 September 2022. IHH Healthcare Malaysia will provide radiotherapy treatment, stereotactic radiosurgery procedures and stereotactic radiotherapy for 500 cancer patients, particularly in the B40 group, across seven (7) IHH Healthcare hospitals for a period of 12 months. The corporate social responsibility (CSR) contribution is estimated to be worth RM6.38 million.

Image 14.5
The Signing Ceremony of the MoU between MOH and IHH Healthcare



Courtesy: MOH Official Facebook

CONTRIBUTION TO OTHER COUNTRIES

BDHA played a key role in coordinating several COVID-19 vaccines and medical supplies contribution programmes to other countries in need. Among the contribution programmes successfully implemented were:

- i. 500,000 doses of AstraZeneca COVID-19 vaccines to Myanmar through Malaysia – Myanmar Business Council on 21 April 2022;
- ii. 500,000 doses of Covilo (Sinopharm) COVID-19 vaccines to Lao PDR through the Embassy of Malaysia in Vientiane on 20 June 2022;
- iii. Medical supplies to the Republic Socialist Democratic of Sri Lanka on 31 October 2022; and
- iv. Medicines to the Government of Ukraine on 9 December 2022.

CONTRIBUTION FROM FOREIGN COUNTRIES

COVID-19 vaccine contributions received from other countries include:

- i. 1,000,000 doses of Sinovac CoronaVac COVID-19 vaccines from the People's Republic of China on 24 January 2022;
- ii. 1,000,000 doses of Sinopharm COVID-19 vaccines from the United Arab Emirates which was received in two (2) batches on 25 January and 24 February 2022; and
- iii. Medical aid and cold chain equipment by the Government of Japan under the Last One Mile Support through UNICEF.

Image 14.6
Contributions from Foreign Governments



Source: Policy and International Relations Division, MOH

OFFICIAL WORKING VISITS

BDHA has coordinated official foreign governments visits to Malaysia as well as the MOH delegation's international visits led by the Minister of Health and Deputy Minister of Health. The following is the list of the official international visits in year 2022:

Table 14.1
Official Working Visits for Year 2022

Official Visits of The Foreign Governments to MOH	
Official Working Visit of Naval Medical Research Unit Two (NAMRU 2) to IMR	24 February 2022
Official Bilateral Working Visit of Mr. Ong Ye Kung, Minister of Health, Republic of Singapore and Delegation	23 - 25 March 2022
Official International Visits of MOH Delegation	
Official visit of the Minister of Health to Geneva for the 150th Executive Board Meeting	30 January 2022
Official visit of the Deputy Minister of Health II to Bali, Indonesia to represent Malaysia in the 15th ASEAN Health Ministers Meeting	11 - 15 May 2022
Official visit of the Minister of Health to Geneva for the 75th World Health Assembly (WHA), 151st Executive Board Meeting and World Economic Forum (WEF)	22 - 28 May 2022
Official visit of the Minister of Health to Singapore and Participation in the Lee Kuan Yew Exchange Fellowship (LKYEF) and Asia Tech x Singapore Programme (ATxSG)	30 May - 3 June 2022
Official Bilateral Working Visit of the Minister of Health on Cannabis and Kratom Usage for Medical Purposes and participation in APEC High-Level Meeting on Health and Economy in Bangkok, Thailand	22 - 26 August 2022
Official visit of the Minister of Health to Manila for the 73rd WHO Regional Committee Meeting	24 - 28 October 2022

Source: Policy and International Relations Division, MOH

Image 14.7
MOH Official Working Visits for Year 2022



Source: Policy and International Relations Division, MOH

COURTESY CALLS

BDHA was also tasked with coordinating courtesy calls on the Minister of Health, Deputy Minister of Health, and top management by foreign delegates. The list of courtesy calls is as follows:

Table 14.2
Courtesy Calls for Year 2022

Courtesy Calls on The Minister of Health	
Courtesy call by H.E Dr. Merve Kavakci, Ambassador of the Republic of Türkiye	17 January 2022
Courtesy call by H.E. Ali Asghar Mohammadi, Ambassador of the Islamic Republic of Iran	20 January 2022
Courtesy call by H.E Joachim Bergström, Ambassador of Sweden to Malaysia	24 February 2022
Courtesy call by Dr. Rabindra Abeyasinghe, WHO Representative to Malaysia, Brunei Darussalam and Singapore	12 April 2022
Courtesy call by H.E Roland Galharague, Ambassador of France to Malaysia	21 April 2022
Courtesy Calls on The Deputy Minister of Health	
Courtesy call by EU-ASEAN Business Council	7 June 2022
Courtesy call by United Nations High Commissioner for Refugees (UNHCR)	21 June 2022
Courtesy call by H.E Lars Bo Larsen, Ambassador of Denmark to Malaysia	5 July 2022

Courtesy Calls on The Minister of Health

Courtesy call by H.E. Mr. Phiphat Ratchakitprakarn, Minister for Tourism and Sports, Thailand	1 August 2022
Courtesy call by Ms. Kiran Mazumdar Shaw, Chairperson of Biocon Group, Republic of India	2 August 2022
Courtesy call by UNICEF	1 September 2022
Courtesy call by H.E Lars Bo Larsen, Ambassador of Denmark to Malaysia	20 September 2022
Courtesy call by TYT Dato Mahmud Saidin, High Commissioner of Brunei Darussalam to Malaysia	28 September 2022
Courtesy call by H.E. Wayne Mitchell Robson, High Commissioner of Canada	3 October 2022

Courtesy Calls on The Deputy Minister of Health

Courtesy call by H.E Marjolijn Sonnema, Deputy Minister for Public Health, Netherlands	13 June 2022
Courtesy call by Professor Dr. Teyfik Demir, Turkiye	22 June 2022
Courtesy call by H.E Abraham Korvah Sr, Deputy Minister for International Cooperation and Economic Integration, Republic of Liberia	25 August 2022
Courtesy call by Mr. Raul Thomas, Assistant Director General (Business Operations), WHO	6 October 2022

Courtesy Calls on The Top Management

Courtesy call by H.E. Mr. Vaidya Rajesh Kotecha, Secretary of Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), Republic of India on Secretary-General of MOH	16 November 2022
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Source: Policy and International Relations Division, MOH

Image 14.8
MOH Courtesy Calls for Year 2022



Source: Policy and International Relations Division, MOH

WAY FORWARD

Although Malaysia is now in the transition to the endemic phase, the challenges and experiences encountered should be taken as lessons and guidance in taking holistic recovery steps. This division will remain focused and committed to ensuring the quality of MOH service delivery is responsive and relevant.



A stack of several books is shown on a wooden surface. A purple semi-transparent overlay covers the middle portion of the image, containing the chapter title. The text is in white, with 'CHAPTER' in a smaller font and '15' in a very large font. Below this, the words 'LEGAL' and 'ADVISORS' are stacked in a smaller font.

CHAPTER 15

LEGAL ADVISORS

INTRODUCTION

The Legal Advisor's (LA) Office consists of one (1) Legal Advisor, seven (7) Senior Federal Counsels, six (6) Federal Counsels, two (2) Assistant Legal Officers and nine (9) supporting staffs. As a representative of the Attorney General's Chamber at the Ministry of Health Malaysia (MOH), the LA Office is always committed to carrying out its duties to provide legal advice, to review draft of laws and legal documents as well as to represent the MOH in relation to civil or criminal actions.

ACTIVITIES AND ACHIEVEMENTS

In year 2022, the LA Office has attended 705 meetings, vetted 2,042 legal documents, provided 453 legal opinions and drafted 26 Bills, Amendment Bills and subsidiary legislations. The LA office has also handled a total of 22 prosecution cases against criminal offences under the Private Healthcare Facilities and Services Act 1998 [Act 586] and filed a total of 46 civil claims in court. Throughout the year 2022, the amount of money successfully claimed in civil cases is RM1,062,473.78.

In addition, the LA Office was also involved in the drafting of the Control of Tobacco and Smoking Products Bill and the Drinking Water Quality Bill apart from the Poisons (Amendment) Act 2022 [Act A1666] which will be enforced on 1 January 2023.

Image 15.1
Contracts and Legal Opinion Coordination Workshop 2022



Source: Legal Advisor's Office, MOH

A hand is shown interacting with several colorful wooden gears on a light-colored surface. The gears are in various colors: red, green, yellow, blue, and purple. Some gears are being held or moved by the hand. The background is a light beige color. A semi-transparent purple banner is overlaid on the image, containing the chapter title.

CHAPTER 16

INTEGRITY

ACTIVITIES AND ACHIEVEMENTS

In 2022, the Integrity Unit received 304 complaints, five (5) criminal complaints, 114 disciplinary issues and 185 ethical breach complaints.

A total of 333 misconduct reports were received, where 98 cases have been brought for consideration and decided by the MOH Disciplinary Authority (DA), 56 cases have been submitted to the DA of the Public Service Department, 10 cases to the DA of Public Service Commission and the rest are still in the determination of the chairman or prime facie paper and proceedings. Disciplinary inspections are also carried out at MOH facilities that have a Disciplinary Board, to be a platform for the department to seek advice and improve weaknesses identified because of the inspection findings.

The Healthcare Work Culture Improvement Task Force (HWCITF) was established on 13 May 2022 and fully assisted by the Integrity Unit. The main reason for this establishment was to analyse information and input from the investigation of the death case of a house officer at Hospital Pulau Pinang on 17 April 2022. HWCITF, consisting of nine (9) members from various expertise, had investigated and assessed the work culture at MOH, analysed the detection and confirmation report of the house officer's death incident and prepared reports and recommendations for improvement. The HWCITF report was submitted to the Minister of Health and presented in a special press conference on 17 August 2022.

Image 16.1
Healthcare Work Culture Improvement Task Force (HWCITF)



Source: Integrity Unit, MOH

The Integrity Unit also actively promotes and cultivates integrity among MOH personnel by organising three (3) series of Integrity Talk Programmes. This unit continuously disseminates the integrity messages by distributing 14 of posters and short videos through the MOH postmaster.

Image 16.2 Integrity Talk and Awareness Programme



Source: Integrity Unit, MOH

Five (5) department compliance reviews were conducted, with 19 good governance practices identified throughout all departments and 14 recommendations for further action. The Integrity Unit also monitors the assets declaration of MOH personnel and carries out relevant monitoring activities including presenting the KPI achievement status. In 2022, MOH has successfully achieved 100 per cent KPI on assets declaration involving 249,635 personnel.

MOH has successfully obtained MS ISO 37001: 2016 Anti-Bribery Management System (ABMS) re-certification from 26 June 2022 to 25 June 2025 as one of the initiatives to be recognised with the best standards in managing corruption risks.



INTRODUCTION

Medical Device Authority (MDA) is a federal statutory agency under the MOH that was established under the Medical Device Authority Act 2012 [Act 738] to implement and enforce the medical device regulatory framework under the Medical Device Act 2012 [Act 737]. The main objectives of the Act are to address public health and safety issues related to medical devices and to facilitate medical device trade and industry by carrying out the following functions:

- i. To register medical devices and Conformity Assessment Bodies (CAB), to issue establishment license and to carry out post-market surveillance and vigilance, advertisements control and enforcement activities;
- ii. To implement, enforce, assess and propose improvements to the medical device laws;
- iii. To supervise all medical device matters involving its industries and activities;
- iv. To encourage and promote the medical device development, medical device industry and its activities including, research and training;
- v. To provide consultation, advice and any other services involving the medical device industry and its activities; and
- vi. To impose fees or any charges on the provision of its services.

As provided under Act 738, MDA is overseen by its Board of Directors led by the Director-General of Health, as the Chairman and members comprising of the Chief Executive of MDA, one representative of the MOH and the MOF respectively, and five (5) other members appointed by the Minister of Health.

MEDICAL DEVICE REGISTRATION AND ESTABLISHMENT LICENSING

Medical device registration is one of the main provisions under the Act 737 and Medical Device Regulations 2012. It requires the safety and performance of a medical device to be evaluated by MDA at the pre-market stage, before to allowing the medical device to be placed in the market. In addition to its registration, the registration holder must notify MDA of any change to be made to a registered medical device.

A medical device registration is valid for five (5) years to continue placement of the medical device, the registration holder is required to apply for re-registration of the medical device. In the year 2022, there were 7,236 applications for new registration of medical devices and 5,603 applications for re-registration of the medical device has been processed. From 7,236 applications, MDA made of 4,581 new registrations and 3,453 re-registrations of medical devices, as shown in **Table 17.1**.

Table 17.1
Medical Device Registration and Re-Registration by Risk Classification for Year 2022

Risk Classification	Medical Device Registration	Medical Device Re-Registration
Class A	2,179	1,160
Class B	1,042	1,106
Class C	987	778
Class D	373	409
Total	4,581	3,453

Source: Medical Device Authority (MDA)

Any establishment who intends to place a medical device in the market shall obtain a valid establishment license and shall carry out the duties and obligations imposed under Act 737 and Medical Device Regulations 2012. The establishment license is valid for (3) years and the establishment shall apply for renewal of the license before its expiry. The establishment must also notify MDA for any amendment to its license and any change of ownership of a medical device registered under its name.

In 2022, 619 new establishment licenses were issued, 614 establishment licenses were renewed, 400 licenses were amended, and 513 medical device ownership changes were approved.

CAB is the body that is by MDA registers to assess and certify the conformity of the quality management system of an establishment and medical device to the regulatory requirements under Act 737 and Medical Device Regulations 2012. CAB registration is valid for three (3) years and the CAB shall apply for re-registration to continue its conformity assessment activities. Besides registration and re-registration, MDA also approves technical staff and conducts inspection activities to ensure CABs are always in compliance with the regulatory requirements and conformity assessment activities are conducted by with the regulations.

POST-MARKET SURVEILLANCE & VIGILANCE, ADVERTISE- MENT CONTROL AND ENFORCEMENT

Post-market surveillance and vigilance; advertisement control and enforcement activities were carried out at the post-market stage when medical devices were registered and were allowed to be placed on the market. These activities were conducted to ensure that the establishments carry out their post-market duties and obligations under Act 737, Medical Device (Duties and Obligations of Establishments) Regulations 2019 and the Medical Device (Advertising) Regulations 2019 to ensure the continued safety and performance of the registered medical devices available in the market. The post-market activities and their respective achievements are depicted in **Table 17.2**.

Table 17.2
Post-Market Activities for Year 2022

Activity	Total
Identification of incidents based on the assessment of complaints on safety and performance of medical device	25 incidents out of 61 complaints
Assessment of field correction action reports	542
Assessment of medical device recall	64
Investigation visits on complaints and incidents	536
Awareness on post-market elements for establishments and CABs	23
Compliance inspections on establishments	15

Source: Medical Device Authority (MDA)

Enforcement activities were conducted upon complaints and were followed up with inspection, issuance of warning letters, raid and seize as shown in **Table 17.3**.

Table 17.3
Enforcement Activities for Year 2022

Activity	Total
Complaints received	202
Inspection and observation	536
Inspection (COVID-19 test kits and oximeter)	51
Issuance of warning letter	94
Raid and seize	3
Taking down medical device link on e-commerce platform	1,653
Complaints completed	85

Source: Medical Device Authority (MDA)

ISSUANCE OF THE RELEVANT CERTIFICATE AND LETTER FOR EXPORT OF MEDICAL DEVICES

MDA also played the role of facilitating export of medical devices by issuing the relevant Certificates of Free-Sale (CFS), Manufacturing Certificates (MC) and notification letters as per the requirements of the importing countries. The number of certificates and notification letters issued by MDA to facilitate the export of medical devices in 2022 is shown in **Table 17.4**.

Table 17.4
Medical Device Export Certificates and Notification Letters for Year 2022

Activity	Total
Issuance of CFS or MC	1,309
CFS for Export-Only application evaluation	195
MC application evaluation	14
Issuance of notification letter for export-only	165
Issuance of notification letter for re-export	5

Source: Medical Device Authority (MDA)

MEDIA AND PUBLIC RELATIONS

In the year 2022, MDA implemented a strengthened strategy to effectively communicate with stakeholders through multiple platforms, including awareness programmes, mainstream media, and social media. MDA organised two (2) awareness programmes in Sabah and Sarawak to target the public for public awareness and understanding.

For the users of Act 737, such as medical practitioners, doctors, and nurses, MDA conducted six (6) programmes in Johor, Kedah, Sabah, Sarawak, and Kelantan. These programmes specifically addressed the needs and concerns of this professional group.

MDA recognised the importance of gathering feedback from the public. To facilitate this, two (2) mediums were available: the Sistem Pengurusan Aduan Awam (SISPAA) and the MDA Feedback Management System (MDAFEMES). In 2022, 58 feedback entries through SISPAA and 626 through MDAFEMES were received, enabling them to address concerns and improve their services.

Social media and MDA's official website played crucial roles in providing up-to-date and accurate information to stakeholders. In 2022, MDA uploaded 294 posts on their social media platforms (Facebook and Instagram) and shared 27 videos on their YouTube channel, ensuring continuous engagement and dissemination of relevant information.

WAY FORWARD

The rapid development of high-tech and innovative medical devices has become one of the significant challenges for regulatory bodies including MDA. New technologies such as Artificial Intelligence (AI) and Machine Learning in medical devices have improve Malaysia's health system with better treatment option on offer. In line with the rapid development of technology, MDA as a regulatory body needs to be prepared in to regulate new technologies that will emerge from time to time.

Besides that, differences in regulatory requirements between Malaysia and other countries is one of the challenges faced to provide certification to medical devices internationally and contribute to trade barriers globally. These obstacles are expected as every country has its regulatory requirements.

To overcome these situations, extensive planning should be done to strengthen Malaysia's medical device regulatory system to ensure future activities implemented are in line with MDA's vision to become a regulatory body recognized worldwide. To achieve this vision, MDA has already identified its mission through our 2019 - 2023 Strategic Plan.

CHAPTER 18

MALAYSIA HEALTHCARE TRAVEL COUNCIL (MHTC)

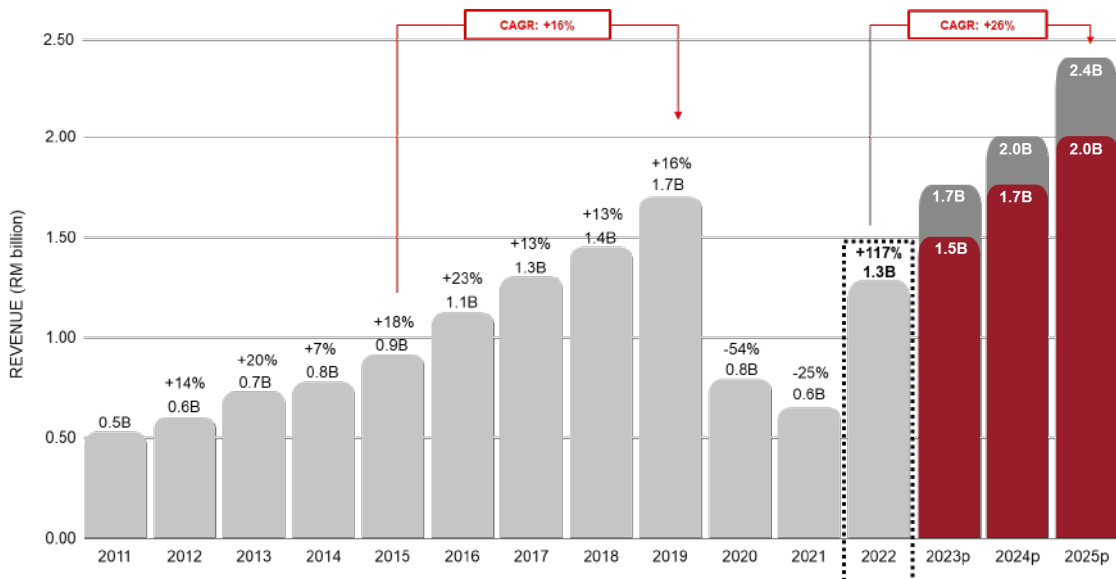


INTRODUCTION

Malaysia's healthcare travel industry is well on its way to achieving post-pandemic recovery. Under the guidance of MOH, Public-Private Partnerships (PPP) became a strategic anchor in facilitating the industry's recovery and swift transition into endemicity. Malaysia Healthcare Travel Council (MHTC) together with the industry players forged an enhanced collaboration to provide continuity of care for patients and implement proactive measures, setting the foundation for transitioning into the industry Rebuilding phase in year 2023, as outlined in the Malaysia Healthcare Travel Industry Blueprint 2021 – 2025.

Malaysia's healthcare travel industry achieved over 100 per cent increase in Healthcare Traveller (HT) revenue in 2022 compared to the previous year, surpassing RM1.3 billion, reaching more than 76 per cent of its pre-pandemic performance of RM1.7 billion in 2019. The industry successfully surpassed its target of RM1 billion set for the year, contributing over RM5 billion in economic impact, which accounts for air travel, accommodation, food and beverage, leisure activities, and more. The industry demonstrated an encouraging recovery rate, surpassing both the global and Asia-Pacific tourism recovery rates of 63 per cent and 23 per cent respectively.

Figure 18.1
Healthcare Traveller Revenue for Year 2022



Note: Data from HIC as of February 2022

Source: Malaysia Healthcare Travel Council

Employing whole-of-government and whole-of-society approach, the achievement is a result of the success in implementing industry-wide recovery efforts, that were centered around the three (3) key strategic pillars of the blueprint; healthcare travel ecosystem, Malaysia Healthcare brand and markets for further elevating the seamless end-to-end patient experience and propelling Malaysia's position as a safe and trusted destination.

Figure 18.3
MHTC's Strategic Partnerships for Year 2022



Source: Malaysia Healthcare Travel Council

As part of the ongoing commitment to further forge industry resilience and future-proof the Malaysia's healthcare travel ecosystem, MHTC also introduced capacity building and collaborative platforms, such as:

- i. Medical Tourism State Committee:** Working closely with state tourism bodies to strengthen healthcare travel offerings by uniting tourism and healthcare travel as well as enhancing the current healthcare travel ecosystem.
- ii. Healthcare Travel Facilitator Training Programme:** A capacity-building endeavour aimed at providing local and international tour and travel agents with the knowledge and skills required to cater to the needs of healthcare travellers. This programme also facilitates networking and business matching opportunities with MHTC's member hospitals, paving the way for potential revenue generation.
- MHTC has conducted training sessions in partnership with the Malaysia Association of Tour & Travel Agents (MATTA), Malaysian Inbound Chinese Association (MICA), and Malaysia International Tourism Development Association (MiTDA).
- iii. Premium Wellness Programme:** MHTC collaborated with hotels, hospitals, tourism players and wellness operators to introduce Premium Wellness packages and introduce preventive care elements into Malaysia Healthcare's offerings. A few of the collaborations include Prince Court Medical Centre with The RuMa Hotel and Banyan Tree, Dorsett Grand Subang Hotel with Subang Jaya Medical Centre and Ascott Kuala Lumpur with Gleneagles Kuala Lumpur.

FLAGSHIP MEDICAL TOURISM HOSPITAL PROGRAMME

The Flagship Medical Tourism Hospital Programme is the first-of-its-kind initiative, aimed to raise globally renowned icons for healthcare travel, elevating Malaysia's global healthcare profile in delivering exceptional patient experiences.

Figure 18.4
Progress of Flagship Medical Tourism Hospital Programme for Year 2022



Source: Malaysia Healthcare Travel Council

ONE-STOP-PORTAL (OSP)

MHTC developed OSP that functions as a trusted digital front door for healthcare travellers. The OSP will serve as a promotional tool to showcase healthcare and wellness offerings in Malaysia as well as an information centre that allows healthcare travellers to plan their end-to-end healthcare travel journey, offering them peace of mind.

MALAYSIA HEALTHCARE BRAND

MHTC has also taken a holistic approach to brand management in ensuring consistent brand identity across all touchpoints in the healthcare travel ecosystem and impactful brand amplification in target markets.

EXPERIENCE MALAYSIA HEALTHCARE CAMPAIGN

MHTC launched the Experience Malaysia Healthcare campaign to maintain an active presence and keep markets connected to the Malaysia Healthcare brand. The campaign effectively encapsulated Malaysia Healthcare's five (5) brand pillars namely Quality, Accessibility, Affordability, Communication and Hospitality with the messaging Experience True Care, Experience Malaysia Healthcare. The campaign was strategically localised in key markets, translated into Bahasa Indonesia and Mandarin, to establish a deeper connection with patients, build trust and foster stronger relationships. Through a series of digital activations, such as social media contests, experience Malaysia Healthcare virtual series and Malaysia Healthcare Virtual Week, the campaign employed a lighthearted, lifestyle-focused approach to promote healthcare advocacy.

Figure 18.5
Public Relations (PR) Value, Awards and Recognition for Year 2022



Source: Malaysia Healthcare Travel Council

MARKETS

MHTC continues building trust towards the Malaysia Healthcare brand via on-ground events, expos and Government to Government (G2G) engagements. Malaysia Healthcare's agile implementation of these initiatives resulted in a swift industry recovery, achieving more than 76 per cent of pre-pandemic revenue levels.

MALAYSIA HEALTHCARE EXPO (MHX)

To further strengthen Malaysia Healthcare's visibility in our core market, Indonesia, MHTC organised MH Expo in three (3) key cities namely Jakarta, Medan, and Surabaya. The expo brought together various stakeholders in the Malaysia Healthcare ecosystem including private hospitals, airlines, healthcare facilities, travel agents and state tourism bodies in Malaysia to create awareness and exposure to the healthcare services. Through MHX, MHTC successfully generated a total of 3,101 leads, RM11,022,000.00 estimated value of confirmed patients and RM75,636,224 PR Value for the publicity efforts.

STRENGTHENING GLOBAL PRESENCE

MHTC also spearheaded various networking initiatives to proactively expand Malaysia Healthcare's market reach in focus markets, with the aim to enhance Malaysia Healthcare's market share, competitive edge and lead in markets such as:

Figure 18.6
Malaysia Healthcare's Global Outreach for Year 2022



Source: Malaysia Healthcare Travel Council (MHTC)

WAY FORWARD

With the Recovery phase setting a solid foundation for industry rebuilding efforts in the year 2023, the industry is poised for continued and sustainable growth. MHTC is optimistic that the industry's revenue trajectory will return to pre-covid levels by year 2024, resulting in the revision of the target set for the year of 2023 – the initial target of RM1 billion has been increased gradually to RM1.3 billion and then to RM1.5 billion, where finally reaching the initial target set in the blueprint of RM1.7 billion by year 2025, one year ahead.

MHTC aspires to double the industry revenue by 2025, maintaining the industry target of 24 per cent Compound Annual Growth Rate (CAGR) with contributing a significant spillover effect into the rest of the Malaysian economy.



CHAPTER 19

PROTECTHEALTH

INTRODUCTION

ProtectHealth Corporation Sdn Bhd (ProtectHealth) was incorporated on 19 December 2016, is a wholly-owned subsidiary of ProtectHealth Malaysia (PHM), established under the MOH. As a non-profit company, ProtectHealth is mandated to manage Skim Peduli Kesihatan untuk Kumpulan B40 (PeKa B40), Electronic Service Provider (ESP) for Skim Perlindungan Insurans Kesihatan Pekerja Asing (SPIKPA) and the implementer of private medical practitioners' and healthcare NGOs participation in the National COVID-19 Immunisation Programme (PICK).

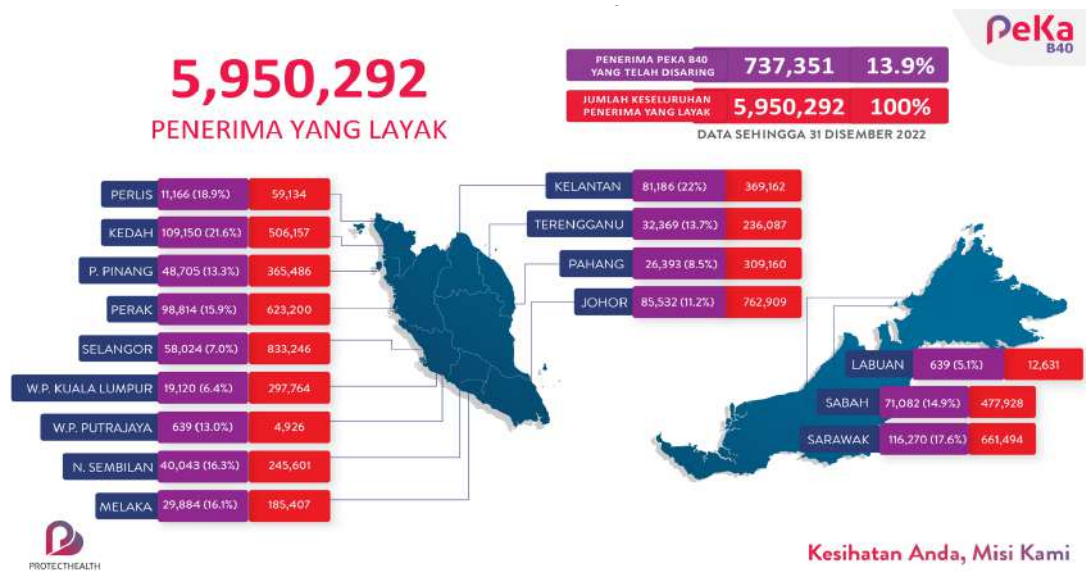
PeKa B40

PeKa B40 is a government initiative via MOH which aims to sustain the healthcare needs of low-income groups by focusing on non-communicable diseases (NCDs). PeKa B40 is offered to Malaysian citizens who fall within the lower 40 per cent of household income range, known as the B40 group. Recipients of the Sumbangan Tunai Rahmah (previously known as Bantuan Keluarga Malaysia) and their spouses, who are aged 40 years and above are automatically enrolled into PeKa B40.

PEKA B40 SERVICE PROVIDERS

In line with the objective of strengthening the public-private partnership, until 31 December 2022, ProtectHealth through PeKa B40 has collaborated with 3,022 General Practitioners (GPs), 962 KKs, 145 MOH Hospitals and seven (7) private laboratories companies with 163 branches in total nationwide.

Figure 19.1
Eligible Beneficiaries PeKa B40 for Year 2022



Source: ProtectHealth

Figure 19.2
PeKa B40 Successful Application Performance for 2022

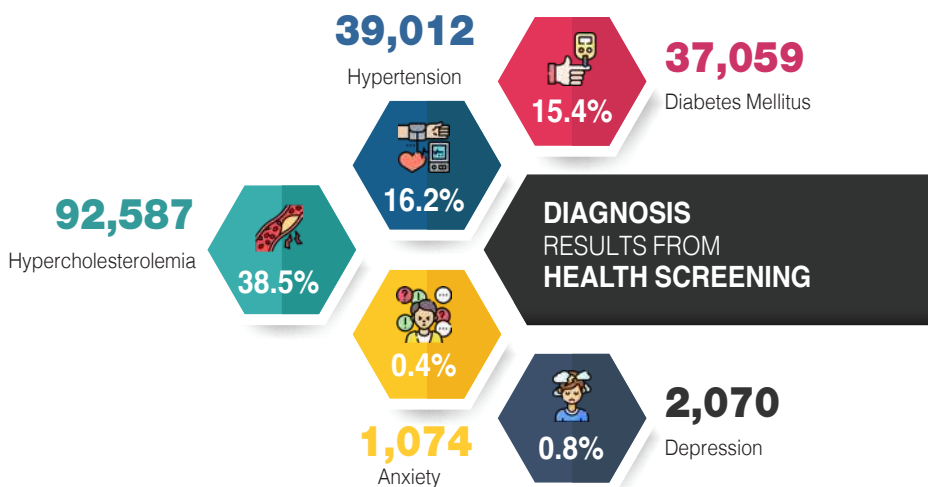
NUMBER OF SUCCESSFUL APPLICATION				
	BENIFIT 1: Health Screening	BENIFIT 2: Health Aid	BENIFIT 3: Completing Cancer Treatment Incentive	BENIFIT 4: Transport Incentive
	Health Screening	Application Approved	Application Approved	Application Approved
2022	275,560	24,713	1,826	5,345
TOTAL	829,016	55,577	7,933	25,620

Source: ProtectHealth

BENEFIT 1: HEALTH SCREENING

The focus of PeKa B40 is to reduce the burden of NCDs through early screening and treatment with an objective to expand the access to quality healthcare. Early detection of NCDs will allow better planning and monitoring of the diseases and can alleviate the burden on the health system particularly financial consequences. In year 2022, PeKa B40 has successfully screened a total of 275,560 beneficiaries and about 43.6 per cent of these beneficiaries were diagnosed with at least one new NCD.

Figure 19.3
Health Screening Diagnosis Results for Year 2022



Source: ProtectHealth

BENEFIT 2: HEALTH AID

There are 10 types of health aid (HA) categories offered under PeKa B40 and each beneficiary are entitled to a lifetime limit of RM20,000. In 2022, a total of 24,713 HA applications have been approved, with Intra Ocular Lens (IOL) which has the highest number of applications, followed by hearing aid and drug eluting stents (DES).

Table 19.1
PeKa B40 Health Aid Applications for Year 2022

Health Aid Applications	Total
Intraocular Lens	11,967
Hearing Aid	4,425
Drug Eluting Stent	1,655
Joint Arthroplasty	1,510
Wheelchair	1,447
Limb Prosthesis & Orthosis	1,413
Nutritional Support	1,036
Breathing Machine & Oxygen Concentrator	783
Spinal Surgery Prosthesis & Implant	318
Pacemaker	160

Source: ProtectHealth

BENEFIT 3: COMPLETING CANCER TREATMENT INCENTIVE

Completing Cancer Treatment Incentive (CCTI) is aimed to encourage beneficiaries to complete their cancer treatment. The incentive is presented in two separate payments with the maximum of RM1,000 per cancer diagnosis. A total of 1,826 applications have been approved for year 2022 and has benefited 1,656 beneficiaries with a value of RM781,500 has been distributed to the recipients.

BENEFIT 4: TRANSPORT INCENTIVE

To increase compliance while lowering the cost burden for transportation during follow-up visits to the hospital, beneficiaries who received Benefits 2 and 3 are entitled to a transport incentive under PeKa B40. The maximum amount of assistance that can be received is RM500 for Peninsular Malaysia and RM1,000 for Sabah, Sarawak and Labuan, respectively. From 1 January to 31 December 2022, a total of 5,345 applications have been approved. Overall, for the year 2022, this transport incentive has benefited a total of 2,351 recipients with a value of RM595,237 has been distributed.

PEKA B40 OUTREACHES AND ENGAGEMENTS

In year 2022, ProtectHealth held a total of 67 PeKa B40 outreach programmes and 58 engagements across the country with various government agencies, private organisations, and NGOs to promote and increase people's awareness of the initiative.

Image 19.1
PeKa B40 Outreach Activities for Year 2022



Source: ProtectHealth

NATIONAL COVID-19 IMMUNISATION PROGRAMME (PICK)

PICK is a massive nationwide exercise by the government to immunise the population in Malaysia against the COVID-19 disease. MOH has appointed ProtectHealth as the implementer of GPs and healthcare NGOs participation in the PICK. The appointment of ProtectHealth is given based on its experience and capability in registering, coordinating, monitoring and managing the payment processes to GPs for PeKa B40.

ProtectHealth has partnered with GPs and healthcare NGOs to operate Vaccination Centres (PPV) throughout the country. In year 2022, a total of 11,137,517 vaccine doses have been administered under ProtectHealth.

Figure 19.4
National COVID-19 Immunisation Programme (PICK)

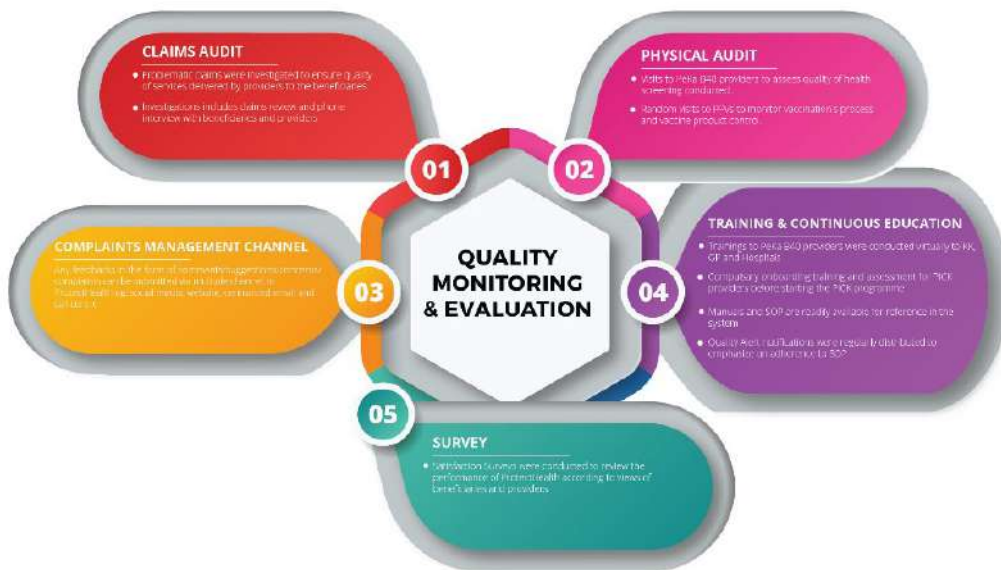


Source: ProtectHealth

QUALITY MONITORING AND EVALUATION

ProtectHealth continuously implements various measures and activities to ensure the highest standard of quality services delivered to the public, such as conducting surveys, establishing a complaint management system, developing work processes for quality monitoring and evaluation, and providing training to the providers. In addition, ProtectHealth also has conducted audits on both PeKa B40 and PICK programmes to ensure the providers adhere to the Standard Operating Procedure (SOP), Manuals, and Clinical Guidelines as the gold standard of practices.

Figure 19.5
Quality Monitoring and Evaluation



Source: ProtectHealth

Image 19.2
Quality Monitoring and Evaluation Activities



Physical Audit at PPV

Source: ProtectHealth



Physical Audit for PeKa B40

The image features a collection of medical supplies. In the foreground, there are several white round tablets, yellow capsules, and a green oval tablet scattered on a light green surface. To the left, a piece of orange adhesive bandage is visible. In the background, a white blister pack with several compartments is partially visible, along with a clear glass vial containing a white substance. The overall scene is brightly lit, suggesting a clinical or pharmaceutical setting.

CHAPTER 20

MALAYSIAN MEDICAL
COUNCIL

INTRODUCTION

Malaysian Medical Council (MMC) is a Federal Statutory Body established on 1 July 2017 after amendments were made to the Medical Act 1971 gazetted on year 2012 that regulates the practice of medicine in Malaysia. The MMC is responsible for the registration of medical practitioners as mandated by the Act to ensure the highest standard of medical ethics, education and practice in the interest of patients, the public and the profession through the fair and effective administration of the Medical Act.

Under the provision of Section 4 of the Medical Act 1971 (Amendment 2012), the MMC functions are:

- i. To register medical practitioners; and
- ii. To regulate the practice of medicine.

The objectives of MMC are:

- i. To ensure the enforcement of the Medical Act 1971 (Amendment 2012) & the Medical Regulations 2017; and
- ii. To ensure safe and quality medical care provided to the nation, through:
 - a. Registration of medical practitioner;
 - b. Regulate the conduct and ethics of Registered Medical Practitioners (RMPs); and
 - c. Accreditation of medical programmes.

REGISTRATION OF MEDICAL PRACTITIONERS

Medical practitioners must be registered with the MMC to legally practice medicine in Malaysia. Through registration, the council ensures that a medical practitioner has the knowledge, skills and competence to provide safe and effective treatment to the Malaysian Public.

- i. **Provisional Registration** (Under sections 12 and 13 of the Act) allows newly qualified practitioners to undergo clinical training (housemanship) under supervision
- ii. **Full Registration** (Under section 14 of the Act) allows a medical practitioner to practice independently. There are two types of full registration:
 - **Without condition** (Under section 14(1) of the Act): No restriction and condition is imposed upon the completion of the compulsory service.
 - **With conditions** (Under section 14(2A) and 14(3) of the Act): registration is subjected to restrictions and conditions determined by the Minister of Health, after consulting by the council. Practitioners are allowed to practice according to a place of practice, the scope of practice and a determined period of time.
- iii. **Specialist Registration** (Under section 14A, 14B, 14C of the Act) is required for the Specialist medical practitioner to register after the amendment to the Medical Act. A physician who is not registered in the specialist register is not allowed to practice in the particular specialisation field.

- iv. **Temporary Practising Certificate (TPC)** (Under section 16 of the Act) are issued to enable foreign-registered medical practitioners wishing to practice medicine in Malaysia usually for teaching, conducting research, attending post-graduate courses, to undergo clinical attachment or fellowship training.
- v. **Letter of Good Standing (LOGS)** is required for the purpose of registration with other foreign medical councils or professional registering bodies.
- vi. **Annual Practising Certificate (APC)** must be obtained by all fully Registered Medical Practitioners (RMP) to legally practice in Malaysia.

The summaries of registration approved by the MMC for the year 2022 are shown in **Table 20.1**:

Table 20.1
MMC Registration Application Approved for the Year 2022

Application	Total
Provisional Registration	3,131
Full Registration with No Condition Section 14(1) of the Act	4,529
Full Registration with Condition Section 14(2A) & 14(3) of the Act	220
Specialist Registration Section 14C of the Act	1,077
Temporary Practising Certificate Section 16(1) of the Act	126
Letter of Good Standing	1,297
Annual Practising Certificate Section 20(1) of the Act	66,820

Source: Malaysian Medical Council

LAW AND REGULATIONS (COMPLAINT)

Medical Act 1971 & the Medical Act 1971 (Amendment 2012) cover the jurisdiction for misconduct of registered medical practitioners in Malaysia. There are six (6) Preliminary Investigation Committee (PIC) formed under the Medical Act 1971 (Old Medical Act). Whereas, under the Medical Act 1971 (Amendment 2012) (New Medical Act), there are five (5) Preliminary Investigation Committee (PIC) in total.

Below is the total number of complaints registered under the Medical Act 1971 & the Medical Act 1971 (Amendment 2012) in year 2022 (**Table 20.2**):

Table 20.2
Statistics of Complaints Sentenced to the PIC for Year 2022

Act	PIC	PIC I/1	PIC II/2	PIC III/3	PIC IV/4	PIC V/5	PIC VI	Total
Medical Act 1971		9	8	8	6	6	2	39
Medical Act 1971 (Amendment 2012)		22	20	45	11	5	-	103
Total		31	28	53	17	11	2	142

Source: Malaysian Medical Council (MMC)

FINANCIAL REPORT

MMC financial report prepared for the year ended 2022 has not been audited yet by the Auditor General of Malaysia as below:

- i. MMC total profit in Year Assessment (YA) 2022 is RM7,195,860.83 higher than in YA 2021 with differences of RM145,616.33;
- ii. MMC income from Government Grant in YA 2022 is 50 per cent lower than in YA 2021 with differences of RM1,000,000; and
- iii. MMC Total Expenses in YA 2022 is lower than YA 2021 with differences of RM445,385.83.

WAY FORWARD

The MMC also serves as a body responsible to regulate the conduct and ethics of RMPs and Acts based on complaints received from the public. The council, entrusted as custodian of the Malaysian Medical Profession, has the arduous duty of regulating this noble profession to the satisfaction of its clients, in a transparent and efficient manner.

In addition, towards competitiveness, MMC has started to establish an Audit Committee under the Quality Management and Audit Unit to ensure a quality scope of work at MMC. According to that, MMC has started to prepare the SOP for work processes under each department in order to achieve MS ISO 9001-2015 Certification. This initiative is to provide quality and effective services to all RMPs in Malaysia.

A scientist in a white lab coat and blue gloves is holding a test tube with red liquid. The scientist is looking at a computer monitor that displays a software interface with various icons and text. The background shows laboratory equipment like beakers and test tubes on a shelf.

CHAPTER 21

CLINICAL RESEARCH MALAYSIA

INTRODUCTION

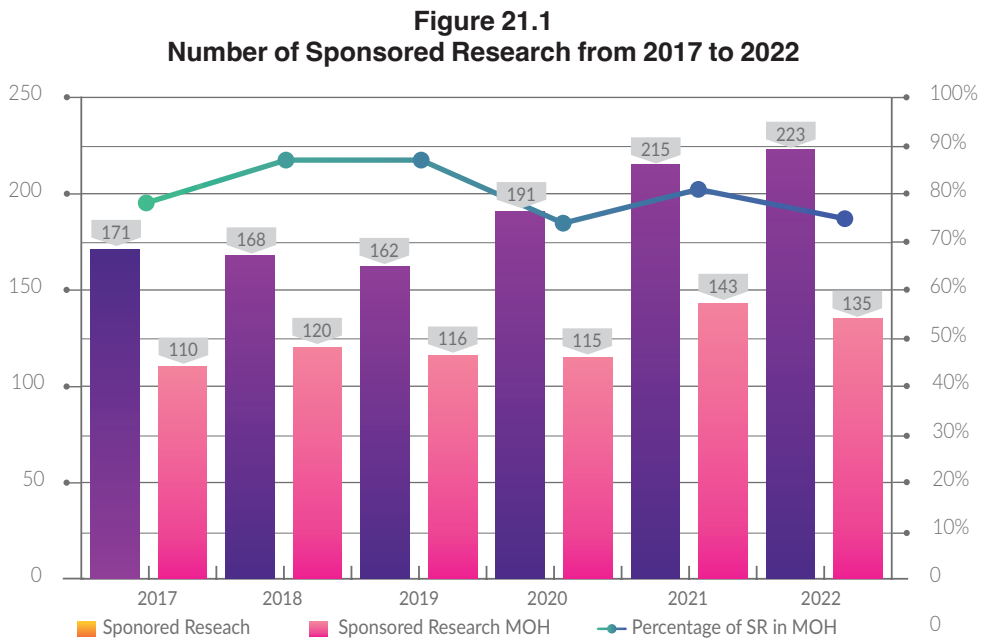
Clinical Research Malaysia (CRM) which was established in 2012 is a corporatised entity wholly owned by the MOH to facilitate sponsored clinical research in Malaysia. Its Board of Directors comprises of senior officers from the MOH as well as experts in clinical research from academic institutions and private hospitals.

CRM works closely with the government and relevant authorities to ensure all the regulations and best practices are conducted and to guarantee smooth and consistent trial delivery that meets global quality standards. Moreover, industry players and investigators in Malaysia work together with CRM to propel clinical research, while creating high-skilled job opportunities in the industry.

CRM's focus in growing its achievements is rooted in three (3) principles which are Humanity, Stability and Sustainability. CRM's commitment to Humanity is demonstrated by attracting sponsored research, improving patient access to treatment, and promoting career growth for employees. The value of Stability is upheld through meeting yearly KPIs, maintaining consistent clinical trial recruitment and quality, and investing in training and development programmes. Sustainability efforts encompass working towards the 2026 vision, achieving operational excellence, generating new business income, and establishing CRM as a trusted global research management organisation.

ACHIEVEMENTS

Approximately three (3) per cent of global sponsored research are conducted in Southeast Asia region annually, where Malaysia is among the Top 3 in number of trials within the region. Sponsored Research in Malaysia has continued to expand over the years, with a total of 223 sponsored research approved by Medical Research and Ethics Committee (MREC) and Institutional Review Boards/Independent Ethics Committees (IRB/IECs) in 2022, on par with the steady growth when compared to the years before. Additionally, over 60 per cent of sponsored research was conducted in MOH facilities, which includes public hospitals and primary healthcare centres (Figure 21.1).



Source: Clinical Research Malaysia

CRM has successfully met the targeted KPI in 2022 through the RM191 million investment value that was captured from the Clinical Trial Agreements (CTAs), which contributed to a total of RM1.071 billion in Gross National Income (GNI) for the clinical research industry in Malaysia. In addition, the nation's talent pool in clinical research industry has also expanded to 2,688 skilled jobs within the country (**Figure 21.2**).

Figure 21.2
Clinical Research Scorecard from 2018 to 2022



Source: Clinical Research Malaysia

As for the company performances, CRM have delivered on all its KPIs, with surplus income of RM3,500,000 (**Table 21.1**).

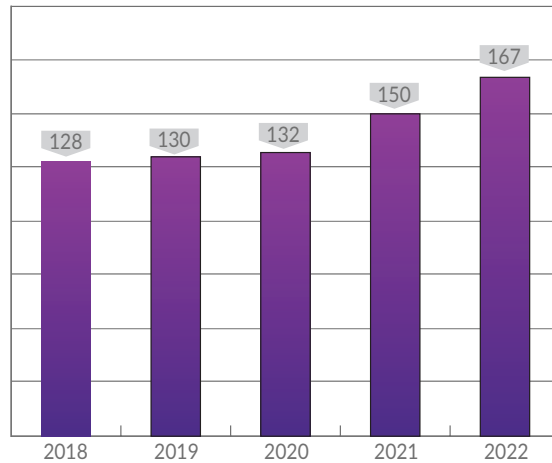
Table 21.1
CRM KPI for Year 2022

KPI	Target	Actual	Rate Difference from Target
KPI 1: Sponsored Research	200 New Studies	223 New Studies	+11.5 per cent
KPI 2: Sponsored Research in MOH Sites	135 New Studies	135 New Studies	0.0 per cent
KPI 3: CRM Income	RM16,600,000	RM20,100,000	+21.1 per cent
KPI 4: CRM Expenses	RM17,500,000	RM18,400,000	+5.1 per cent
KPI 5: GNI (CTA Value)	RM125,800,000	RM191,000,000	+51.8 per cent

Source: Clinical Research Malaysia

CRM is also responsible as a Site Management Organisation (SMO) for sponsored research conducted at MOH sites, mainly through the service of its Study Coordinators. The number of CRM Study Coordinators (SCs) has been increasing year by year due to the increase in the number of sponsored research as shown in **Figure 21.3**. Currently, CRM recorded over 160 SCs nationwide with the responsibilities are to support investigators in various study activities. A good example of that is by facilitating study recruitment activities that will ensure investigators can achieve the recruitment targets. It is worthy to note that there is an increase of 11 per cent in the number of SCs in 2022 compared to 2021.

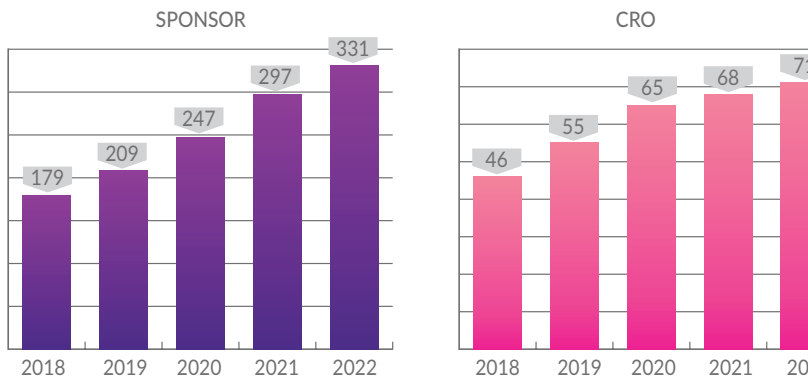
Figure 21.3
Study Coordinators in CRM from 2018 to 2022



Source: Clinical Research Malaysia

CRM prioritizes on continuous engagement with industry players, involving both new and existing Contract Research Organizations (CRO) as well as pharmaceutical, biotechnology and medical device companies, to broaden the country’s influence in global clinical research landscape. CRM leverages its presence and continually creates awareness on its social media platforms, with over 34 million visits and impressions recorded in the year 2022.

Figure 21.4
Growth of Sponsor and CRO from 2018 to 2022



Source: Clinical Research Malaysia

PHASE 1 REALISATION PROJECT (P1RP) 2.0

Following the success of the P1RP in 2021, CRM continue to develop the early phase clinical research ecosystem in the country through its P1RP 2.0. The objective is to further cement the foundation laid and enhancing the current capabilities in conducting early phase clinical trials by investing in investigator and study team capability development, site development and attracting more early phase trials into the country.

ACTIVITIES

One of the major highlights of 2022 is the CRM Trial Connect 2022 conference that was conducted in October and has gained many tractions from stakeholders and important key players in clinical research in Malaysia and other countries. The first-time event was a huge success in showcasing Malaysia's capabilities and outstanding achievements in multinational clinical research and sponsored clinical trials. The 2-day event saw up to 400 delegates and provided an excellent platform for building networks and understanding the clinical research setting in Malaysia.

Additionally, CRM participated and conducted numerous activities and events throughout year 2022, with close collaborations with both local and global stakeholders. In efforts to maintain and form new business collaborations, CRM has executed the Memorandum of Understanding (MOU) with both Novartis and Syneos Health, to further establish Malaysian trial sites within the footprint of global trials conducted. In enhancing early phase capabilities, CRM established a partnership with Princess Margaret Cancer Centre (PMCC), Canada. Collaboration with Japan-led institutions were also acknowledged through the inking of partnership with the National Centre for Global Health and Medicine (NCGM) and renewal of partnership with Remedy & Company Corporation.

CRM has also conducted numerous trainings, dialogues and workshops to ensure CRM's SCs continually receive the necessary training that will ensure quality delivery of clinical trials (**Table 21.2**).

Table 21.2
CRM Programmes in 2022

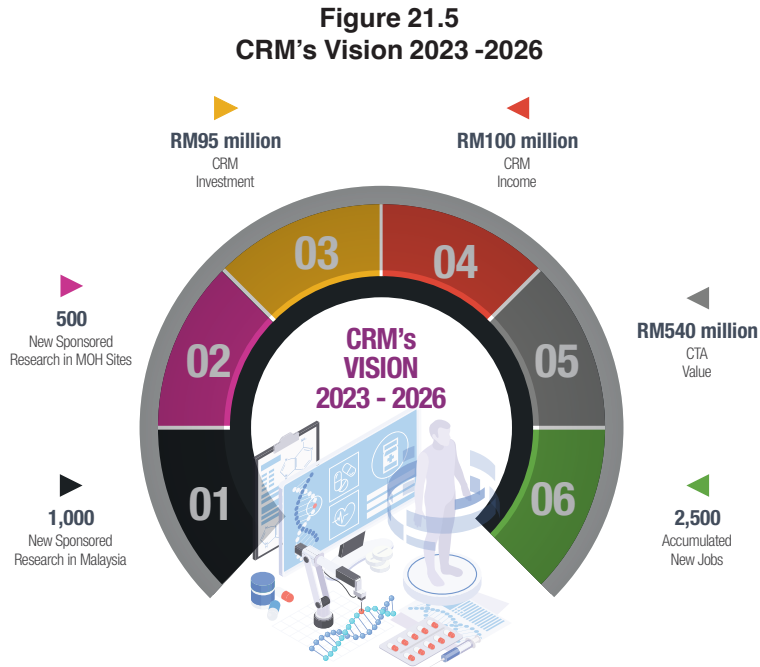
Training/Activities	Frequency
Good Clinical Practice Refresher Workshop	4
Nurturing New Talents in Sponsored Research	4
Patient Recruitment and Retention Workshop	3
Training to Improve Performance of Study Coordinators (TIPS)	2
Regulatory Inspection Workshop	2
Protocol Compliance Workshop	2
Training to Improve Performance of Study Coordinators (TIPS): Train the Trainer	1
Investigator Dialogue	1

Source: Clinical Research Malaysia

WAY FORWARD

Moving forward in 2023, there are many aspirations to be achieved and CRM will continue to work towards delivering Operational Excellence within the organisation, by focusing on Humanity, Stability and Sustainability.

This is fitting with our continuous effort to accelerate sponsored clinical research in Malaysia and to accomplish CRM's Vision 2023-2026 (**Figure 21.5**).



Source: Clinical Research Malaysia



GLOSSARY

GLOSSARY

MOH	Ministry of Health	MAPSU	Alliance of President and General Secretary Council
FT	Federal Territory		
CDR	Crude Mortality Rate	IPKKM	MOH Headquarters
NMR	Neonatal Mortality Rate	JKN	State Health Department
IMR	Infant Mortality Rate	APC	Excellent Service Award
MMR	Maternal Mortality Ratio	HRMIS	Human Resource Management Information System
ICD-10	International Statistical Classification of Disease 10th Revision	PSD	Public Service Department
BOR	Bed Occupancy Rate	LDP	In-Service Training
K1M	1Malaysia Clinic	ACP	Advanced Competency Programme
KKom	Community Clinic	PTM	Program Transformasi Minda
HWP	Health White Paper		
NIH	National Institute of Health	ILKKM	Institut Latihan Kementerian Kesihatan Malaysia
BSM	Human Resource Department	MQA	Malaysian Qualification Agency
BPL	Training Management Department	FA	Full Accreditation
BPK	Competency Development Department	MAMPU	Malaysia Administrative Modernisation and Management Unit
BKP	Management Service Department	TDP	Talent Development Programme
BPM	Information Management Department	GLC	Government-Linked Company
PSC	Public Service Commission	NGO	Non-Government Organisation
KPI	Key Performance Indicator		
MOE	Ministry of Education	ALPH	Hospital Visitors Board Member
AADK	National Anti-Drug Agency	ALPHP	Psychiatric Hospital Visitors Board Member
MMA	Malaysian Medical Association	NIH	National Health Institutes

VLDS	Virtual Library Discovery Services Portal	CenSSIS	Central Sterile Supply Service Information System
NLM	National Library of Medicine	OTMS	Operating Theater Management System
MeSH	Medical Subject Headings	LIS@KKM	Laboratory Information System
DDMS	Digital Document Management System	HTJ	Hospital Tunku Ja'afar
SPFP	Personnel Files Management System	HSI	Hospital Sultan Ismail
JAKM	Jelajah Aspirasi Keluarga Malaysia	SME	Subject Matter Expert
PPTA	Public Service Top Management Officers	IT	Information Technology
API	Prime Innovation Award	VeDa	Verifications of Data for Death Not Validate by Medical in Malaysia System
AKI	Special Innovation Award	STBP	Medical Assistance Fund System
AI	Innovation Award	SPPBI	Import Goods Acquisition Application System
KIK	Innovative and Creative Group Convention	eCML	Medico Legal Division Information System
QA	Quality Assurance	MHPS	Malaysian Healthcare Practitioners' System
SMIS	Special Management Information System	ePakar	Medical Officer Placement System for Graduated Specialist
NTIS	National Technology and Innovation Sandbox	PTJ	Pusat Tanggungjawab
HTA	Hospital Tunku Azizah	JPICT	ICT Steering Committee
EKSA	Public Sector Conducive Ecosystem	JTI	ICT Project Technical Committee
ICT	Information and Communication Technology	ISMS	Information Security Management System
PSP KKM 2021 - 2025	MOH Digitalisation Strategic Plan 2021 - 2025	DKICT	ICT Security Policy
HIS@KKM	Hospital Information System at MOH	EA	Enterprise Architecture
EMR	Electronic Medical Record	TPOS	Terminal Point-of-Sale
POC	Proof of Concept	TBP	Medical Assistance Fund
		EPO	Erythropoietin

LPKKM	Procurement Board of the Ministry of Health	IHBR	Institute for Health Behavioral Research
FOMEMA	Foreign Workers Health Supervision and Inspection Services	SIP	Inspectorate and Legislative Sector
eP	ePerolehan	SOP	Standard Operating Procedure
MOF	Ministry of Finance	DDBIA	Disease Destruction of Bearing Insects Act
G2B	Government-to-Business	MATRRAIN	Maritime Transport Training Institute
PSH	Hospital Support Service	PPE	Personal Protective Equipment
MEET	Medical Equipment Enhancement Tenure	KOSPEN	Komuniti Sihat Pembina Negara
FWMES	Foreign Workers Medical Examination Coordination & Surveillance System	NMCD	Non-Medically Certified Death
PPE	Property, Plant & Equipment	VA	Verbal Autopsy
BPKK	Family Health Development Division	DOSM	Department of Statistics Malaysia
OA	Orang Asli	MCD	Medically Certified Death
UHC	Universal Health Coverage	NBR	National Diabetes Registry
PKD	Health District Office	MAP	Monitoring, Awareness and Product
BER	Beyond Economic Repair	NCEMH	National Centre of Excellence for Mental Health
CPD	Continous Professional Development	MHPSS	Mental Health and Psychosocial Support Service
MoA	Memorandum of Agreement	PFA	Psychological First Aid
WHO	World Health Organization	SAR	Search and Rescue
NCD	Non-Communicable Disease	PDRM	Royal Malaysian Police
SCH	Steering Committee on Health	FCTC	Framework Convention on Tobacco Control
OIC	Organisation of Islamic Cooperation	GEG	Generational Endgame
AHMM	ASEAN Health Ministers Meeting		

GEGAR	Generational Endgame Advocacy Roadshow	PICK	National COVID-19 Immunisation Programme
OHU	Occupational Health Unit	NSPDPC	National Strategy Plan for Dengue Prevention and Control
SIS	Sharps Injury Surveillance		
OHD	Occupational Health Doctor	WMO	Wolbachia Mosquito Operation
EHU	Environmental Health Unit		
CPRC	Crisis Preparedness and Response Centre	ORS	Outdoor Residual Spray
		POR	Prevention of Malaria Re-establishment
PPS	Temporary Evacuation Centre	LLIN	Long Lasting Insecticide Net
EIA	Environmental Impact Assessment	IRS	Indoor Residual Spraying
BUR	Biennial Update Report	HIV	Human Immunodeficiency Virus
UNFCCC	United Nations Framework on Climate Change	STI	Sexually Transmitted Infection
DTS	Temporary Detention Depots	RRTF 2.0	National COVID-19 Rapid Response Task Force
PJH	Daycare Centre	ILI	Influenza-Like-Illness
TB	Tuberculosis	AGE	Acute Gastroenteritis
ACD	Active Case Detection	SPKAKP	International Health Regulations & Health Travel Sector
LTBI	Latent TB Infection	POE	Points of Entry
PEP-SDR	Post Exposure Prophylaxis - Single Dose Rifampicin	MHTC	Malaysia Healthcare Travel Council
HFMD	Hand Foot Mouth Disease	DCEV	Death And Critically Ill Emergency Visits
DVS	Department of Veterinary Services	eNCDC	Electronic National Centre for Disease Control
Mpox	Monkeypox	12MP	12th Malaysia Plan
CME	Continuing Medical Education	EOC	Emergency Operation Centre
NTD	Neglected Tropical Disease	PHRL	Public Health Reference Laboratory
VPD	Vaccine Preventable Disease		
FWBD	Food Water Borne Disease		
AFP	Acute Flaccid Paralysis		

NHSI	National Health Screening Initiatives	O&G	Obstetrics & Gynaecology
		PPC	Pre-Pregnancy Care
KBM	Quit Smoking Service	BDHA	Policy & International Relations Division
PeKa B40	Skim Peduli Kesihatan untuk Kumpulan B40	PNN	Postnatal Care Nursing
ANMS	Agenda Nasional Malaysia Sihat	PTPKWE 2023-2030	Elderly Health Service Action Plan 2023 - 2030
POCT	Point of Care Testing	JM	Community Nurses
TPC	Teleprimary Care	KD	Rural Clinics
TPC-OHCIS	Teleprimary Care – Oral Health Clinical Information System	PWD	Person With Disabilities
		DHC	Domiciliary Healthcare Services
KK	Health Clinic	IDA	Iron Deficiency Anaemia
DOTS	Direct Observed Treatment Short Course	Hb	Haemoglobin
MTAC	Medication Therapy Adherence Clinic	ORS	Oral Rehydration Salt
MDT	Multi-Disciplinary Team	NPANM	National Plan of Action for Nutrition in Malaysia
AMS	Antimicrobial Stewardship	BFHI	Baby-Friendly Hospital Initiative
SSPP	Client Experience Questionnaire	UNICEF	United Nations Children's Fund
AFHS	Adolescent Friendly Health Service	PPKZM	Programme For Undernourished Childrem
HEADSS	Home, Education/ Employment, Peer Group Activites, Sexuality and Suicide Depression	SDG	Sustainable Development Goals
GAMA	Global Action for Measurement of Adolescent Health	PCF	Community Feeding Programme
		NHMS	National Health and Morbidity Survey
MCO	Movement Control Order	PIBG	Parents and Teachers Association
MR	Measles & Rubella	PIBKS	Parents, Community and Private Involvement
DT	Diphtheria & Tetanus		
HPV	Human Papilloma Virus		
ATT	Tetanus toxoid	C-HAT	Cara Hidup Anda Terbaik

JU	Lead Trainer	HIE	Health Information Exchange
BPK	Health Education Division		
BMSS	Bulan Malaysia Sihat Sejahtera	NTP	National Training of Paediatric Palliative Provider
PERKESO	Social Security Organisation	NICU	Neonatal Intensive Care Unit
LPPKN	National Population and Family Development Board	NCERT	National Cell Ethics Research and Therapy Committee
COMBI	Communication for Behavioural Impact	HLP	Hadiah Latihan Persekutuan
WoW	Wellness on Wheels		
HSA	Hospital Sultanah Aminah	APC	Annual Practising Certificate
DLKK	National Health Literacy Policy	NSR	National Specialist Register
BPP	Medical Development Division	HO	House Officer
MaHTAS	Malaysian Health Technology Assessment Division	HLS	Housemanship Training Hospital
Saraubat	Medical Compensation Technical Evaluation Unit	HOS	Head of Services
ASHD	Allied Science Health Division	MQC	Medical Qualifying Committee
JDPKK	MOH Policy and Planning Committee	HTAR	Hospital Tengku Ampuan Rahimah
SJAM	St. John Ambulance of Malaysia	IPC	Infection Prevention Control
MRCS	Malaysian Red Crescent Society	AMR	Antimicrobial Resistance
USP	Medical Resource Unit	IDRC	International Development Research Centre
APPL	Approved Product Purchased List	CRE	Carbapenem-resistant Enterobacteriaceae
MPC	Malaysian Productivity Corporation	e-IR	e-Incident Reporting
PHPN	Private Healthcare Productivity Nexus	MPSG	Malaysian Patient Safety Goals
KWC	Kumpulan Wang COVID-19	WPSD	World Patient Safety Day
FPP	Full Paying Service	HKL	Hospital Kuala Lumpur
		OSH	Occupation Safety and Health

ILO	International Labour Organisation	ISPOR	The Professional Society for Health Economics and Outcomes Research
CAU	Clinical Audit Unit	MOSTI	Ministry of Science, Technology, and Innovation
P5VS	Pain as the 5th Vital Sign	HTAi	Health Technology Assessment International
PFH	Pain Free Hospital	TBP	Medical Aid Fund
MENANG	Menangani Kesakitan Kronik	STBP	Medical Aid Fund System
POMR	Perioperative Mortality Review	BAP	Medical Practice Division
SSI	Surgical Site Infection	CML	Medico Legal Section
MyAP-AMR	Malaysian National Action Plan on Antimicrobial Resistance	AGC	Attorney General's Chamber
JKK	Jawatankuasa Keselamatan dan Kesihatan Pekerjaan	JKPB	External Inquiry Committee
HTA	Health Technology Assessment	CPP	Medical Legislation Section
CPG	Clinical Practice Guidelines	LA	Legal Advisor
TR	Technology Review	JBPM	Malaysian Fire and Rescue Department
BPH	Benign Prostatic Hyperplasia	MCDF	Malaysia Civil Defence Force
TKA	Total Knee Arthroplasty	SJAM	St John Ambulance Malaysia
THA	Total Hip Arthroplasty	JPJ	Road Transport Department
CKD	Chronic Kidney Disease	RIS	Regulatory Impact Statement
PDAC	Pusat Penyelidikan Kesihatan Alam Sekitar	MOA	Malaysian Orthopedic Association
NMIBC	Non-Muscle-Invasive Bladder Cancer	MSN	Malaysian Neuroscience Association
EVALI	E-Cigarette or Vaping Product Use-Associated Lung Injury	MAS	Malaysian Arthroscopy Association Annual Scientific Meeting
INAHTA	International Network of Agencies for Health Technology Assessment	LCP	Letter of Credentialing and Privileging

KPDNHEP	Ministry of Domestic Trade and Consumer Affairs	APC	Annual Practicing Certificate
MDA	Medical Device Authority	HEP	Higher Education Providers
DSM	Department of Standard Malaysia	ASO	Optic Surveillance Optic
MITI	Ministry of International Trade and Industry	UPEN	Economic Planning Unit
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership	MAHPC	Malaysian Allied Health Professions Council's
AFAS	ASEAN Framework Agreement on Services	MHPS	Malaysian Healthcare Practitioners' System
AJCCM	ASEAN Joint Coordinating Committee on Medical Practitioners	NCC	National Credentialing Committee
ERIA	Economic Research Institute for ASEAN and East Asia	CBBP	Cuti Belajar Bergaji Penuh
CKAPS	Private Medical Practice Control Section	JKPF	Jawatankuasa Penggunaan Fasiliti
PHFS	Private Healthcare Facilities and Services	NNA	National Nursing Audit
ToT	Training of Trainer	NORN	National Operating Room Audit
CPPPP	Assistant Medical Officer Service Branch	NNIA	National Nursing Indicator Approach
ARC	Registration and Annual Registration Certificate	KZM	Kekurangan Zat Makan
PPW	Compulsory Placement Programme	INTAN	National Institute of Public Administration
AMO	Assistant Medical Officer	C&P	Credentialing and Privileging
LPHE	Estate Hospital Assistant Board	ILKKM	Ministry of Health Training Institute
MOC	Malaysian Optical Council	IPTS	Private Higher Education Institution
		T&CMD	Traditional and Complementary Medicine Division
		TIM	Traditional Indian Medicine

ITEC	Indian Technical and Economic Cooperation	GMEC	Governance, Monitoring and Evaluation Committee
BTM	Bilateral Technical Meeting	PPC	COVID-19 Care Package
NPRA	National Pharmaceutical Regulatory Agency	JLN	Joint Learning Network
PRC	People's Republic of China	PHM	ProtectHealth Malaysia
NATCM	National Administration of Traditional Chinese Medicine	TAC	Technical Advisory Committee
WHOCC	WHO Collaborating Center	TEH	Total Expenditure on Health
IP	Intellectual Property	GDP	Gross Domestic Product
WPR	Western Pacific Region	OOP	Out-of Pocket
AP-HSAF	Asia Pacific Health Security Action Framework	NHA	National Health Accounts
MHHO	Malaysia Holistic and Herbal Organisation	GHED	Global Health Expenditure Database
T&CMS	Traditional and Complementary Medicine Council Section	WBG	World Bank Group
PDPK	Health Plan and Policy Planning	PHC	Primary Healthcare
NHF	National Health Financing	MyHDW	Malaysian Health Data Warehouse
MNHA	Malaysia National Health Accounts	SMRP	Sistem Maklumat Rawatan Pelanggan
HIC	Health Informatics Centre	PRIS	Patient Registry Information System
PFK	Health Facility Planning	MDEB	Malaysian Digital Economy Blueprint
PS 2022	2022 Strategic Plan	MED4IRN	Council of Digital Economy and the Fourth Industrial Revolution
JKP PS 2022	2022 Strategic Plan Monitoring Committee	ICD-11	International Classification of Disease - 11th version
AKM	Keluarga Malaysia Aspirations	ICHI	International Classification of Health Interventions
SJTK	Clinic Appointment System	MIID	Malaysia Institute of Infectious Disease
ESP-SPIKPA	Electronic Service Provider for SPIKPA	JKR	Public Works Department
PHCorp	ProtectHealth Corporation Sdn. Bhd.	MCH	Mother and Child Health

EPU	Economic Planning Unit	SIP	Project Implementation Sector
HTAN	Hospital Tuanku Ampuan Najihah	SPL	Sustainability Programme Sector
VC	Virtual Clinic	KAS	Water and Sanitation Engineering Sector
UAT	User Acceptance Testing	BAKAS	Water Supply and Environmental Cleanliness Unit
OHS REGLAB	Online Healthcare Service Regulatory Lab	KMAM	National Drinking Water Quality Monitoring Unit
OHS	Online Healthcare Service	UPA	Water Pollution Unit
ESD	Engineering Service Division	NEHAP	National Environmental Health Action Plan
UTTK	Technical and Engineering Technology Unit	UKU	Air Quality Unit
PPP	Public Private Partnerships	IAQ	Indoor Air Quality
PFI	Private Finance Initiatives	DOSH	Department of Safety and Occupational Health
PDI	Pre-Delivery Inspection	PEKA	Environmental Health Protection
UPKS	Private Healthcare Facility Unit	SH	Waste and Hygiene Sector
PATA	Immovable Asset Management Unit	JMP	Joint Monitoring Programme
UPKj	Engineering Research Unit	SB	Biomedical Sector
IoT	Internet of Things	BEMS	Biomedical Engineering Maintenance Services
CSS	Clinics Support Services	MEET	Medical Equipment Enhancement Tenure
FEMS	Facility Engineering Maintenance Services	RTM	Replacement Through Maintenance
CLS	Cleansing Services	MRSD	Medical Radiation Surveillance Division
PPM	Planned Preventive Maintenance	QC	Quality Control
CM	Corrective Maintenance	QUANUM	Quality Management Audits in Nuclear Medicine Practices
POG	Project Operation Guidelines	QAP	Quality Assurance Programme
HSS	Hospital Support Services		
PMC	Project Monitoring Committee		
CPA	Contractor Performance Assessment		

DBP	Dewan Bahasa & Pustaka	IHSR	Institute for Health System Research
MNA	Malaysian Nuclear Agency	MQSH	Malaysian Society for Quality in Health
DRL	Diagnostic Reference Level	APEC	Asia-Pacific Economic Cooperation
CPF	Country Programme Framework	UM	University of Malaya
SSAC	State System of Accounting and Control	IKU	Institute for Health System Research
INSServ	International Nuclear Security Advisory Service	IMR	Institute for Medical Research
ORS-DOE	Office of Radiological Security, Department of Energy	IDRC	Infectious Diseases Research Centre
USA	United States of America	AIRC	Allergy and Immunology Research Centre
RRD	Radiation Regulatory Division	CaRC	Cancer Research Centre
Atom Malaysia	Department of Atomic Energy	EHRC	Environmental Health Research Centre
ILKEM	Malaysian Protection Security Training Institute	HMRC	Herbal Medicine Research Centre
PMO	Prime Minister Office	NMCR	Nutrition, Metabolism and Cardiovascular Research Centre
COMRAD	Project Management of Comprehensive Medical Radiation Information System	SDC	Specialised Diagnostic Centre
NBRAIS	National Blueprint for Regulatory Authority on Radiological Information System	SRC	Special Resource Centre
ICR	Institute for Clinical Research	GMP	Good Manufacturing Practice
RCC	Research Consultant Clinic	FCD	Malaysian Food Composition Database
NTD	Neglected Tropical Disease	PID	Primary Immunodeficiency Diseases
GCP	Good Clinical Practice	MOU	Memorandum of Understanding
CCT	Centre for Clinical Trial	IHM	Institute for Health Management
MOHE	Ministry of Higher Education	TGP	Talent Grooming Programme
P&ST	Research and Technical Support		

IHBR	Institute for Health Behavioural Research	NMP	National Medicine Policy
ILSI	International Life Science Institute	APPL	Approved Products Purchase List
INFOODS	International Network of Food Data System	FUKKM	Ministry of Health Malaysia Formulary Medicine
CRC	Clinical Research Centre	VAS	Value Added Services
DNDi	Drugs for Neglected Diseases Initiative	IDDS	Integrated Drug Delivery Service
KPKT	Ministry of Local Government Development	UMP	Appointment System Medicine by Post
NCEMH	National Centre of Excellence for Mental Health	UM3	Supply of Repeated Medicines Through Third Party
DBKL	Kuala Lumpur City Hall	PICC	Pharmacy Intergrated Community Care
DBDI	Diagnosis Behavioral Diabetes	DCA	Drug Control Authority
MAHEO	Malaysian Health Promotion Organisation	AEFI	Adverse Events Following Immunisation
OHP MOH	Oral Health Programme Ministry of Health	JFK	COVID-19 Vaccine Special Pharmacovigilance Committee
CDO	Chief Dental Officers	R&D	Research & Development
NOHP	National Oral Health Policy	RMC	Royal Malaysian Customs Department
NOHSA	National Oral Health Survey for Adults	MCMC	Malaysian Communications and Multimedia Commission
SDC	School Dental Clinics		
COPD	Chronic Obstructive Pulmonary Diseases	PKKM	The Food Safety and Quality Programme
PSP	Pharmaceutical Services Programme	SMEs	Small and Medium-sized Enterprise
BDPSF	Pharmacy Policy and Strategic Planning Division	DKMK	National Food Safety Council
BAPF	Pharmacy Practice and Development Division	BKKM	Food And Safety Quality Division
BPF	Pharmacy Enforcement Division	FAO	Food and Agriculture Organization
BLFM	Pharmacy Board Malaysia Division		

MeSTI	Makanan Selamat Tanggungjawab Industri	PHM	ProtectHealth Malaysia
FoSIM	Food Safety Information System of Malaysia	SPIKPA	Skim Perlindungan Insurans Kesihatan Pekerja Asing
ProKEM	Food Safety Programme	GP	General Practitioners
BAKAS	Water Supply and Environmental Sanitation	CCTI	Completing Cancer Treatment Incentive
JKPPT	Land Management and Monitoring Committee	PPV	Vaccination Centres
CAD	Internal Audit Division	MMC	Malaysian Medical Council
RCs	Responsibility Centres	CRM	Clinical Research Malaysia
SiSPAA	Public Complaint Management System	MREC	Medical Research and Ethics Committee
THIS	Total Hospital Information System	IRB/IECs	Institutional Review Boards/Independent Ethic Committees
UKK	Corporate Communications Unit	GNI	Group National Income
PICKids	National COVID-19 Immunisation Programme for Children	SC	Study Coordinator
GEG	Generational EndGame	PMCC	Princess Margaret Cancer Centre
4IR	Fourth Industrial Revolution	NCGM	National Centre for Global Health and Medicine
CSR	Corporate Social Responsibility		
WHA	World Health Assembly		
WEF	World Economic Forum		
UNHCR	United Nations High Commissioner for Refugees		
ABMS	Anti-Bribery Management System		
CAB	Conformity Assessment Bodies		
AI	Artificial Intelligence		
G2G	Government to Government		
PR	Public Relations		

MINISTRY OF HEALTH MALAYSIA
Blok E1, E3 , E6 , E7 & E10, Kompleks E,
Pusat Pentadbiran Kerajaan Persekutuan,
62590, Putrajaya, Malaysia

Tel : 03 8000 8000 | Faks : 03 8888 6187
E-mel : kkm@moh.gov.my

