



MINISTRY OF HEALTH MALAYSIA

ANNUAL REPORT 2021

www.moh.gov.my





KEMENTERIAN KESIHATAN MALAYSIA

ANNUAL REPORT 2021



TABLE OF CONTENT

EDITORIAL BOARD	iii
ORGANISATION CHART OF THE MINISTRY OF HEALTH MALAYSIA	iv
VISION & MISSION	v
CHAPTER 1 HEALTH STATUS	1
CHAPTER 2 MANAGEMENT	9
CHAPTER 3 FINANCE	41
CHAPTER 4 PUBLIC HEALTH	57
CHAPTER 5 MEDICAL	129
CHAPTER 6 RESEARCH & TECHNICAL SUPPORT	175
CHAPTER 7 ORAL HEALTH	255
CHAPTER 8 PHARMACY	271
CHAPTER 9 FOOD SAFETY & QUALITY	289
CHAPTER 10 MEDICAL DEVICE AUTHORITY	305
CHAPTER 11 DEVELOPMENT	311
CHAPTER 12 INTERNAL AUDIT	317
CHAPTER 13 COMMUNICATION CORPORATE	325
CHAPTER 14 POLICY & INTERNATIONAL RELATIONS	337
CHAPTER 15 LEGAL ADVISORS	345
CHAPTER 16 INTEGRITY	347
CHAPTER 17 MALAYSIA HEALTHCARE TRAVEL COUNCIL (MHTC)	351
CHAPTER 18 PROTECTHEALTH	357
CHAPTER 19 CLINICAL RESEARCH MALAYSIA (CRM)	363
CHAPTER 20 MALAYSIA MEDICAL COUNCIL (MMC)	369

EDITORIAL BOARD

TAN SRI DATO' SERI DR. NOOR HISHAM BIN ABDULLAH (CHAIRPERSON)

Director General of Health, Malaysia

DATUK HARJEET SINGH A/L HARDEV SINGH

Deputy Secretary-General

DATO' ZAMZURI BIN ABDUL AZIZ

Deputy Secretary-General (Finance)

DATO' DR. CHONG CHEE KHEONG

Deputy Director General of Health (Public Health)

DATO' DR. ASMAYANI BINTI KHALID

Deputy Director General of Health (Medical)

DATUK DR. HISHAMSHAH BIN MOHD IBRAHIM

Deputy Director General of Health (Research and Technical Support)

DR. NOORMI BINTI OTHMAN

Senior Director, Oral Health

PN. NORHALIZA BINTI A. HALIM

Senior Director, Pharmacy Services

EN. MOHD SALIM BIN DULATTI

Senior Director, Food Safety and Quality

DR. ROZITA HALINA BINTI TUN HUSSEIN

Director, Planning

DR. NURAIDAH BINTI MARZUKI (SECRETARIAT)

Deputy Director, Health Informatics Centre



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:
 - o fully attain their potential in health
 - o appreciate health as a valuable asset
 - o take individual responsibility and positive action for their health

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

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

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 2021 was 32.66 million with an annual population growth rate of 0.22 per cent. The total population in 2021 increased by 0.08 million as compared to 32.58 million recorded in 2020. The geographical distribution of population showed that Selangor had the highest population of 6.56 million, while Wilayah Persekutuan Labuan recorded the lowest population of 0.10 million. Wilayah Persekutuan Putrajaya recorded the highest annual population growth rate of 5.42 per cent, while Sabah recorded negative annual growth rate of 1.29 per cent (**Table 1.1**).

Table 1.1
Population and Annual Population Growth Rate by State, Malaysia 2020 and 2021

No	State	Total Population ('000)		Annual Population Growth Rate 2020/2021 (%)
		2020	2021 ^e	
1.	Johor	3,773.5	3,794.0	0.54
2.	Kedah	2,182.6	2,194.1	0.53
3.	Kelantan	1,904.9	1,928.8	1.25
4.	Melaka	931.8	937.5	0.60
5.	Negeri Sembilan	1,127.1	1,129.1	0.18
6.	Pahang	1,676.8	1,684.6	0.46
7.	Pulau Pinang	1,770.4	1,774.4	0.23
8.	Perak	2,507.9	2,508.9	0.04
9.	Perlis	254.7	255.4	0.29
10.	Selangor	6,524.6	6,555.4	0.47
11.	Terengganu	1,258.5	1,275.1	1.31
12.	Sabah	3,882.8	3,833.0	-1.29
13.	Sarawak	2,813.1	2,822.2	0.32
14.	W.P. Kuala Lumpur	1,766.0	1,746.6	-1.10
15.	W.P. Labuan	99.4	100.1	0.67
16.	W.P. Putrajaya	109.9	116.1	5.42
MALAYSIA		32,584.0	32,655.4	0.22

Notes:

1. Current population estimates 2020 and 2021, based on 2010 Population and Housing Census, Malaysia

2. The added total may differ due to rounding.

3.^e estimates

Source: Department of Statistics Malaysia ([www.dosm.gov.my/Population Quick Info](http://www.dosm.gov.my/Population%20Quick%20Info))

Overall, Malaysia is predominantly urban, with 77.3 per cent of the total population living in urban areas, and 22.7 per cent of the population living in the rural areas (**Table 1.2**). In 2021, the economically-active (working age) population which consists of population aged 15 to 64 years was 22.7 million or 69.6 per cent of the total population. Meanwhile, young age and old age population were 7.5 million (23.0%) and 2.4 million (7.4%) respectively.

Table 1.2
Statistics Related to Population, 2021

No.	Population	2021 ^e	
		Total ('000)	% of Total Population
1.	Male	16,771.0	51.4
2.	Female	15,884.4	48.6
3.	Urban	25,230.2	77.3
4.	Rural	7,425.2	22.7
5.	Working age group (15-64 years)	22,738.4	69.6
6.	Young age group (below 15 years)	7,513.1	23.0
7.	Old age group (65 years & above)	2,403.7	7.4

Notes:

1. Current population estimates 2020 and 2021, based on 2010 Population and Housing Census, Malaysia
2. The added total may differ due to rounding.
3. ^e estimates

Source: Department of Statistics Malaysia ([www.dosm.gov.my/Population Quick Info](http://www.dosm.gov.my/Population%20Quick%20Info))

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 shows an increasing trend from 43.6 in 2021 from 43.5 in 2020. The old age dependency ratio also shows an increasing trend in 2021 to 10.6 as compared to 10.1 in 2020. Meanwhile, the young dependency ratio shows a decreasing trend from 33.4 in 2020 to 33.0 in 2021.

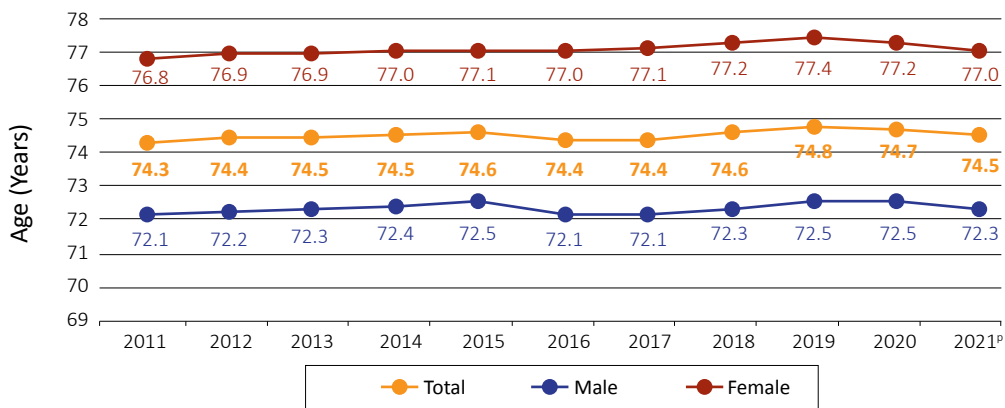
HEALTH STATUS

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 2021, the life expectancy at birth for Malaysian population increased by 0.2 years to 74.5 years as compared to 74.3 years in 2011. A similar trend was observed for male and female. The life expectancy for male has increased by 0.2 years to 72.3 years in 2021 from 72.1 years in 2011, and for female also increased by 0.2 years to 77.0 years in 2021 from 76.8 years in 2011 (**Figure 1.1**).

Figure 1.1
Life Expectancy at Birth, Malaysia, 2011 to 2021



Notes:

^p Preliminary figure

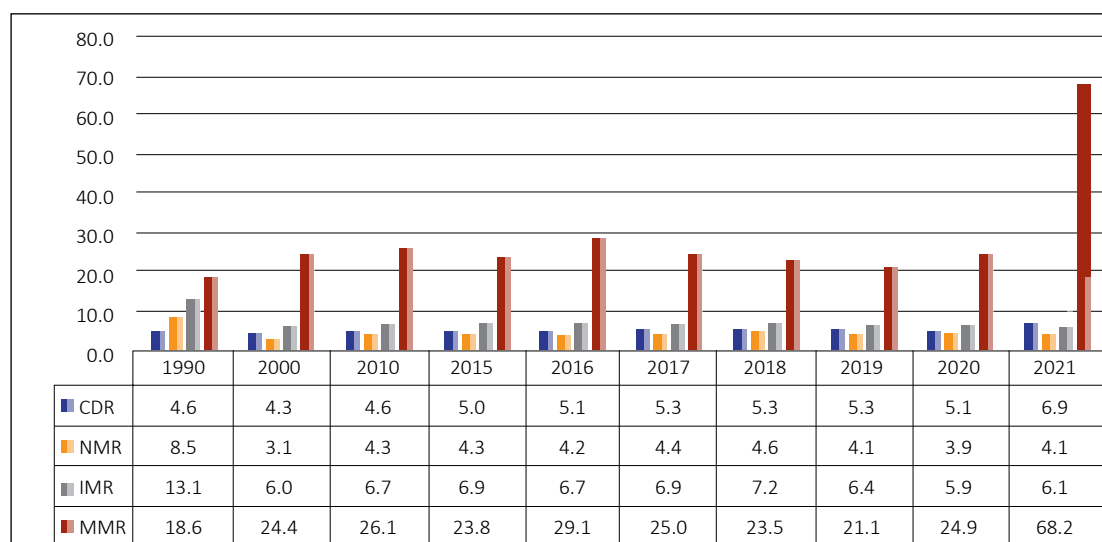
Source: Department of Statistics Malaysia

MORTALITY

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

No	Indicator	2015	2016	2017	2018	2019	2020	2021
1.	Crude death rate (per 1,000 population)	5.0	5.1	5.3	5.3	5.3	5.1	6.9
2.	Stillbirth rate (per 1,000 births)	4.4	5.2	5.4	5.5	5.4	5.1	5.0
3.	Perinatal mortality rate (per 1,000 births)	7.7	8.3	8.7	8.9	8.4	8.0	8.2
4.	Neonatal mortality rate (per 1,000 live births)	4.3	4.2	4.4	4.6	4.1	3.9	4.1
5.	Infant mortality rate (per 1,000 live births)	6.9	6.7	6.9	7.2	6.4	5.9	6.1
6.	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
7.	Under-5 mortality rate (per 1,000 live births)	8.4	8.1	8.4	8.8	7.7	7.0	7.4
8.	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 MOH Hospitals in 2021 shows a decreasing trend of 122,710 or 5.14 per cent to 2,264,108 from 2,386,818 in 2020. The 10 principal causes of hospitalization in the MOH Hospitals for 2021 are shown in **Table 1.4**. The diseases were classified based on the International Statistical Classification of Disease 10th Revision (ICD10). In 2021, “Pregnancy, childbirth and the puerperium” (19.63%) remained as the top cause of admissions in MOH hospitals followed by “Codes for special purposes” (19.17%) and “Certain conditions originating in the perinatal period” (9.73%).

Table 1.4
10 Principal Causes of Hospitalisation in MOH Hospitals, 2021^P

No	Principal Causes	ICD-10 Code	Percentage to total discharges (%)
1.	<i>Chapter XV: Pregnancy, childbirth and the puerperium</i>	O00-O99	19.63
2.	<i>Chapter XXII: Codes for special purposes</i>	U00-U89	19.17
3.	<i>Chapter XVI: Certain conditions originating in the perinatal period</i>	P00-P96	9.73
4.	<i>Chapter IX: Diseases of the circulatory system</i>	I00-I99	7.73
5.	<i>Chapter X: Diseases of the respiratory system</i>	J00-J99	7.36
6.	<i>Chapter XIX: Injury, poisoning and certain other consequences of external causes</i>	S00-T98	5.55
7.	<i>Chapter II: Neoplasms</i>	C00-D48	4.41
8.	<i>Chapter I: Certain infectious and parasitic diseases</i>	A00-B99	4.08
9.	<i>Chapter XI: Diseases of the digestive system</i>	K00-K93	3.80
10.	<i>Chapter XIV: Diseases of the genitourinary system</i>	N00-N99	3.35

Note: Based on ICD10 3-digit code grouping

^P preliminary

Source: MyHDW Fixed Format Report, 2021 (as of 31 March 2022)

The number of deaths (for all causes) in MOH Hospitals increased by 17,754 or 30.53 per cent from 58,144 in 2020 to 75,898 in 2021. 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 respiratory system” was the top cause of death in MOH hospitals recorded in 2021 (24.53%), followed by “Diseases of the circulatory system” (17.67%) and “Codes for special purposes” (16.31%). The 10 principal causes of deaths in the MOH Hospitals for 2021 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 X: Diseases of the respiratory system	J00-J99	24.53
2.	Chapter IX: Diseases of the circulatory system	I00-I99	17.67
3.	Chapter XXII: Codes for special purposes	U00-U89	16.31
4.	Chapter I: Certain infectious and parasitic diseases	A00-B99	10.88
5.	Chapter II: Neoplasms	C00-D48	7.00
6.	Chapter XIV: Diseases of the genitourinary system	N00-N99	4.91
7.	Chapter IV: Endocrine, nutritional and metabolic diseases	E00-E90	4.37
8.	Chapter XI: Diseases of the digestive system	K00-K93	3.58
9.	Chapter XX: External causes of morbidity and mortality	V01-Y98	2.84
10.	Chapter XVI: Certain conditions originating in the perinatal period	P00-P96	1.53

Note: *based on underlying causes of death

Based on ICD10 3-digit code grouping

^P preliminary

Source: MyHDW Fixed Format Report, 2021 (as of 31 March 2022)

HEALTH FACILITIES AND FACILITY UTILISATION

The number of MOH hospitals in 2021 was 146 which consists of 135 hospitals and 11 Special Medical Institutions with total beds of 39,263 and 5,586 beds respectively. Overall, Bed Occupancy Rate (BOR) for MOH hospitals and special medical institutions in 2021 was 77.52 per cent (**Table 1.6**).

There were 1,057 Health Clinics, 1,749 Rural Clinics and 86 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 2021, there were 255 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,
2016 to 2021

No	Facility	2016	2017	2018	2019	2020	2021
1.	Number of Hospital	144	144	144	144	146	146
	- Hospital	135	135	135	135	135	135
	- Special Medical Institution	9	9	9	9	11	11
2.	Number of Bed Complement	41,995	42,302	42,434 ^r	42,936	44,117	44,849
	- Hospital	37,293	37,470	37,619	38,131	38,543	39,263
	- Special Medical Institution	4,702	4,832	4,815	4,805	5,574	5,586
3.	Bed Occupancy Rate, BOR (%) ¹	70.13	60.75	68.75 ^r	70.01	64.72	77.52
4.	Number of Health Clinics	969	994	1,000	1,027	1,051	1,057
5.	Number of Rural Clinics	1,803	1,798	1,791	1,771	1,752	1,749
6.	Number of Maternal and Child Health Clinics	91	91	90	87	87	86
7	Number of 1Malaysia Clinic/Community Clinics ²	357	342	343	286	257	255

Note:

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

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

^r revised

Source: Health Informatics Centre, MOH

2

MANAGEMENT



INTRODUCTION

The Management Programme consists of eight (8) divisions/units that reporting directly to the Secretary-General, five (5) divisions under the Deputy Secretary-General (Management) and three (3) divisions under the Deputy Secretary-General (Finance). The main objective of this programme is to facilitate and support the achievement of the Ministry's policy and objectives under other programmes through an efficient and effective service system, human resource management, information technology management, competency and training development and financial management.

The divisions under the Deputy Secretary-General (Management) are listed below:

- i. Human Resource Division (HRD);
- ii. Training Management Division (TMD);
- iii. Competency Development Division (CDD);
- iv. Management Services Division (MSD); and
- v. Information Management Division (IMD).

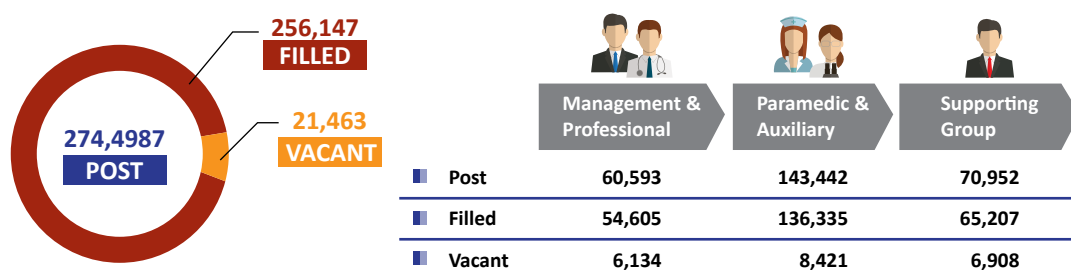
HUMAN RESOURCE DIVISION (HRD)

ESTABLISHMENT OF POSTS AND PERSONNEL

As of 31 December 2021, about 93.1 percent (256,147) of 274,987 posts in MOH have been filled. **Figure 2.1** indicates the posts and personnel according to the services group.

Figure 2.1

MOH Personnel According to Service Group as of 31 December 2021

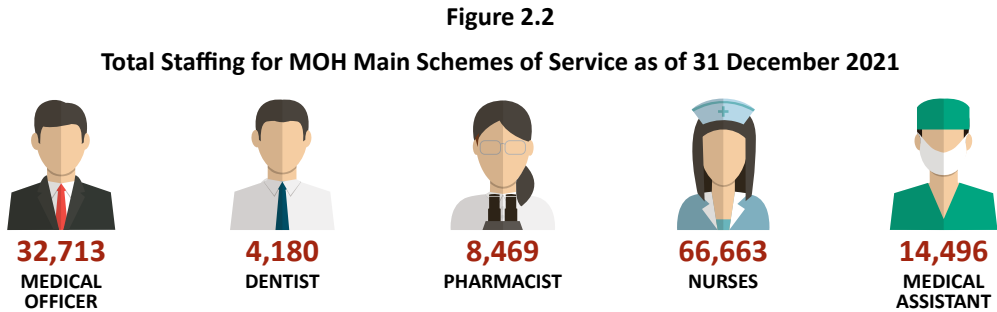


Note:

1. Management & Professional group include the top management group and integrated scheme personnel.
2. Total post showed in figure 2.1 not including others ministry/agency 2,623 filled cadre post.

Source: Human Resource Division, MOH

The total numbers of personnel for five (5) main schemes of service in MOH are shown in **Figure 2.2**.



Source: Human Resource Division, MOH

There were 32,713 permanent Medical Officers in 2021, comprising 6,258 Medical Specialists; 26,392 Medical Officers (MO) and 63 permanent House Officers (HO) Grade UD41 (HOs remained in housemanship training and were appointed before December 2016).

CONTRACT APPOINTMENTS FOR THE THREE (3) MAIN SCHEMES AND THE PARAMEDIC AND AUXILIARY SCHEME OF SERVICE

As of 31 December 2021, a total of 39,389 Contract Officers have been appointed which consists of various schemes including Medical Officer, Dentist, Pharmacist, Dental Technologists, Physiotherapist and Occupational Therapist. The details of these contract appointments according to scheme is described in **Table 2.1**.

Table 2.1
Contract Appointments for the Three (3) Main Schemes and the Paramedic and Auxiliary Scheme of Service

Scheme of Service	Total of Appointment
Appointment Due To Expertise Service Requirements	
Medical Specialist	24
Appointment Due To The Act's Requirements For Graduate Training And Compulsory Service	
Medical Officer, Grade UD41	26,303
Dentist, Grade UG41	5,587
Pharmacist, Grade UF41	6,663
Appointment For Assisting Delivery of Health Services	
Physiotherapist, Grade, U29	144
Occupational Therapist, Grade U29	136
Dental Technologists, Grade U29	47
Dental Surgery Assistants, Grade U19	485
Total	39,389

Source: Human Resource Division, MOH

Note: Excluding contract appointment to assist in the management of COVID-19 pandemic.

An Inter-Ministry Workshop to Discuss Healthcare Human Resource Requirement and Roadmap for Contract Medical Officer, Dentist and Pharmacist was held on 2 December 2021 at Zenith Hotel Putrajaya (**Image 2.1**). The outcome and suggestion from the workshop was tabled to the Ministerial Cabinet Meeting to establish 4,186 permanent posts for Medical Officer, Dentist and Pharmacist.

Image 2.1

Inter-Ministry Workshop to Discuss Healthcare Human Resource Requirement and Roadmap for Contract Medical Officer, Dentist and Pharmacist



Source: Human Resource Division, MOH

MANAGEMENT OF PROMOTION AFFAIRS

Promotion is an important aspect of human resource management which serves as catalyst as well as motivating factor to produce high potential officers. As of 31 December 2021, a total of 19,609 MOH personnel were promoted according to the service group described in **Figure 2.3**.

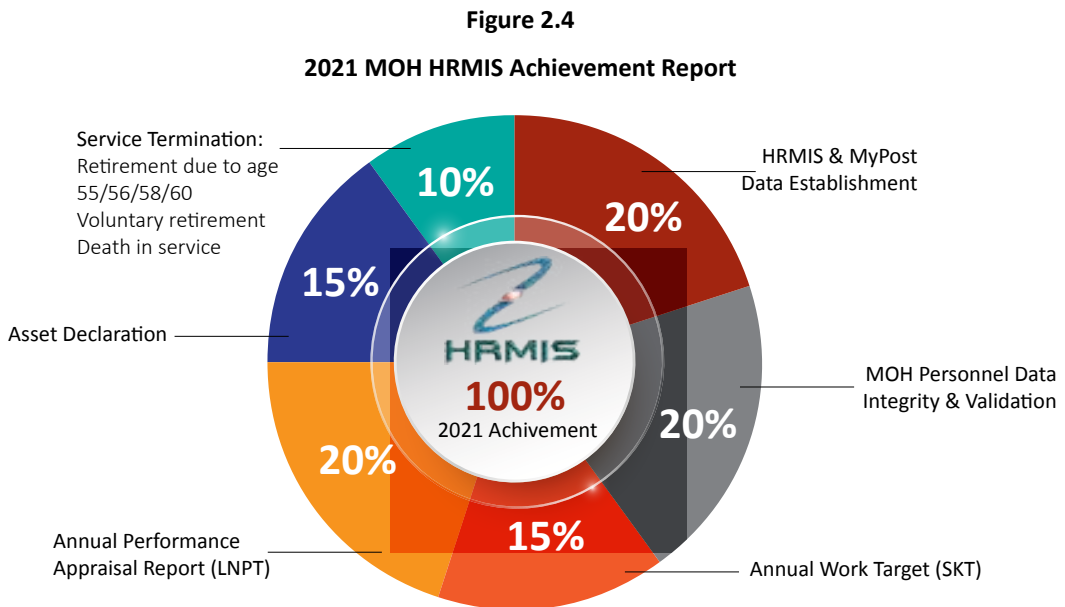
Figure 2.3
Number of Officers Involved in Promotion Matters for the Year 2021



Source: Human Resource Division, MOH

HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEM (HRMIS)

HRMIS is an important system in public service to ensure the integrity and accuracy of human resource management data. This system consists of personnel data information management, service profiles, personal records and the Annual Performance Appraisal Report (LNPT). The implementation achievement of HRMIS is one part of the KPI for the Secretary General of MOH. In 2021, MOH successfully achieved 100 per cent (%) for the implementation of all six (6) HRMIS criterias as shown in **Figure 2.4**.



Source: Human Resource Division, MOH

IMPROVEMENT OF WORK PROCESS THROUGH OFFICE AUTOMATION

Office Automation is a process of automatic data flowing without any human interference to reduce data inconsistency and error. Work processes that have been improved through office automation involving the following implementation:

- i. Expansion of HRMIS Transferring Sub-module to all MOH schemes of service for personnel inter-facility transfer requests.
- ii. Rebranding of *Sistem Maklumat Pengurusan Profesional 2.0* (MySYMPP) to Human Resource Information System (HRIS) with updated modules for posts and staffing.

IMPROVEMENT OF ALLOWANCES AND BENEFITS/REMUNERATIONS

Improvements to existing allowances and benefits/remunerations is implemented as an incentive to motivate healthcare talents in the public service and to improve healthcare service delivery. The improvised allowances, benefits and remunerations in 2021 are as the following:

- i. Extension of *Bayaran Insentif Penempatan Pakar Perubatan/Pergigian (BIPP)* to Specialist working in the States Department of Health (JKN) and Health/Dental Offices (PKK/PKD/PPK) in Sabah, Sarawak and W.P. Labuan;
- ii. Special allowance to healthcare workers involved in the National COVID-19 Immunisation Programme (PICK) at the vaccination centre (PPV). The rate of the allowance has been increased for six (6) months from RM200.00 to RM600.00 effective July 2021 until December 2021;
- iii. Increased of COVID-19 special allowance from RM600.00 to RM1,000.00 effective July 2021 until December 2021 for healthcare workers involved in managing and treating COVID-19 patients in Intensive Care Unit (ICU);
- iv. Extension of unrecorded leave (CTR) for Festive Leave to MOH personnel appointed on a contract basis;
- v. Expansion of the definition of 'Frontliners' for the purpose of exemption on contribution to Disaster Trust Account;
- vi. Extension of maximum usage period of substitute leave to healthcare workers from existing six (6) month to 18 month for accumulate leave from 18 March 2020 to 31 December 2021;
- vii. Extension of On-Call Allowance to medical officers working in PKRC MAEPS 2.0;
- viii. Extension of Fare to Travel to Region of Origin (TMWA) benefits to contract Medical Officer, Dentist and Pharmacist that have been relocated to another region (from peninsular to Sabah, Sarawak and W.P. Labuan or vice versa); and
- ix. Extension of medical leave on special grounds (Tuberculosis, leprosy and cancer leave) to contract Medical Officer, Dentist and Pharmacist.

STRENGTHENING OF ADMINISTRATIVE CAPACITY AND IMPROVING GOOD GOVERNANCE

Strengthening of administrative capacity and increased good governance is achieved through the strategic implementations of the development of the Human Resource Management Accountability Index (IASM). The IASM is a management tool to ensure compliance in human resource management in accordance with current government policies. The implementation of IASM involves Human Resource Management in State/Federal Territory Health Department (JKN/JKWP), District Health Office (PKD), Hospitals, institutions and health facilities. For the year 2021, the implementation of IASM has involved 40 health facilities throughout JKN.

HUMAN RESOURCE MANAGEMENT IN DEALING WITH THE COVID-19 PANDEMIC

SPECIAL ALLOWANCE FOR DOCTORS AND HEALTHCARE WORKERS IN DEALING AND CONTROLLING THE SPREAD OF COVID-19 PANDEMIC

The government has provided COVID-19 special allowance for healthcare workers of RM400 per month from March 2020 and increased it to RM600 per month from April 2020 onwards. The provision of this allowance serves to appreciate and motivate frontline workers who are exposed directly to the risk of infection while performing their duties to address and curb the COVID-19 pandemic.

As of 31 December 2021, a total of RM1.1 billion has been paid to 2,163,496 approved claims. Circulars and procedures are provided to ensure the management in payment of the allowance complies to the stipulated financial guidelines accordingly.

CONTRACT APPOINTMENT TO ASSIST IN THE MANAGEMENT OF COVID-19 PANDEMIC

As of 31 December 2021, a total of 14,993 healthcare personnel from various service schemes have been appointed on contract basis to assist in the management of the COVID-19 pandemic for a period of 3 to 12 months. Details of appointments according to the service schemes are as in **Table 2.2** and **Table 2.3**.

Table 2.2
Contract Appointment in Handling COVID-19 Pandemic

Scheme of Service	Total of Appointment
Science Officer	176
Counsellor	200
Nurse	6,235
Medical Assistant	5,297
Environmental Health Officer	90
Environmental Health Officer Assistant	1,031
Medical Lab Technologist	1,462
Radiographer	473
Public Health Assistant	1
Total	14,965

Source: Human Resource Division, MOH

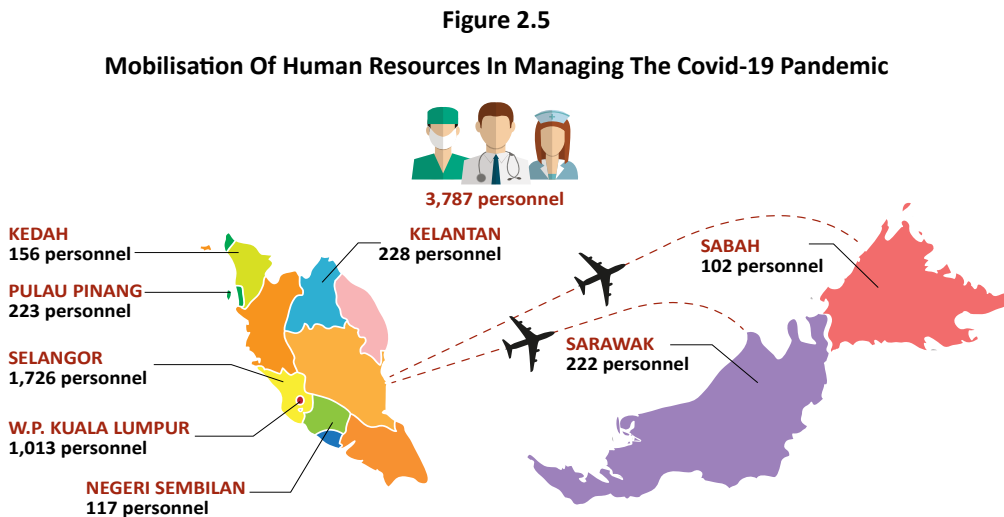
Table 2.3
Contract Appointment in Handling COVID-19 Pandemic through Government Strategic Programme to Empower the People and Economy (PEMERKASA)

Scheme of Service	Total of Appointment
Medical Specialist	24
Medical Officer	1
Dentist	1
Public Relation Officer	1
Engineer	1
Total	28

Source: Human Resource Division, MOH

MOBILISATION OF HUMAN RESOURCES IN MANAGING THE COVID-19 PANDEMIC

In order to fulfil the service requirements and management of the COVID-19 pandemic throughout Malaysia, MOH has mobilised existing personnel and contract appointment to assist shortage of human resource in affected states due to sudden surge of COVID-19 cases. In total, 3,787 personnel had been mobilised across states throughout the year. The mobilisation initiative also involved personnel from other Agencies and Ministries at Federal and States levels. Details of personnel mobilisation in 2021 are as in **Figure 2.5**.



Source: Human Resource Division, MOH

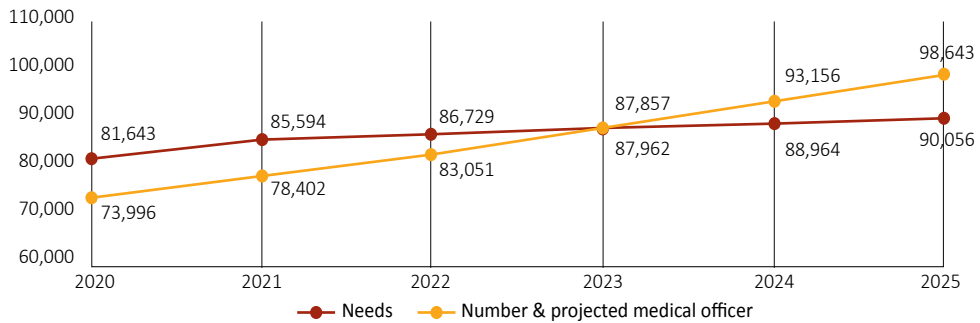
The HRD committed to deliver the best service to enhance the quality of healthcare services and the management of human resources for health. The Human Resource Department always adopts and adapts new norms and digital initiatives in human resource management governance at MOH.

TRAINING MANAGEMENT DIVISION (TMD)

MANPOWER PLANNING

The projection of demand and supply for Medical Officers for reference year 2020 had shown a shortage to fulfil the country’s needs even though the numbers of supply for Medical Officers have increased as shown in **Figure 2.6**. However, the gap of demand and supply of these professions became smaller when Public University and Private Higher Education Institution enlarged their training capacity to include graduates from abroad.

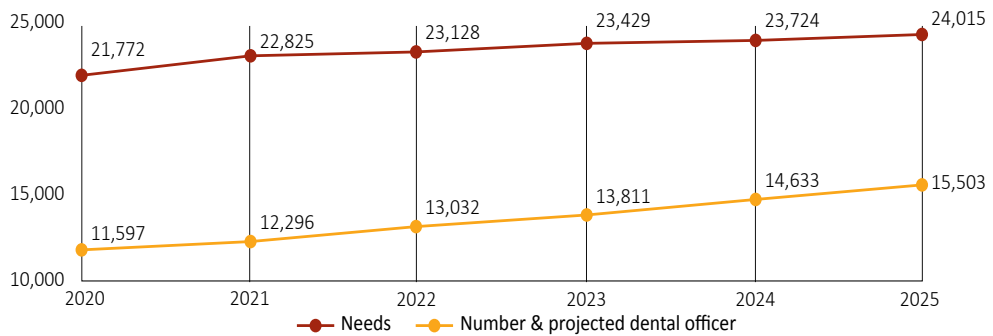
Figure 2.6
Current Demand and Supply of Medical Officer with projection using ratio of 1:400 to populations



Source: Training Management Division, MOH

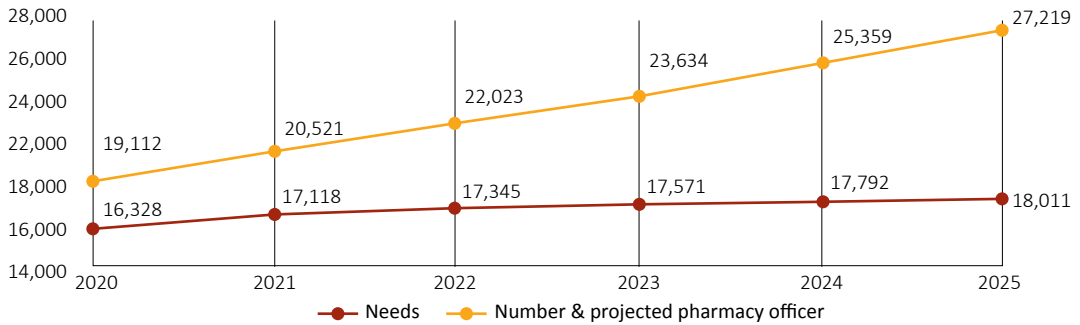
Figure 2.7 and **Figure 2.8** show the current needs and national projection for supply of Dental Officers and Pharmacy Officers.

Figure 2.7
Current Demand and Supply of Dental Officer with projection using ratio of 1:1,500 to populations



Source: Training Management Division, MOH

Figure 2.8
Current Demand and Supply of Pharmacy Officer with projection
using ratio of 1:2,000 to populations



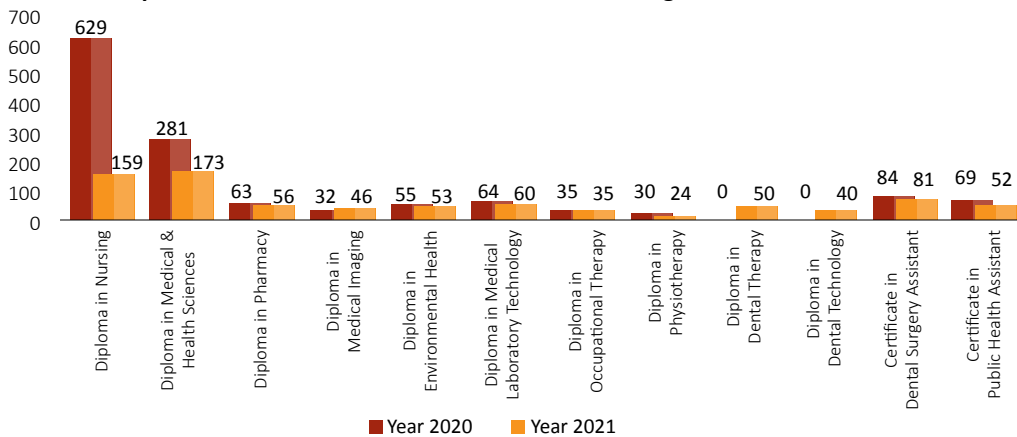
Source: Training Management Division, MOH

TRAINING PROGRAM

PRE-SERVICE TRAINING

In 2021, MOH offered 1,688 places for 13 Pre-Service Training at ILKKM. However, admission was offered only to 923 candidates for the July 2021 session, while the remaining 765 trainees in Diploma in Nursing (PSL) were postponed to the January and July 2022 sessions to focus on managing COVID-19 in the field. On top of that, the intake for the two (2) programmes, namely the Diploma in Dental Therapy and Dental Technology were postponed. In 2021, only 829 trainees have accepted and attended the training compared to 2020, which was a total of 1,342. Moreover, MOH did not enrol new trainees for the January 2021 session due to the increase in COVID-19 cases and several ILKKM being made as COVID-19 Low-Risk Quarantine and Treatment Centres (PKRC). **Figure 2.9** shows a comparison of the enrolment of Pre-Service Training according to the programmes offered for 2020 and 2021.

Figure 2.9
Comparison of trainee intake for Pre-Service Training for the Year 2020 to 2021



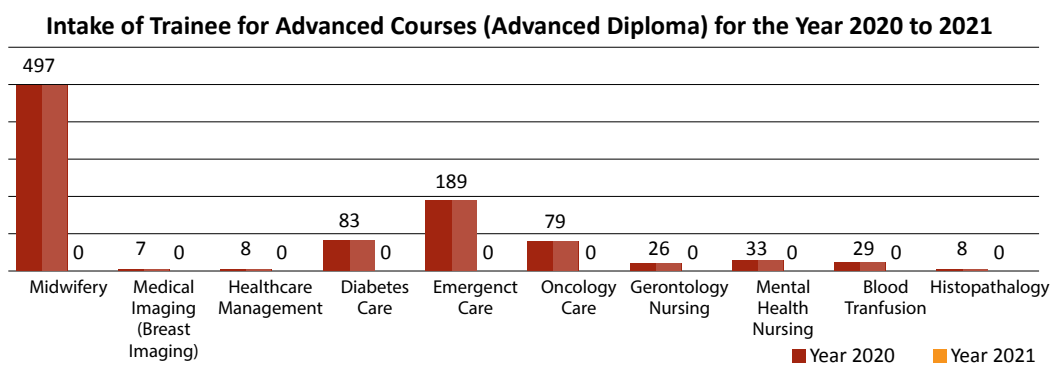
Source: Training Management Division, MOH

ADVANCED COURSE

Following the declaration of emergency by The Yang di-Pertuan Agong Al-Sultan Abdullah Ri'ayatuddin Al-Mustafa Billah Shah on 11 January 2021, the Ministry halted the enrolment of new trainees for Advanced Course in 2021. The decision was made due to the fact that the candidates were involved in managing the COVID-19 pandemic. However, MOH committed to offer one (1) programme, namely the Post Basic Certificate in Maxillofacial Prosthesis, for the September 2021 intake. A total of 20 new trainees have reported participating in the Post Basic Certificate in Maxillofacial Prosthesis at ILKKM Georgetown (Dental) on 13 September 2021.

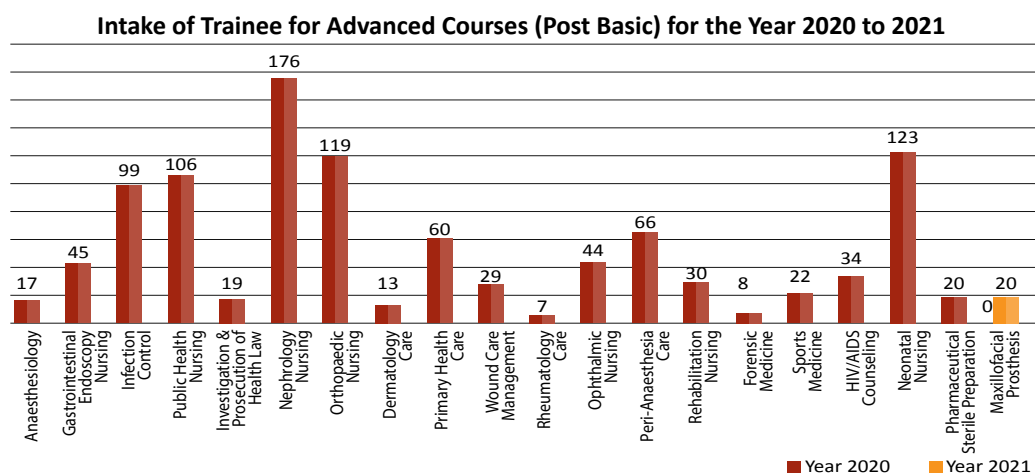
Besides that, a total of 1,329 existing trainees were instructed to return to their respective Departments to assist the management of the COVID-19 pandemic and MOH decided to defer the training because 11 ILKKM have been gazetted as PKRC apart from the constraints of clinical placement in MOH health facilities. **Figures 2.10** and **2.11** show the number of Advanced Course trainees according to programme throughout 2021.

Figure 2.10



Source: Training Management Division, MOH

Figure 2.11



Source: Training Management Division, MOH

MASTER PROGRAMME FOR MEDICAL OFFICER

A total of 1,120 medical officers were granted the Federal Government Scholarship to pursue Master programmes in various medical disciplines for the year 2021, as shown in **Table 2.4**. The number of Medical Officers granted scholarship decreased by 8.4 per cent in 2021 compared to 2020 due to the COVID-19 pandemic. In addition, two disciplines were not offered for the 2021 session due to the university limited training capacity.

Table 2.4
Intake of Medical Officers for Master Program for the Year 2020 to 2021

Discipline	2020/2021	2021/2022
Obstetrics & Gynaecology	75	61
Anaesthesiology	116	120
Paediatrics	67	72
Internal Medicine	111	105
Psychiatry	60	57
Radiology	69	88
General Surgery	69	73
Ophthalmology	56	60
Orthopaedics	75	85
Otorhinolaryngology	47	48
Pathology	58	67
Family Medicine	100	109
Public Health / Community	135	No intake
Sports Medicine	11	10
Rehabilitation	11	11
Emergency Medicine	85	90
Neurosurgery	18	21
Plastic Surgery	8	8
Clinical Oncology	12	13
Paediatric Surgery	6	5
Transfusion Medicine	12	8
Nuclear Medicine	5	No intake
Forensic	8	9
Total	1,214	1,120

Source: Training Management Division, MOH

PROGRAM FOR MASTERS AND DOCTOR OF PHILOSOPHY

In 2021, 132 MOH officers from various health schemes were offered the Federal Government Scholarship to pursue various health related Master Programmes while 32 officers were offered the scholarship to pursue Doctor of Philosophy. 2021 witnessed a decrease of sponsorship by 0.6% compared to the year 2020. The postgraduate scholarship for Master/Ph.D. level was

offered to 55 Dental Officers and 38 Pharmacy Officers while the remaining slots were offered to other health professions in MOH. One (1) scholarship was also offered to a Dental Officer to pursue training for the Area of Special Interest.

HALF-PAID STUDY LEAVE/NO PAY STUDY LEAVE WITHOUT SCHOLARSHIP FOR MOH'S SUPPORT GROUP

In 2021, 27 applications were received and after the screening process and approval from top management, 24 officers were granted study leave without scholarship to pursue their first degree. The qualified applicants were 13 Assistant Medical Officers, six (6) Assistant Pharmacists, two (2) Staff Nurses and three (3) Medical Laboratory Technologists.

SUBSPECIALTY PROGRAM

The statistics for Officers undergo Subspecialty Programme for the year 2019 to 2021 is as stated in **Table 2.5** below.

Table 2.5

Numbers of Officers undergo Subspecialty Programme for the Year 2019 to 2021

Programme	Year		
	2019	2020	2021
Medical	159	155	134
Surgery	16	14	17
Paediatric	35	44	24
Radiology	18	13	9
Anaesthesia	17	26	23
Orthopaedic	30	25	29
Psychiatry	17	12	13
Ophthalmology	16	11	14
Obstetric & Gynaecology	9	14	12
Otorhinolaryngology	4	1	2
Public Health	0	5	1
Family Medicine	5	7	9
AOI Pathology	11	13	28
Emergency Medicine	8	10	8
Forensic Medicine	0	0	3
AOSI Family Medicine	0	0	1
AOSI Rehabilitation Medicine	1	1	2
AOSI Nuclear Medicine	0	5	0
Total	346	356	329

Source: Training Management Division, MOH

PARALLEL PATHWAY PROGRAM

The statistics of Officers undergo Parallel Pathway programme managed by BPL for the year 2019 to 2021 is as stated in **Table 2.6** below.

Table 2.6
Number of Officer Parallel Pathway Programme for the Year 2019 to 2021

Program	Year		
	2019	2020	2021
Surgery Urology	4	10	11
Surgery Cardiothoracic	0	6	2
Forensic Medicine	4	3	4
Oncology	0	0	4
Family Medicine (MInTFM)			20
Total	8	19	41

Source: Training Management Division, MOH

The numbers of applications Parallel Pathway Programme with MOH scholarship, namely *Hadiah Latihan Persekutuan* (HLP) is summarised in **Table 2.7** as below.

Table 2.7
Number of Application for Parallel Pathway Program with MOH's HLP

Program	Year	
	2019	2020
Urology	9	11
Cardiothoracic	8	2
Forensic	4	6
Oncology	0	5
Family Medicine (MInTFM)	0	65
Total	21	89

Source: Training Management Division, MOH

EXTERNAL SPONSORSHIP

The numbers of sponsorship from the Public Service Department of Malaysia (JPA)/Foreign Agency for the year 2021 is stated in **Table 2.8**.

Table 2.8
The Number of Sponsorship by Agencies

Sponsorship	Numbers Approved to JPA
Scholarship Sponsored by Foreign Agency Year 2021 – Japan International Cooperation Agency (JICA) for Master’s Program in Japan.	0
Scholarship Sponsored by Yang Di-Pertuan Agong (BYDPA) Year 2021 for Study in Master’s Program and Doctors of Philosophy (Ph.D.) local and abroad.	2
Sponsorship of Hadiah Latihan Persekutuan (HLP) for Management and Professional group (P&P) to undergo full-time study in Master’s and Doctors of Philosophy (Ph.D.) in year 2022	36
Scholarship Sponsored by Government of Japan, 2022 (MONBUKAGAKUSHO: Mext) for Post Graduated	1
Slot Offered to undergo Diploma Siswazah/ Master’s in <i>Diploma Siswazah/ Masters in Specialty Program of Alcohol and Drug Abuse (SPADA) Session 2021</i>	4
Slot Offered for Sponsorship of <i>Hadiah Latihan Persekutuan Separa Biasiswa (HLPSB) year 2021</i>	0
Slot Offered for Scholarship of JICA - Knowledge Co-Creation Program for Long Term Participants – SDGs Global Leader (JFY 2021- 2023)	4
Slots Offered for Fellowship Program in the Year 2021 of Public Service Department of Malaysia (JPA)	0
Slots Offered for Scholarship of JICA Knowledge Co-Creation Program for Long Term Participants – Agriculture Studies Networks for Food Security (AGRI-NET) 2022	2
Slots Offered to undergo study in Master’s Program with Sponsorship of Lee Kuan Yew School of Public Policy, National University of Singapore	1
Slots Offered for scholarship of JICA-Knowledge Co-Creation Program for Long Term Participants – Human Resources Development for Electricity Dan Energy Sector 2022	0
Slots offered for scholarship of Japanese Government (MONBUKAGAKUSHO: MEXT) Young Leaders’ Program (YLP) Scholarships For 2022	2
Total	52

Source: Training Management Division, MOH

For the scholarship of external sponsorship, numbers of Officers in the program of Full Paid Study Leave (CBBP)/Unpaid Study Leave (CBTG) without HLP for 2021 is stated in **Table 2.9**.

Table 2.9**Number of Officers (With External Sponsorship) in Program CBBP/CBTG without HLP Year 2021**

Scheme/Program	Numbers of Officer
Nurse	1
Medical Officer	56
Dental Officer	10
Pharmacy Officer	23
Research Officer	2
Physiotherapy Officer	3
Others	6
Total	101

Source: Training Management Division, MOH

INTEGRATION AND ADMINISTRATIVE CONSOLIDATION PLAN OF MALAYSIAN MINISTRY OF HEALTH TRAINING INSTITUTES (ILKKM)

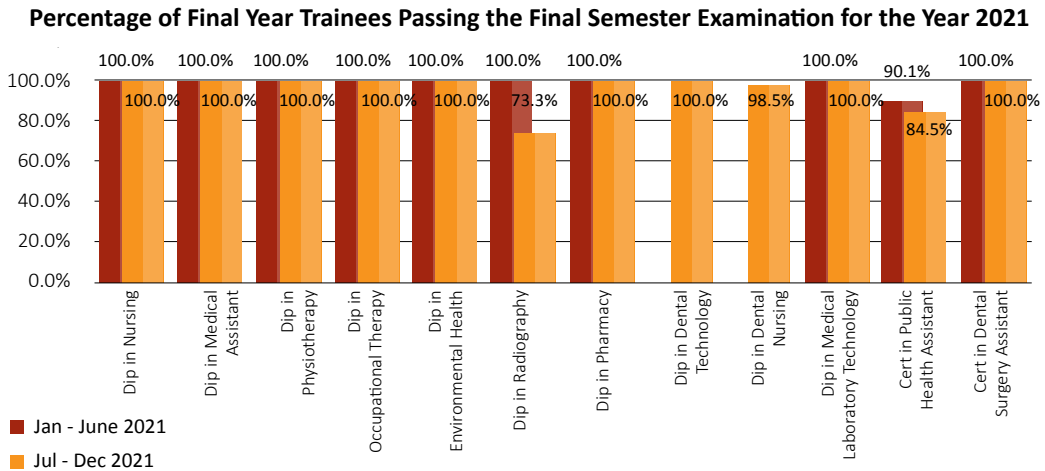
The implementation of the Integration and Administrative Consolidation Plan of ILKKM, which involved the reduction of ILKKM numbers from 33 to 14 that was started in 2019, has been approaching its second phase in 2021. The objective of this Integration Plan is to optimise the utilisation of available sources and to consolidate the administration of ILKKM.

In Phase 2, five (5) ILKKM were fully integrated in July 2021, in which some of the facilities and assets involved have been handed to the respective State Health Department (JKN) to be modified for different functions and use. In total, since 2019 (Phase 1), 19 ILKKM have already gone through this integration process.

EXAMINATION AND CERTIFICATION

The outbreak of COVID-19 has resulted in the 2021 final-semester examinations for 13 Pre-Service Training Programmes to be conducted online. Two (2) examination sessions were conducted in 2021, namely the January - June session and the July - December session. A total of 1,415 final year trainees sat for the final examination in May 2021 and 1,489 trainees sat for the November 2021 final examination. The passing percentage of trainees in the final examination for the final semester was 99.29 per cent (May 2021) and 98.25 per cent (November 2021). Percentage breakdown for each of the Pre-Service Training Programmes is as shown in **Figure 2.12**.

Figure 2.12



Source: Training Management Division, MOH

TMD will continue to play the role in realising the achievement of the defined vision, mission and the strategic plan of training for MOH.

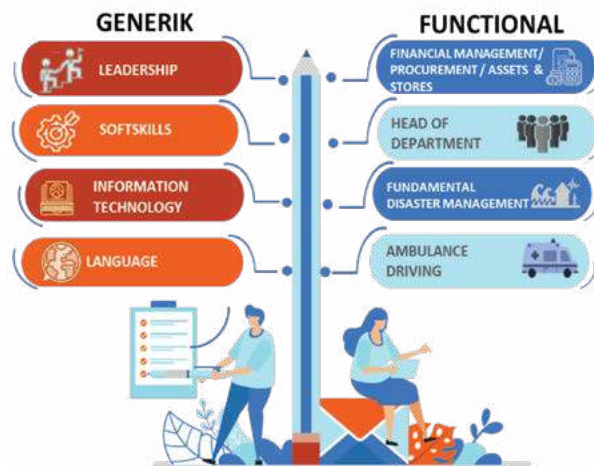
COMPETENCY DEVELOPMENT DIVISION (CDD)

COMPETENCY-BASED TRAINING — GENERIC & FUNCTIONAL (GOVERNANCE) COURSES

To ensure that MOH’s staff are equipped with the necessary competencies (knowledge, skills and attitudes) to effectively perform their duties and responsibilities, BPK has conducted numerous generic and functional courses which comprise of the following areas as shown in **Figure 2.13**.

Figure 2.13

Generic and Functional Courses Implemented by CDD

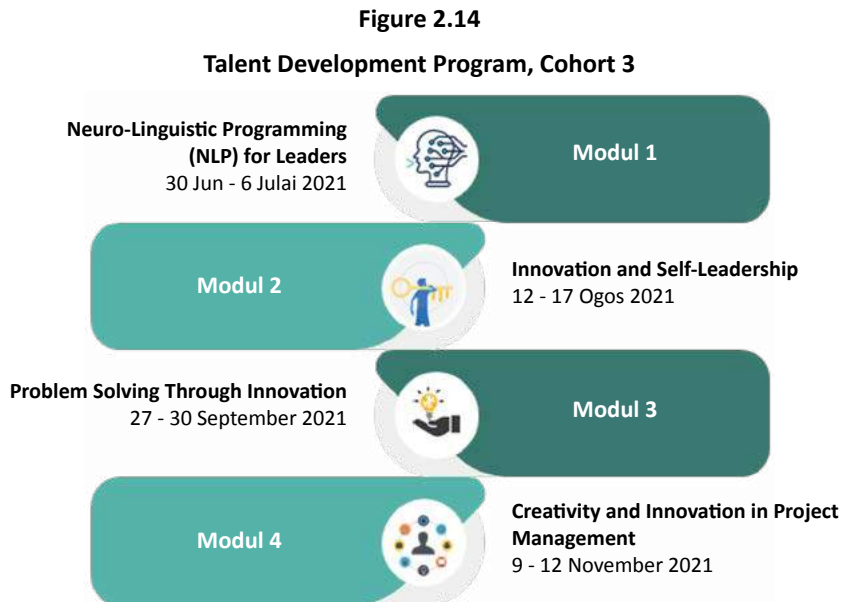


Source: Competency Development Division, MOH

In 2021, a total of 2,343 MOH staff attended generic and functional courses organised by CDD. The analysis of pre and post course assessment results showed an increase of up to 97.39 per cent in participants’ knowledge after attending CDD’s courses. The objective of pre and post course assessment is to measure and evaluate the training courses in terms of knowledge improvement of the participants.

TALENT DEVELOPMENT PROGRAMME

Talent Development Programme (TDP) is a training program organised by CDD since 2019. Initially, the programme was targeted to MOH Management Program officers of Management and Professional Group under the Federal Shared Services scheme and Cadre Services. However, starting in 2021, the TDP program is also open for selected MOH medical and health officers. TDP is a well-designed and structured program meant to help enhance leadership skills of officers in MOH. In 2021, TDP Cohort 2 was completed with the implementation of Module 7: Innovation Leadership on 15 to 19 March 2021. Meanwhile, Cohort 3 has started with the implementation of 4 modules as shown in **Figure 2.14**.



Source: Source: Competency Development Division, MOH

SIGNING OF COOPERATION NOTE BETWEEN THE MINISTRY OF HEALTH MALAYSIA AND THE MINISTRY OF TRANSPORT

The signing of the Cooperation Note between the Ministry of Health Malaysia (MOH) and the Ministry of Transport (MOT) took place on 6 April 2021 at the Multipurpose Hall of MOH as shown in **Image 2.2**. The Secretary General of MOH and the Secretary General of MOT signed the cooperation note in the presence of the Minister of Health and the Minister of Transport.

The cooperation note was signed to signify the strategic collaboration and commitment by both sides through ambulance driver competency development program, automotive engineering and road safety programme.

Image 2.2
Signing Ceremony of Cooperation Note



Source: Competency Development Division, MOH

The Public Service Department (JPA) had issued the Human Resource Development Policy Service Circular (DPSM) on 21 December 2021, replacing the Public Sector Training Policy effective from 1 January 2022. It is the latest direction and policy on matters pertaining to human resource development. MSD shall play a vital role in planning and implementing the DPSM through Competency Development and Career as well as Potential Development Assessment.

MANAGEMENT SERVICES DIVISION (MSD)

FINANCE AND ASSET MANAGEMENT BRANCH

FINANCE UNIT

For 2021, this Unit is responsible for the MOH HQ's Management Programme budget whereby a total of RM1.45 billion was allocated under the operating budget. The performance-based expenditures for the MOH HQ's Management Programme for the financial year ending on 31 December 2021 is 104.5 per cent. Total allocations and expenditures by activity is as shown in **Table 2.10**.

Table 2.10

Total Allocations and Expenditures by Activity under Management Programme for the Financial Year Ending 31 December 2021

Activity	Allocation (RM)	Expenditure (RM)
HQ Management	590,150,976.76	653,979,344.45
Human Resources	13,413,031.05	13,414,075.35
Finance	464,847,206.09	465,746,503.52
Training	346,561,619.93	347,486,554.42
Information Technology	40,670,876.61	40,685,055.61
Competency Development	4,318,766.96	4,319,323.96
Total	1,459,962,477.40	1,525,633,857.31

Source: Management Services Division, MOH

ASSET MANAGEMENT UNIT

The Asset Management Unit is responsible for managing matters related to assets, rental of premises, maintenance and procurement. The performances for each activity for the year 2021 is as shown in **Figure 2.15**.

Figure 2.15

Summary of Activities under Asset Management Unit for the Year 2021

1. Procurement:

- » Tender - 1 (RM1,357,549.63)
- » Quotations - 13 (RM1,892,089.51)
- » Direct Appointments - 680 (RM4,619,705.50)

2. Asset Management:

- » Government Moveable Assets Management Committee (JKPAK) MOH HQ - 4 meetings
- » MOH HQ asset registration - 1,607
- » MOH HQ asset inspection - 99.95%

3. Building Maintenance:

- » Number of complaints in MOH HQ (Complex E dan Jalan Cenderasari) - 1,803
- » Appointments of contractors for scheduled maintenance for identified scopes:-
 - Facility Management for MOH HQ, Complex E, Putrajaya
 - Air Conditioner Management for MOH HQ, Jalan Cenderasari, Kuala Lumpur
 - Landscape Services for MOH HQ, Jalan Cenderasari, Kuala Lumpur
 - Pest Control and Housekeeping Services for MOH HQ, Jalan Cenderasari, Kuala Lumpur
 - Pest Control and Housekeeping Services for Allied Health Sciences Division (BSKB), Precint Diplomatic, Putrajaya
 - Housekeeping Services for MOH HQ, Menara Prisma, Putrajaya

Source: Management Services Division, MOH

SECURITY UNIT

The Security Unit is responsible for the Protection Security System in MOH and the management of government confidential documents including the Safety Instruction (Revision and Amendment 2017). The achievements of the unit are shown in **Figure 2.16**.

Figure 2.16
Summary of Achievements under Security Unit for the Year 2021

RECOGNITIONS	<ul style="list-style-type: none"> » Special Security Protection Inspectorate Award for MOH HQ : 5 star » BOMBA Recertification Certificate 2021
APPOINTMENTS	<ul style="list-style-type: none"> » 172 Classifying Officers under Section 2B Official Secret Act for MOH » 1 Department Security Officer » 30 Department Assistant Security Officers » 1 Secrecy Registrar » 114 Secrecy Junior Registrar » 157 Scheduled Security Officers
SECURITY COORDINATIONS	<ul style="list-style-type: none"> » 837 Security Access Passes activation » 408 Security Access Passes deactivation » 3,226 Security Stickers distribution

Source: Management Services Division, MOH

GENERAL MANAGEMENT BRANCH

The General Management Branch manages human resources for MOH HQ and matters pertaining administration including consultation for protocol, psychology and Islamic affairs matters based on demand in MOH. Summary of the programs and activities under the General Management Branch throughout 2021 is as shown in **Figure 2.17**.

Figure 2.17
Summary of Programs and Activities under General Management Branch for the Year 2021

1. Human Resource Management Unit

- » Selection of 524 recipients for MOH Outstanding Service Award 2020 (APC 2020)
- » Management of 311 personnel for confirmation of appointment, confirmation of service and pension status
- » Management of 76 personnel for confirmation of retirement (mandatory/ optional/ issuance)
- » Management of 443 personnel for promotion
- » Management of 11,302 Kew. 8 documents

2. Administration Unit

- » 100% issues solved through the *Majlis Bersama Jabatan* (MBJ)
- » 1,912 appointments for the Hospital Visitors Board (ALPH) for the period of 1 June 2020 to 31 May 2022
- » 224 appointments for the Visitors of Psychiatric Hospital Board (ALPHP) for the period of 1 August 2020 to 31 August 2023
- » Coordination of six (6) COVID-19 Contribution Event
- » Coordination of two (2) *Keluarga Malaysia* Corporate Contribution Event
- » Launching of the COVID-19 National Immunization Program by the Prime Minister
- » Coordination of COVID-19 Immunization Program Event for Minister of Health dan Chief Secretary to the Government
- » Coordination of the Official Visit to the Kuala Lumpur Health Clinic by His Majesty Seri Paduka Baginda Yang Di-Pertuan Agong on 20 January 2020

3. Psychology Management Unit

- » One (1) 2021 MOH HQ Mentoring Program with 65 participations
- » Two (2) MOH HQ Blood Donation Campaign with 330 participations
- » One (1) *Training of Trainer* (TOT) AKRAB-Care Program with 55 participations
- » One (1) Emotion Management Program "*Taking Care of Me*" with 90 participations
- » Two (2) Pre-AKRAB Stage 1 & Stage 2 Course with 110 participations
- » One (1) Psychology Webinar: Strengthening the Resilience Towards Challenges with 90 participations
- » One (1) 2021 MOH HQ Personal Financing Guidance Program with 40 participations
- » One (1) 2021 MOH HQ Performance Driven Program for Middle Performance Officer with 50 participations
- » One (1) Prosperous Mind Stress Management Course with 180 participations

4. Islamic Affairs Unit

- » Coordination of dakwah programs, application of Islamic values and Islamic Celebration Days.
- » Coordination of Hajj Medical Group for Hajj Season of 1443H/ 2022M.
- » Coordination of Halal Malaysia Certification for kitchen and cafe in hospitals, pharmaceuticals, medical devices halal medication.
- » Advisory services related to the management of Islamic Affairs in MOH pertaining:
 - Worship Friendly Hospital program;
 - Islamic Medical Practitioner Regulatory Board; and
 - Patient Spiritual Care Program for staffs, patients and families in all MOH hospital/ health facilities

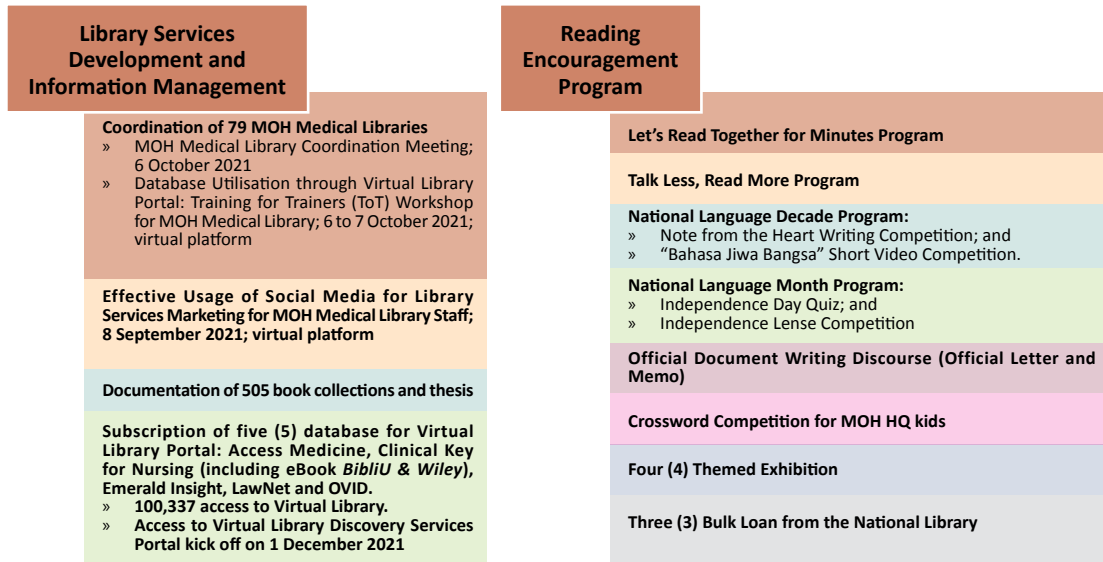
Source: *Management Services Division, MOH*

INFORMATION RESOURCES AND RECORD MANAGEMENT BRANCH

INFORMATION RESOURCES UNIT

The Information Resources Unit provides library services for all MOH HQ employees as well as providing access to online databases and journals through the Virtual Library Portal for MOH employees nationwide. Summary of programs and activities implemented under the Information Resources Unit for year 2021 is as shown in **Figure 2.18**.

Figure 2.18
Summary of Programs and Activities under Information Resources Unit for the Year 2021

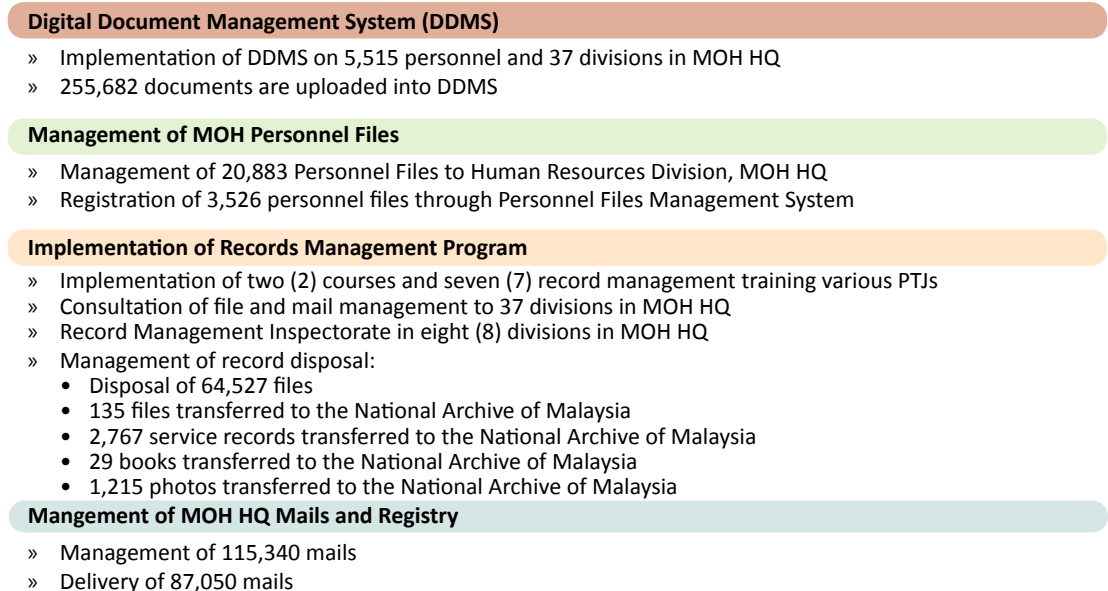


Source: Management Services Division, MOH

RECORD MANAGEMENT UNIT

The Record Management Unit is responsible for the management of records in MOH including the monitoring of the Digital Document Management System (DDMS) management as well as MOH personnel files. Summary of programs and activities of this unit is as shown in **Figure 2.19**.

Figure 2.19
Summary of Programs and Activities under the Records Management Unit Year 2021



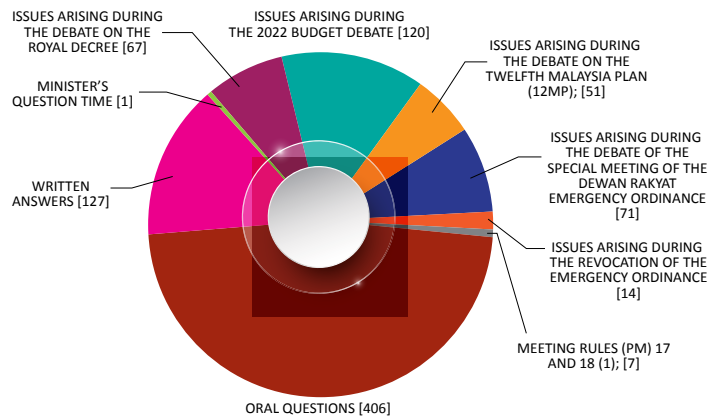
Source: Management Services Division, MOH

PARLIAMENT AND QUALITY BRANCH

PARLIAMENTARY UNIT

MOH received 864 questions from both *Dewan Rakyat* and *Dewan Negara* based on the categories as shown in **Figure 2.20**. MOH received 533 verbal and non-verbal questions which was the highest among other ministries covering issues related to COVID-19 management, public health readiness, healthcare facilities and development, contract doctors and others.

Figure 2.20
Summary of Questions Received from Dewan Rakyat and Dewan Negara by MOH for the Year 2021



Source: Management Services Division, MOH

KEY PERFORMANCE INDICATOR (KPI) UNIT

The programmes and activities under the coordination of KPI Unit are as shown in **Figure 2.21**.

Figure 2.21
Summary of Program and Activities under KPI Unit for the Year 2021

<p>100 Days of Aspirasi Keluarga Malaysia (AKM) Cabinet Members Year 2021</p>	<ul style="list-style-type: none"> » Coordinator for 100 Hari Aspirasi Keluarga Malaysia (AKM) for MOH. AKM is the replacement of Ministerial Performance Indicator (MPI) from 2018 to 2020. » Report Card Day Session of the 100 Days of AKM between the Minister of Health and the Prime Minister was held on 24 November 2021.
<p>Implementation of Key-Performance Indicators (KPI)-Based Performance Appraisals for Senior Managers of the Public Service Ministry of Health (MOH) Year 2021</p>	<ul style="list-style-type: none"> » KPI Unit, Management Services Division is responsible on handling and monitoring Key Performance Indicators (KPIs)-based performance appraisals for: <ul style="list-style-type: none"> • Senior Managers of The Public Services Tier 1 to Tier 3 (Management Programme); and • Senior Managers of The Public Service Tier 2 to Tier 6 (Technical Programme) for Generic KPIs under governance and accountability dimensions. » KPI-based performance appraisals for Senior Managers of The Public Service with JUSA C and above within MOH is fully implemented in 2021.
<p>Briefing on Work Coordination on the Implementation of Key Performance Indicators (KPI)-Based Performance Appraisals for Senior Managers of the Public Service Ministry of Health (MOH) Year 2021</p>	<ul style="list-style-type: none"> » Coordinator for 100 Hari Aspirasi Keluarga Malaysia (AKM) for MOH. AKM is the replacement of Ministerial Performance Indicator (MPI) from 2018 to 2020. » Report Card Day Session of the 100 Days of AKM between the Minister of Health and the Prime Minister was held on 24 November 2021.

Source: Management Services Division, MOH

INNOVATION & QUALITY UNIT

Innovation and Quality Unit is MOH focal point in coordinating the implementation of strategic innovation and creative initiatives that focuses on improving the quality, productivity, efficiency and effectiveness of the public service delivery system in MOH.

APPRECIATION OF INNOVATION IN MOH

MOH Innovation Day of Year 2020 was held on 26 March 2021, to recognise MOH employees' innovations through the Premier Award for Innovation, Special Award of Innovation and Innovation Award of the Ministry of Health Malaysia. Smart Bed which is one (1) of the innovative products by Selama Hospital, Perak has been commercialised and launched during this event. To date, MOH employees worldwide have invented 887 products to ease public service delivery in health facilities.

Image 2.3

MOH Innovation Day of Year 2020



Source: Management Services Division, MOH

EKOSISTEM KONDUSIF SEKTOR AWAM (EKSA) CERTIFICATION

In 2021, four (4) State Health Departments which are the Sarawak State Health Department, the Perak State Health Department, the Terengganu State Health Department and the Kuala Lumpur & Putrajaya State Health Department have successfully obtained certification for EKSA Do-It-Yourself (DIY) from the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Prime Minister Office.

MS ISO 9001:2015 ACCREDITATION

MOH HQ has been granted MS ISO 9001:2015 Certification for the Management Program from SIRIM QAS International Sdn. Bhd. on 6 January 2021.

INFORMATION MANAGEMENT DIVISION (IMD)

MOH DIGITALISATION PLAN 2021-2025

The ICT Strategic Plan is a blueprint or plan that comprises recommendations for planning, developing, and implementing ICT in accordance with an organisation's digitalisation needs over the following five years. The strategy also aids in the identification of application and data requirements, as well as ICT infrastructure, governance, and capabilities.

In this context, the MOH has established a Digitalisation Strategic Plan (PSP) for the period 2021 to 2025 in partnership with MAMPU. The fourth ICT strategic plan, PSP KKM 2021-2025, addresses the Ministry's application and data requirements, ICT infrastructure, ICT governance, and ICT competencies. With the help and involvement of domain representatives, top management, and stakeholders in the Ministry, the PSP was developed.

PSP KKM 2021-2025 consists of four (4) strategic thrusts, 13 strategies, and 30 ICT programmes that will be executed by the Ministry's divisions, departments, and institutions over the next five years. The implementation and achievement of ICT programmes will be monitored on a regular basis to ensure that they meet their goals on time.

MyGovUc 2.0 'S TRANSITION TO GOOGLE WORKSPACE (GWS)

The government integrated communications and collaboration services (MyGovUC 2.0) are being transitioned to the Google WorkSpace (GWS) platform. The goal of implementing this new solution is to ensure that the government's MyGovUC 2.0 services satisfy current needs in accordance with the Public Sector Strategic Digitalisation Plan. With this implementation, the availability of MyGovUC 2.0 communication and collaborative services achieves its maximum level, allowing for a more comprehensive and secure use of MyGovUC 2.0 services among public officials.

MyGovUC 2.0 is being launched as a cost-cutting measure involving all Malaysian government agencies through jointly integrated communication. In line with the Public Sector Strategic Digitalisation 2021-2025, the goal of implementing the new MyGovUC Services 2.0 solution is to increase the stability of service access. Email service provided by MyGovUC 2.0 under Google WorkSpace has the following new features:

- i. Encryption function is used automatically for data at rest (data stored) and data in transit.
- ii. Information is stored at the Public Sector Data Centre (PDSA) using cloud infrastructure and on-premise storage facilities.
- iii. The Confidential Mode feature prevents email from being forwarded, copied, printed, or downloaded.

Method of transmitting classified data in a secure manner:

- i. Data is saved locally in the Public Sector Data Centre (PDSA) using the services available. This function creates one-of-a-kind links and passwords.
- ii. Delivery is accomplished by inserting a link in the email's body and sending it in Confidential Mode.
- iii. The recipient receives the generated unique password.

NEW SYSTEMS

HOME QUARANTINE APPLICATION (HQA)

The Home Quarantine Application (HQA) is a service that allows citizens and non-citizens who enter Malaysia to complete an obligatory quarantine order from home. The Home Quarantine Application (HQA) system processes quarantine applications allowing citizens and non-citizens to upload supporting documents such as vaccination certificates, international passports, and other papers before entering Malaysia. The applications must be checked by officers at the CPRC to ensure that the documents are complete, and then each individual/traveller who will enter the International Gateway must receive a quarantine authorisation letter. Individuals or groups, whether citizens or non-citizens, who desire to enter Malaysia through the International Gateway are considered HQA applicants. With this application, CPRC will be able to simplify the application procedure and also improve efficiency and speed up the work process.

FOOD SAFETY SYSTEM INFORMATION OF MALAYSIA (FoSIM)

Food Safety Information System of Malaysia (FoSIM) is a Malaysian enterprise application system for food safety and quality supporting the functions and activities of the Malaysian Food Safety and Quality Programme (PKKM). It provides a single centralised food industry gateway accessible via web portals, mobile devices, and dashboards. The FoSIM system was created by PKKM for registration, certificate application, licence application and renewal, premise inspection, auditing, online payment, food sample and food tracking programme.

The FoSIM application features a flexible web design, links with MyIdentity, and offers online payment options for the application and renewal of food industry licences and certificates. For field work tasks, this application can also be used in offline mode. Mobile tablets and printers will be used in this industry. The primary purpose of tablets and printers is to allow inspection officials to store food premise inspection data in an offline mode on the spot using a tablet. The inspection notice and the premise inspection finding form will be printed on-site and delivered to the property owner for signature.

Industry, G2G, government agencies, private laboratories, food training schools and food quality service providers at the Food Quality and Safety Division's headquarters, gateway control (sea, air and land), Food Health Laboratory, State Health Department and District Health Office are among the FoSIM application's users. The FoSIM application is an end-to-end concept that aids the country's food business in ensuring that food resources are safe and of good quality in compliance with the Food Act 1983, the Food Regulations 1985 and other relevant regulations.

OUT OF COUNTRY TRAVEL APPLICATION SYSTEM

The Application System for Travel Out of the Country on Private Business (SPPKN) is an online system that keeps track of, processes and approves private business travel applications for all MOH employees. The enhancement of the SPPKN System in 2021 is in line with the devolution of powers of the Ministry of Health Malaysia's Controlling Officer in accepting applications for travel out of the nation on Private Business.

DEVELOPMENT OF INTERNAL APPLICATIONS FOR MOH

IMD is the division in charge of fully utilising internal resources to develop the application systems at MOH Headquarters. In 2021, three (3) new applications were created.

- i. The **Malaysian Healthcare Practitioners' System (MHPS)** was created to replace the current systems, which included the Optometry Practitioners Information Management System (OPTims), Dental Practitioners' Information Management System (DPIMS) and Allied Health Professional Information System (AHPIS). The goal of MHPS is to manage practitioner registration applications as well as the processing of Annual Certificates of Practice (APC), Temporary Certificates of Practice (TPC), document applications and a variety of other applications. The users of this system are officers from the Malaysian Optical Council (MOC), Malaysian Dental Council (MDC), Malaysian Board of Dental Therapists (LJPM) and Malaysian Council of Allied Health Professions (MPKBM), as well as all practitioners subject to the act under their respective Councils. The MHPS offers online payment options for practitioners. In addition, MHPS will work with the Continuing Professional Development System (MyCPD) to renew practitioner licence eligibility and with MyIDENTITY to verify practitioner information.
- ii. The **Medico Legal Branch Information System (e-CML)** was developed to create a systematic, comprehensive, integrated, and user-friendly information system, as well as to improve the management of medicolegal case data and information in the Medico Legal Branch, which includes multiple levels and agencies. There are six (6) key modules to manage medicolegal case data and information which are Dashboard Module, Complaints Module, Ex-Gratia Module, Litigation Module, Surveillance Module and Report Module.
- iii. The **Imported Goods Procurement Application System (SPPBI)** was created to make the MOH's process of reviewing imported goods easier and faster. The Procurement and Privatisation Division uses SPPBI to automate the application process for approval of imported commodities (medical equipment, non-medical equipment, medications,

reagents, and other items) from all MOH Responsibility Centres (PTJ), which is currently done manually. This system’s development is critical to maintaining effective import goods application administration services and is in accordance with Treasury Circular (PK1/2013).

COVID-19 PORTAL

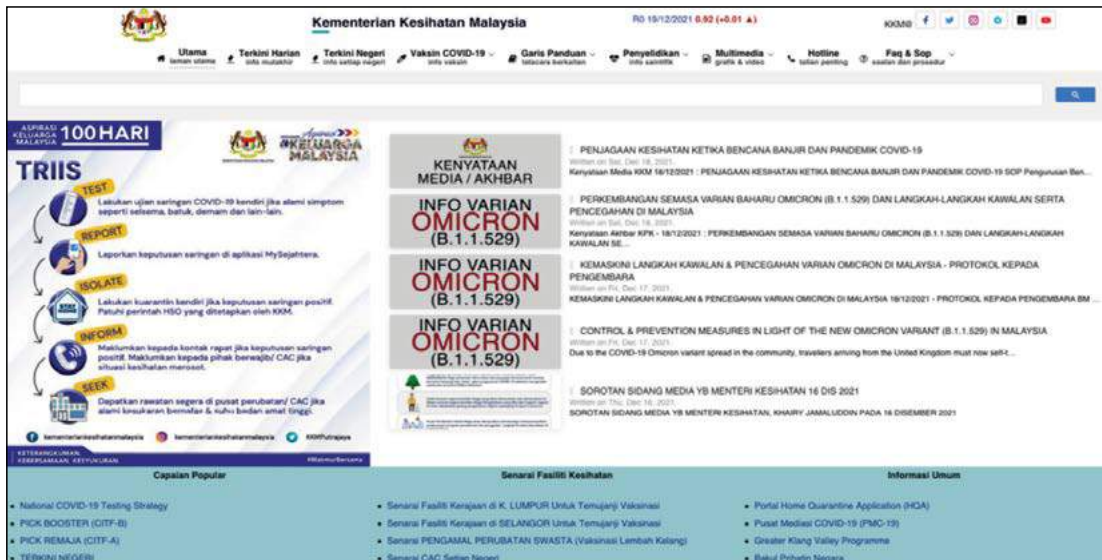
The MOH COVID-19 Portal as shown in **Figure 2.22** is a collaborative effort by the IMD, the Health Education Division, and the Corporate Communication Unit to improve the delivery of COVID-19 information to the public.

The IMD is in charge of handling the creation, software maintenance, security, and updating of COVID-19-related content on the portal, which has been operational since May 4, 2020. The COVID-19 portal, which serves as a local repository for COVID-19-related material, includes daily COVID-19 case reports for each Malaysian state, COVID-19 guidelines (Annex), scientific research information, media, standard operating procedures (SOP) and the most recent information on the COVID-19 epidemic.

The portal has received a total of 18,499,543 visitors over its time of existence, with an average of over one million visitors per month as shown in **Figure 2.23**. This webpage is the primary source of information on COVID-19 pandemic handling procedures in Malaysia for the general public and medical practitioners, locally and internationally.

Figure 2.22

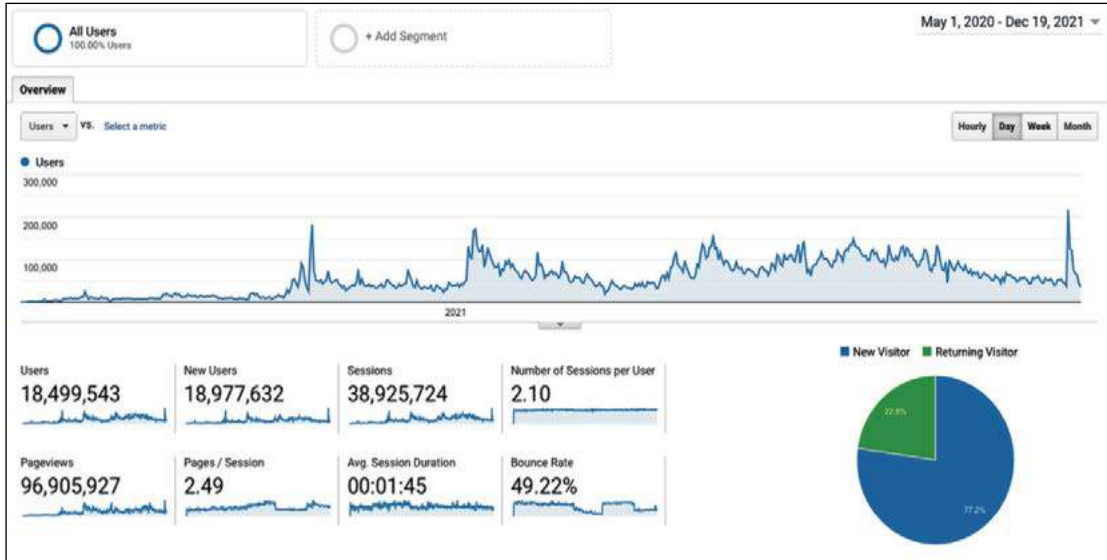
COVID-19 Malaysia Portal Home View



Source: Information Management Division, MOH

Figure 2.23

Number of Visitors from May 2020 to December 2021



Source: Information Management Division, MOH

MANAGEMENT OF TECHNICAL APPROVAL FOR ICT PROJECTS

According to General Circular Letter Number 3 of 2015 - Guidelines for Technical Approval and Monitoring of Information and Communication Technology (ICT) Projects, technical approval of ICT projects is required before they may be executed. Technical viability, resource optimisation and cost effectiveness in supporting MOH’s operations are all factors considered when ICT initiatives are approved. The MOH ICT Steering Committee (JPICT), MOH ICT Project Technical Committee (JTI), and the secretariat of MOH ICT Project Technical Committee (JTI) are the three (3) levels of committees that are responsible for technical approval for ICT projects.

In 2021, a total of 121 ICT projects were considered for technical approval, as shown in **Table 2.11**

Table 2.11
Total Projects Notified and Approved by Level of Committees

Committee	Total Projects Notified and Approved
MOH ICT Committee of Management (JPICT)	41
MOH ICT Project Technical Committee (JTI)	48
MOH ICT Project Technical Committee (JTI) Secretariat Rank	32
Total	121

Source: IMD, MOH

ICT TECHNICAL SUPPORT SERVICES

The IMD receives ICT technical complaints through telephone or official e-mail and processes them with the ICT Complaint Management System (SPAI). ICT Technical Complaints must be addressed within three (3) working days of receipt. Among the complaints received includes ICT equipment under IMD supervision and equipment under contract agreement with the vendors.

For equipment under MOH supervision, MOH Computer Technicians will undertake maintenance, installation, troubleshooting and advising services (first level support) on ICT equipment. MOH shall channel ICT equipment under the supervision of the supplier, ICT Helpdesk, to the supplier for further action in accordance with the terms of the MOH contract.

In 2021, IMD received a total of 10,455 ICT technical complaints, with a 100 per cent resolution rate, meaning that all concerns were addressed and resolved within the specified time frame.

INFORMATION SECURITY MANAGEMENT INSPECTION

The objective of the MOH Information Security Management Inspection is to evaluate and monitor the level of compliance with all MOH facilities Acts, Policies, Circulars and Letters of Instruction. This inspection activity is critical for verifying that information security management is adequately addressed and organised in compliance with the ISO/IEC 27001: 2013 Standard Information Security Management System (ISMS) standards. Inspection activities are also meant to raise awareness and disseminate knowledge about ICT information security management at the MOH facility.

Security inspection were conducted at Bukit Mertajam Hospital, Penang (23 to 24 March 2021); Sungai Buloh Hospital, Selangor (29 to 31 March 2021); Tuanku Ampuan Najihah Hospital, Kuala Pilah, Negeri Sembilan (6 to 7 April 2021); Permai Hospital, Johor Bahru, Johor (9 to 11 November 2021); and Kuala Lipis Hospital, Pahang (23 to 25 November 2021).

TRAINING

In 2021, a total of three (3) courses have been organised by IMD.

- i. The **Personal Manners Dive** workshop was attended by 100 new IMD officers and included a briefing from an invited counsellor from the Ministry of Education Malaysia (MOE). It was held on the 23 and 24 March 2021 at Marina Putrajaya, Putrajaya. The goal of the training is to motivate employees to develop high-quality workers. It also seeks to instil in employees a sense of responsibility as well as the most helpful and cooperative attitude towards one another.
- ii. The **Mind Transformation Course For New Officers** training was attended by 30 new IMD officers, either freshly appointed or officers working with work rounds involving Management and Professional groups, Support 1 and Support II, and was held at Marina Putrajaya, Putrajaya on the 27 and 29 of October 2021. Briefings were delivered by guest speakers from MOH, MAMPU and JPA. The goal of the workshop is to promote work motivation and share management ideas with all officers in order to improve productivity. In order to meet with industry norms, it also strives to strengthen communication mechanisms between management and IMD workers.
- iii. The **IMD 2021 Officer Management Leadership Workshop** course, which was attended by 29 IMD officers, was held between the 5 and 7 November 2021 at Cheringin Hill Convention & Spa Resort Bentong, Pahang. Speakers from Syed Faizal Training & Consultant gave the briefing. The goal of the course is to teach participants on how to use verbal strategies to influence employees in the workplace, as well as how to grasp the secrets and techniques of body language in order to become influential leaders. Participants can also use verbal and nonverbal communication methods to exchange secrets and strategies.

3

FINANCE



FINANCE DIVISION

BUDGET MANAGEMENT

Ministry of Health (MOH) was allocated RM31.94 billion in 2021 whereby RM27.22 billion was for Operating Budget (B42) and RM4.72 billion for Development Budget (P42). However, the Operating Budget was later revised to RM22.83 billion, a reduction of RM4.39 billion (16.13 per cent) due to restriction warrant by the Ministry of Finance (MOF) and the reclassification of Operating Expenditure to Development Expenditure involving Hospital Support Services and Clinical Support Services.

PERFORMANCE OF OPERATING BUDGET

In 2021, MOH has spent RM24.65 billion (107.95 per cent) of the total allocated budget. The highest operating budget allocation was for Medical Programme with RM12 billion (106.31 per cent) and followed by allocation for the Public Health Programme with the amount of RM5.7 billion (112.62 per cent). **Table 3.1** shows the allocation and expenditure according to the Programme in 2021.

Table 3.1
Allocation and Expenditure of 2021 Operating Budget by Programme

Programme	Allocation (RM)	Expenditure (RM)	% of Expenditure
Management	1,874,394,149	1,861,785,570	99.33
Medical	11,379,579,785	12,097,248,814	106.31
Public Health	5,031,878,598	5,666,706,554	112.62
Oral Health	977,037,796	1,043,806,374	106.83
Pharmaceutical Services	207,142,091	211,418,117	102.06
Research and Technical Support	344,225,079	332,660,489	96.64
Food Safety and Quality	95,918,602	103,440,283	107.84
Special Programme	2,925,149,500	3,333,344,988	113.95
Total	22,835,325,600	24,650,411,189	107.95

Note: The actual expenditures exceed 100 per cent due to additional provision for emoluments payments. Adjustments to the spending are made in the following year. (Data as of 31.12.2021)

Source: Finance Division, MOH

SPECIAL BUDGET FOR COVID-19

Due to the spread of COVID-19 in Malaysia in 2021, MOH was allocated RM7.51 billion to curb the spread of COVID-19 whilst protecting the public health. This includes RM5.78 billion to fund the vaccination programme and RM1.73 billion for COVID-19 screening and treatment which includes purchase of Personal Protective Equipment (PPE), reagent, consumables and outsourcing of lab services for sample test and also services for patients.

REVENUE MANAGEMENT

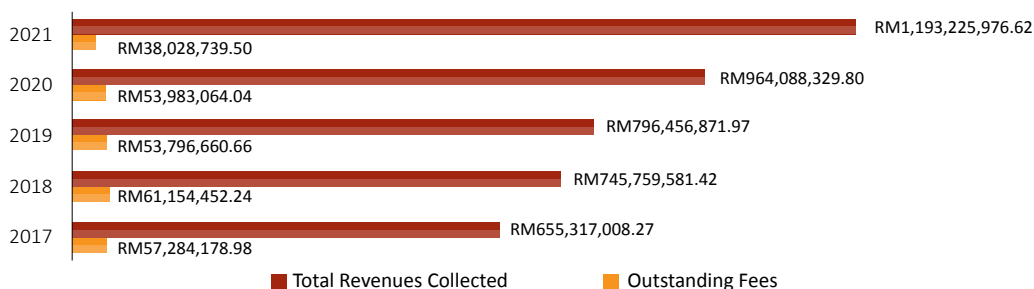
MOH recorded a total of RM1.193 billion of revenues in 2021. Medical fees contributed the largest amount of revenues with RM404.949 million or 33.94 percent out of the total revenues collected. It is the highest ever recorded by MOH within the past five years, an increase of 23.7 percent from the previous year. This significant increase contributed by the compound imposed on SOP violations during the COVID-19 pandemic. **Table 3.2** shows the categories in which the revenues are classified while **Figure 3.1** recorded the total of outstanding revenue, and the total of revenues collected from the year 2017 to 2021.

Table 3.2
Revenues Collected by Classification for the Year 2021

Code	Code Classification	Amount (RM)	%
71000	License, Registration Fees & Permits	345,433,928.09	28.95
72000	(i) Medical Fees	404,949,322.38	33.94
	(ii) Others (Non-medical fees)	38,392,546.17	3.22
73000	Sales of Goods	4,302,869.29	0.36
74000	Rentals	24,465,245.44	2.05
75000	Interests & Return on Investment	204,349.49	0.02
76000	Fines & Penalties	125,121,595.27	10.49
77000	Local and Non-Local Contributions	2,614,389.68	0.22
80000	Non-revenue receipts	247,741,730.81	20.76
	TOTAL REVENUE COLLECTED	1,193,225,976.62	100

Source: Finance Division, MOH

Figure 3.1
Total Revenues and Total Outstanding Revenues Collected for the Year 2017 to 2021



Source: Finance Division, MOH

In 2021, the total outstanding medical fee charges was RM38.03 million, of which RM31.48 million or 82.78 per cent was the non-citizen patient fee charges. The breakdown of collection records as well as the outstanding amount according to citizenship status is shown in **Table 3.3**.

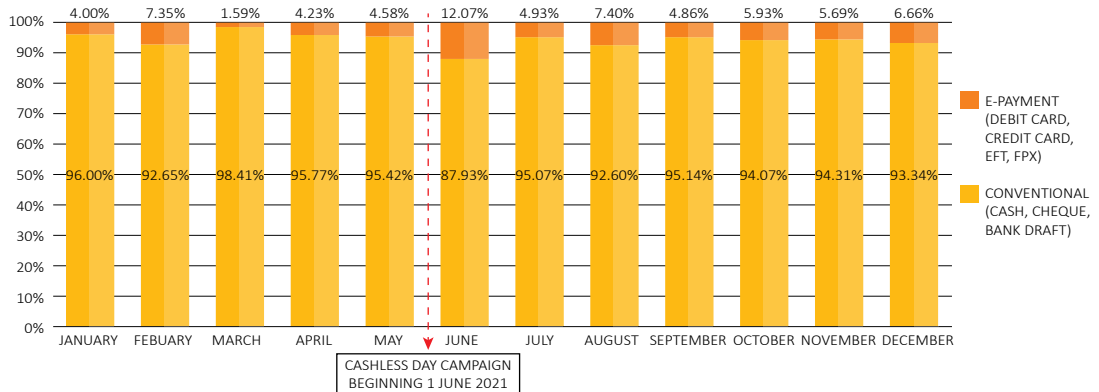
Table 3.3
Total Outstanding and Revenues Collected According to Citizenship Status under the Fees Act (Medical) in 2021

Citizenship	Outstanding Fees (RM)	% of Outstanding Fees	Fees Collected (RM)	% of Fees Collected
Malaysian	6,547,800.90	17.22%	190,739,848.97	47.10
Non-Malaysian	31,480,938.60	82.78%	214,209,473.41	52.90
Total	38,028,739.50	100.00%	404,949,322.38	100

Source: Finance Division, MOH

In an effort to increase the e-payment transactions at MOH's facilities, a Cashless Day Campaign was launched on 1 June 2021. **Figure 3.2** shows the increment recorded in e-payment related transactions after the campaign was launched as compared to May 2021, the month prior to the campaign's implementation.

Figure 3.2
Transactions Recorded After Cashless Day Campaign was Launched



Source: Finance Division, MOH

FINANCIAL ASSISTANCE & GRANT

MEDICAL ASSISTANCE FUND

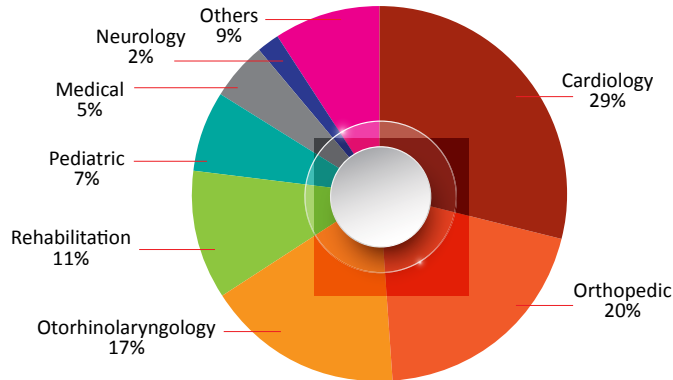
Medical Assistance Fund or *Tabung Bantuan Perubatan* (TBP) was established since 2005 following Section 10 of the Financial Procedure Act 1957, governed by the Trust Deed, TBP Guidelines and the current regulations in force. The aim of TBP is to assist underprivileged patients in financing their treatment cost and purchase of medical supplies including cost of medicines at the Government Hospitals and Public University Medical Centres. **Figure 3.3** shows the allocation of TBP, number of patients and total amount of TBP approval from 2005 to 2021. Total amount of TBP approval is based on available balanced of Medical Assistance Fund regardless of allocation distributed by Treasury. Meanwhile **Figure 3.4** shows TBP approval based on medical discipline in 2021.

Figure 3.3
Allocation, Total Patients and Total Amount of TBP Approval for the Year 2005 to 2021



Source: Finance Division, MOH

Figure 3.4
TBP Approval Based on Medical Discipline in 2021



Source: Jawatankuasa Kumpulan Wang Amanah TBP Report

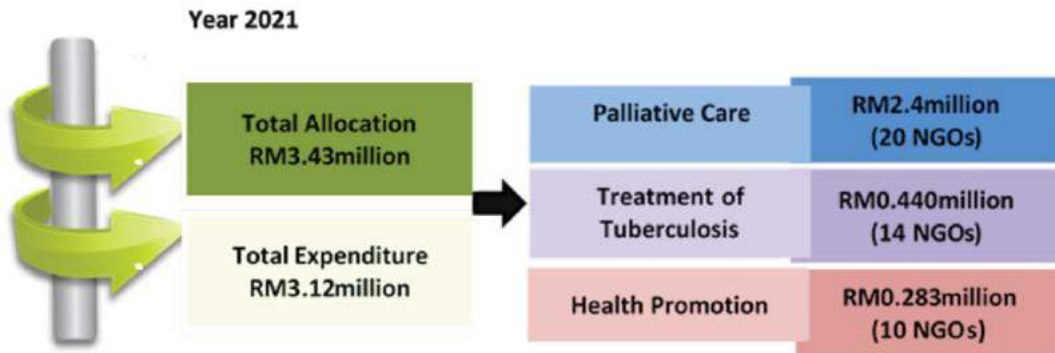
HAEMODIALYSIS TREATMENT COST AND ERYTHROPOIETIN (EPO) INJECTION SUBSIDIES

Haemodialysis treatment cost and EPO injection subsidy for poor or underprivileged patients with kidney disease getting treatment at Non-Governmental Organization (NGO) Haemodialysis centres were introduced on 1 April 2001. This financial assistance in the form of treatment cost subsidy of RM100.00 for each hemodialysis treatment and Erythropoietin (EPO) injection of RM18.50 is given through NGO Haemodialysis Centre recognised by MOH. A total of RM36.50 million has been allocated to this program by MOF for the year 2021 whereby RM36.44 million has been spent. The subsidy payment involved 61 NGOs, comprising 125 dialysis centres and 2,615 active patients.

FINANCIAL ASSISTANCE FOR NGOS

Starting from 2002, MOH provided financial assistance for NGOs to carry out health activities such as counselling, awareness campaigns, treatment and other activities for patients and communities. **Figure 3.5** shows the total allocation and expenditure of MOH for the financial assistance programme for NGO in 2021.

Figure 3.5
Total Allocation and Expenditure for the Financial Assistance Programme for NGO In 2021



Source: Finance Division, MOH

MEDICAL BENEFITS FOR GOVERNMENT DEPENDENCE PATIENTS AND SUBSIDIES FOR UNDERPRIVILEGE PATIENTS AT INSTITUT JANTUNG NEGARA SDN BHD (IJNSB)

The Government through MOH has channelled allocation to pay the cost of treatment for government dependence patients namely Federal Civil Servants, Retired Federal Civil Servants and underprivileged patients at IJNSB. In 2021, MOH has paid RM553.27 million to IJNSB whereby 91.15 per cent of the payment is for the subsidy cost of government dependence patients, 8.7 per cent for Fully Paid Patients from the government hospitals referred to IJNSB during the COVID-19 period and 0.15 per cent for payment of treatment under the Heart and Liver Transplant and Mechanical Heart Program in IJNSB. Total payment for Government's patients to receive treatment in IJNSB presented in **Table 3.4**.

Table 3.4
Total Payment to IJNSB and Number of Government Dependence Patients, 2016 to 2021

Year	2016	2017	2018	2019	2020	2021
Total Payment (million)	RM435.65	RM465.08	RM469.80	RM485.80	RM527.73	RM553.27
Number of Patients	53,890	54,691	54,288	53,900	53,520	52,513

Source: Finance Division, MOH

COVID-19 CASH DONATION

Since the establishment of COVID-19 trust account on 23 March 2020, MOH continued to receive cash contributions to assist the Government especially MOH in managing the spread of COVID-19. From 2020 until 2021, a total of RM37,759,402.92 has been contributed to MOH. In 2021, a total of RM2,927,801.52 has been contributed to MOH through *Akaun Amanah Pembelian Alat Kelengkapan, Keperluan Perubatan, Kemudahan dan Perkhidmatan di Fasiliti Kesihatan KKM*. As of 31 November 2021, MOH's Trust Account Committee has approved a total of RM33,610,275.73 for the purchase of medical and non-medical equipment such as ventilators, infrared thermometers, ultrasound machines, patient beds, reagents for COVID-19 test, and system upgrading for the of *Crisis Preparedness and Response Centre (CPRC) in hospitals*.

PROCUREMENT AND PRIVATIZATION DIVISION

The Procurement and Privatisation Division is responsible in planning, managing and implementing procurement, privatisation programs, asset and store programs at the Ministry of Health (MOH).

This Division is also the main secretariat for the Procurement Board of the Ministry of Health or *Lembaga Perolehan Kementerian Kesihatan Malaysia (LPKKM)*. The members of LPKKM who are appointed by the Ministry 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 drug and store laboratories, procurement and maintenance of medical equipment at MOH Clinics, Hospital Support Services as well as Foreign Workers Health Supervision and Inspection Services (FOMEMA). These privatisation programs must be in line with National Privatisation Policy. Therefore, the programmes have been closely monitored and improvised constantly to ensure it achieve its objectives and desired output. The Division also regulates the management of stores, inventories and MOH assets to ensure all applicable rules are adhered at all times.

MINISTRY'S PROCUREMENT PERFORMANCE

In 2021, MOH has undertaken procurement amounting to RM3,429,600,215.04 and obtained savings of RM943,235,642.90 or 27.50 per cent which covers the procurement of pharmaceuticals, medical equipment, services, ICT, vehicles and Approved Products Purchase List (APPL). **Table 3.5** shows the achievement of MOH Procurement in 2021 by categories.

In line with the national resource optimization policy, MOH has secured savings in procurement expenditure to ensure the allocation received is sufficient to cover core services and patient

care needs. This is also to ensure health care services is not affected. The savings obtained are based on the comparison between the department's estimation price with the contract price offered as well as the price negotiation with the company

Table 3.5
Achievement of MOH Procurement 2021

Category	Procurement Value (RM)	Savings (RM)
ICT	371,631,589.80	27,802,875.77
Medical Equipment	95,314,603.00	12,455,976.00
Pharmaceutical	2,116,872,767.71	771,529,597.29
Toner/MTO	206,435,933.63	77,336,060.13
Services	634,527,075.73	52,620,482.08
Printing	3,725,045.17	1,490,651.63
Medical Gas	1,093,200.00	-
Total	3,429,600,215.04	943,235,642.90

Source: Procurement and Privatisation Division, MOH. Data is until September 2021.

MANAGEMENT OF MOVABLE ASSETS

As of 31 December 2021, MOH has a total moveable asset of 2,857,502 units (excluding stocks) with a value of RM13,043,421,100.20. MOH's moveable assets are monitored through the Committee of Government's Moveable Assets Management at all levels in ensuring the adherence to the procedures issued by the MOF.

IMPLEMENTATION OF ePerolehan (eP) SYSTEM

The ePerolehan (eP) system which was developed in the year 2000 serves as a platform to enable Government agencies procure online supplies and services from the Government-registered vendors. The 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 new eP system. Based on the records, MOH is the largest eP system user compared to other ministries and has used the eP system optimally. **Table 3.6** shows the Ministry's achievement in the use of the eP System for the year 2020 and year 2021.

Table 3.6
MOH Achievements in the Use of the eP System 2020 and 2021

Year	Total Transaction	Transaction Value (RM)	Allocation (RM)	Achievement (%)
2020	715,345	5,731,877,322.29	7,000,000.00	81.90
2021	694,542	6,550,430,924.00	7,000,000.00	93.58

Note: Data for 2021 is until November 2021

Source: ePerolehan System, MOF

There has been an increase in the use of the eP System in 2021 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 of 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 to be cancelled, and immediate procurement needs to be implemented on Emergency Procurement basis under Treasury Instruction (AP) 173.2.

MANAGEMENT OF IN-KIND CONTRIBUTIONS

For the period of 1 January 2021 to 23 December 2021, MOH has approved a total of 882 applications for in-kind contributions in the form of movable assets, fixed assets and stocks with a value of RM157,568,110.46. All contributions must be in accordance with the Public Service Department's circular. Most of the in-kind donations are the donor's pledge in helping MOH battle against COVID-19. All in-kind contributions that are received in the form of assets and stocks are properly recorded and managed in adherence with the MOF procedures on assets and stocks management.

MANAGEMENT OF EMERGENCY PROCUREMENT (AP173.2) DURING COVID-19 PANDEMIC

The Procurement and Privatisation Division has coordinated 266 emergency procurement applications to deal with the COVID-19 outbreak from 30 Divisions/Departments/Agencies under the MOH from January to December 2021 with a value of RM1,462,234,897.04. This emergency procurement involves the acquisition of assets (medical and non-medical), medicines, reagents, consumable and Personal Protective Equipment (PPE). The implementation of the Emergency Procurement is to ensure sufficient medical and non-medical supplies at the MOH Health Facilities to combat the COVID-19 pandemic.

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 positive cases and MOH needs to provide more beds for COVID-19 patients, resulting in the vast majority of non-COVID-19 patients to be referred to private hospitals. As of November 2021, a total of 10,536 surgical cases and 7,248 non-surgical cases involving RM128.8 million have been successfully implemented via outsourcing.

In the Budget 2022 announced by the Minister of Finance, a total of RM190 million has been allocated for the implementation of hospital and private laboratory outsourcing. Implementation in the year 2022 is expected to prioritise high backlog cases as well as long waiting times in MOH hospitals. This programme is also one of the Ministry's contingencies to face any eventuality in the event of a sudden and unexpected increase in COVID-19 cases.

CONCESSION AGREEMENT

The Procurement and Privatisation Division is managing four (4) Concession Agreements as follows:

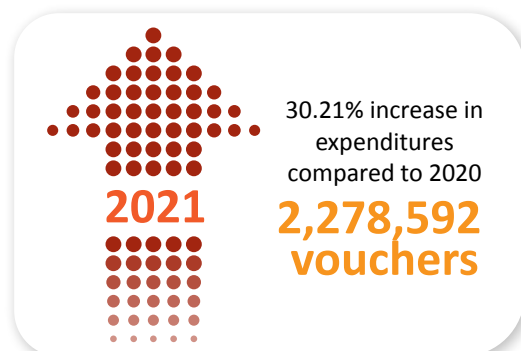
- i. Medical Equipment Enhancement Tenure (MEET) Concession Agreement;
- ii. Foreign Workers Medical Examination Coordination & Surveillance System in Malaysia (FOMEMA);
- iii. Privatisation of *Makmal Ubat & Stor* Concession Agreement with Pharmaniaga; and
- iv. Hospital Support Service Concession Agreement (HSS).

Privatisation projects implemented in the MOH have provided various benefits to the Government. Among them is to enable the comprehensive maintenance of medical equipment's which will extend the "life-cycle" of the equipment. In addition, it also provides long-term financial savings to the Government. These benefits have enabled MOH to provide the best health services to the people.

ACCOUNT DIVISION

FINANCIAL MANAGEMENT

EXPENDITURES



In 2021, the MOH total payments increased by RM3.72 billion (30.21 per cent) to RM16.03 billion compared to RM12.31 billion in 2020. The total number of vouchers processed also increased from 2,085,549 in 2020 to 2,278,592 in 2021, an increase of 9.26 per cent. The overall increase in expenditures is due to a vital role MOH played by MOH in combating the COVID-19 pandemic especially in procuring the vaccines for the nation.

EMOLUMENT MANAGEMENT

BA is entrusted to ensure that the monthly emoluments and remunerations for 33,147 headquarters personnel are paid as per scheduled and accordingly. In 2021, a total of RM2.38 billion was paid. Included in this amount are payments for *Bantuan Khas Kewangan* and *Bantuan Khas Aidilfitri* amounting to RM18.50 million and RM15.42 million respectively.

TRUST ACCOUNT MANAGEMENT

There are two (2) categories of trust account managed by the MOH, namely the Government Trust Fund under section 10 and the Public Trust Fund under Section 9 of the Financial Procedures Act 1957. In 2021, the trust account stood at RM110.8 million of which RM80.58 million (72.73 per cent) for the Government Trust Fund and RM30.22 million (27.27 per cent) for the Public Trust Fund.

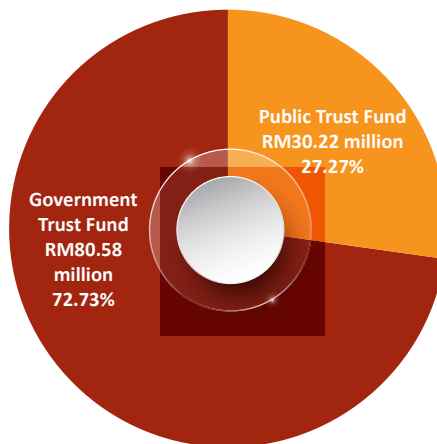
The Government Trust Fund

Kumpulan Wang Amanah Tabung Bantuan Perubatan (KWATBP) was established to help the underprivileged to finance the costs of medical treatment.

The Public Trust Fund

The largest components of 21 Public Trust Funds comprised of the fund for Akaun Amanah Untuk Pembelian Alat Kelengkapan dan Perkhidmatan di Hospital Kerajaan and Akaun Amanah Perkhidmatan Penyediaan Laporan Perubatan di Hospital Kerajaan. In 2021, these two funds accounted for RM16.47 million or 54.5 per cent of the RM30.22 million. **Figure 3.6** shows the Trust Fund by category.

Figure 3.6
Trust Fund by Category



Source: Account Division, MOH

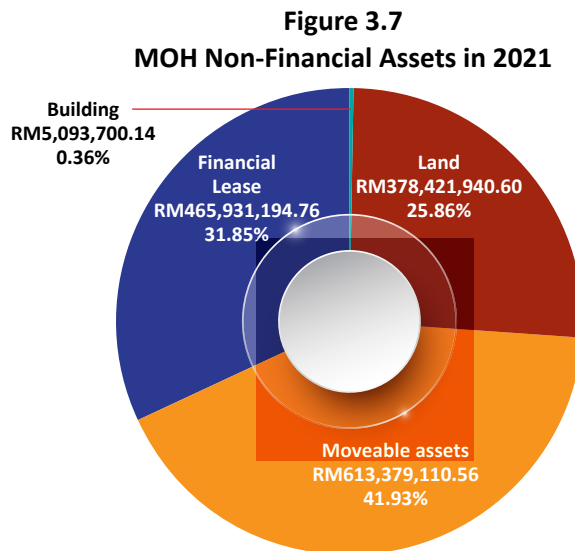
DEPOSIT ACCOUNT MANAGEMENT

In 2021, the total deposits held by MOH amounted to RM107.11 million. A total of RM87.29 million or 81.5 per cent of these balances were of General Deposit whilst RM19.82million or 18.5 per cent were Hospital Deposits.

ASSET ACCOUNTING

The Ministry's assets is one of the substantial items reported in the Financial Statements of the MOH and the Financial Statements of the Federal Government of Malaysia (FGOM) that have an impact on the assessment of the Government's financial position. Other than assets that have been accounted for in iGFMAS, the process of gathering data of assets including movable assets, immovable assets, intangible assets, infrastructure assets, finance leases and inventories is an ongoing exercise towards implementation of accrual accounting for the FGOM. Among the activities carried out to obtain information on the related assets are empowerment of preparation of Moveable Assets Reconciliation Statement on a monthly basis and hands-on training to targeted RCs.

BA has successfully accounted for an additional of non-financial assets in 2021 amounted RM1,462,825,946.09 which is reflected in **Figure 3.7**.

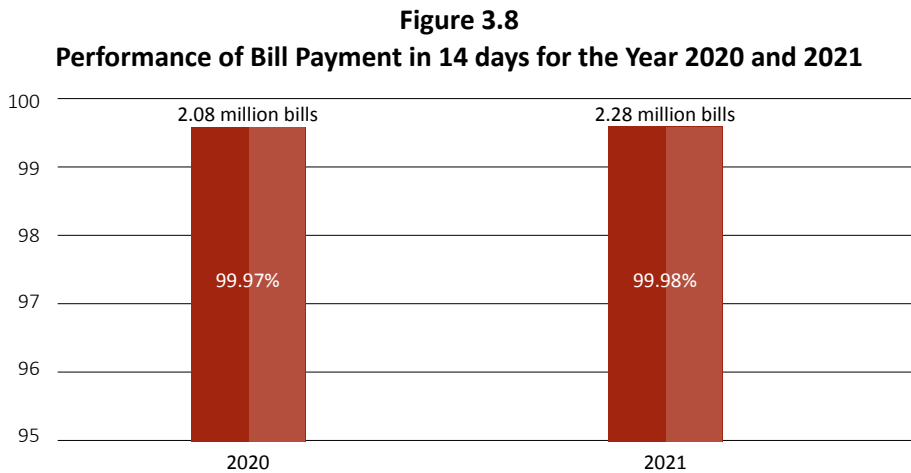


Source: Account Division, MOH

The total cost of non-financial assets as of **31 December 2021** is **RM46,030,192,490**.

BILL PERFORMANCE MANAGEMENT

In 2021, a total of 2,278,947 payment vouchers amounting to RM16.04 billion were processed by MOH RCs. The performance of bill payments within 14 days for MOH payments was 99.98 per cent (2,278,592 bills) amounted to RM16.03 billion, an increase of 0.01 per cent as compared to 99.97 per cent in 2020. In 2021, 355 RCs or 78.19 per cent have successfully processed payment within 14 days as compared to 64.09 per cent in 2020, an increase of 14.1 per cent. The overall performance of 99.98 per cent in 2021 was not only meet the requirement of *Arahan Perbendaharan* 103(a) for bills settlement within 14 days but also surpassed the Key Performance Indicator (KPI) of the Chief Secretary to the Government (KSN) of 98 per cent as well as the MOH's KPI of 99 per cent. **Figure 3.8** shows the performance of bill payment in 14 days for 2020 and 2021.

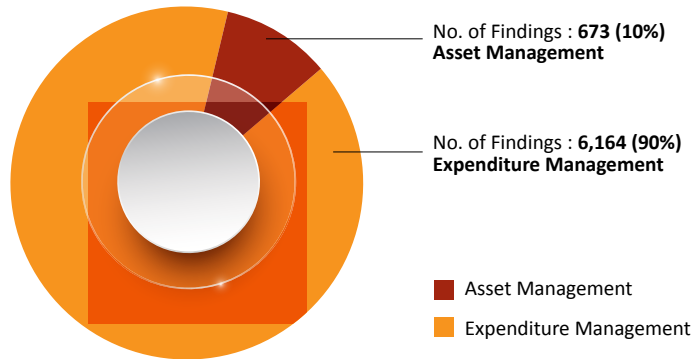


Source: Account Division, MOH

GOVERNANCE AND COMPLIANCE

In 2021, BA and the Accountant General of Malaysia have carried out accrual accounting compliance inspection for the scope of assets and expenses on 101 MOH RCs. Verification of monthly revenue collection document was also carried out on 432 MOH Main Collector's Offices. This monitoring is carried out to ensure that the existing procedures comply with accounting policies and standards as well as ensuring adequate internal controls to strengthen governance and accounting management at MOH RCs. Audit Reports of accrual accounting compliance and observation letter on revenue collection management were given to RCs for corrective actions and improvements after the exit conference. **Figure 3.9** shows the number of finding during the Auditing od Accrual Accounting Compliance in 2021. Meanwhile, **Figure 3.10** shows the number of findings for Revenue Collection documents review at MOH Collector Offices for the Year 2020 and 2021.

Figure 3.9
Number of Findings on Auditing of Accrual Accounting Compliance in 2021



Source: Account Division, MOH

Figure 3.10
Number of findings for Revenue Collection documents review at MOH Collector Offices for the Year 2020 and 2021



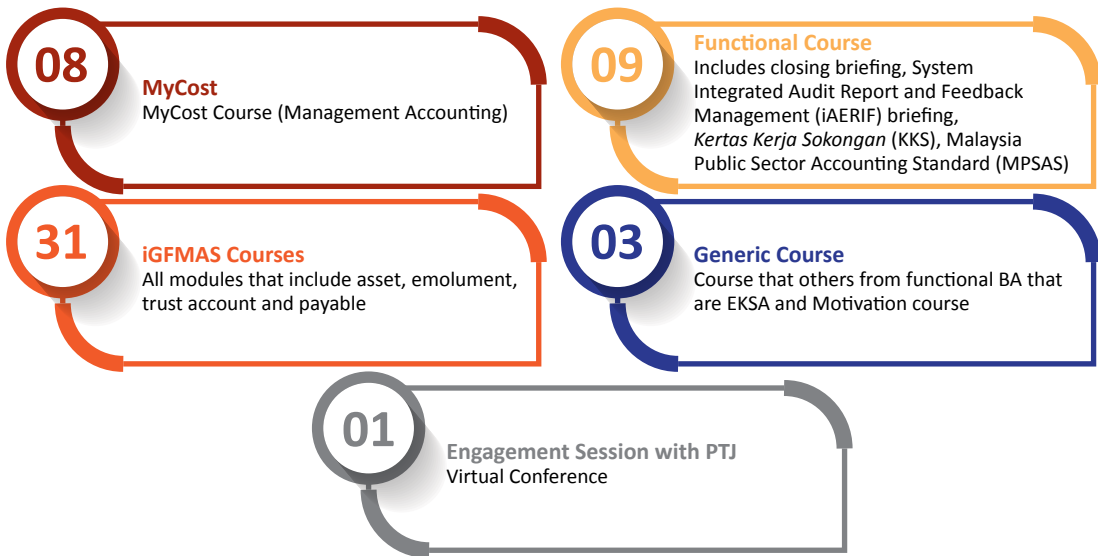
Source: Account Division, MOH

CONSULTATION AND TRAINING

A total of 52 training courses and programme series involving accrual accounting, management accounting and iGFMAS were held throughout 2021 to strengthen the efficiency and skills of financial officers that involved 1,440 participants.

The method of training conducted is crucial in this new normal period to ensure productivity and relevance in remote working culture. In managing the COVID-19 crisis that has affected the nation and organisation, 67 per cent of 52 training courses were held online. The biggest achievement of BA in conducting online training is to organize Virtual Conference (VC): Transformation Assets at PTJ KKM. The VC was launched by MOH Secretary General on 17 and 18 August 2021 which involved 454 RCs at KKM and 921 participants. **Figure 3.11** shows the number of courses and training programs in 2021.

Figure 3.11
Training Courses and Programmes in 2021



Source: Account Division, MOH

4

PUBLIC HEALTH



PUBLIC HEALTH DEVELOPMENT DIVISION (PHDD)

The Public Health Development Division consists of three (3) sections and two (2) sectors:

- i. Public Health Policy and Services Section;
- ii. Public Health Profession Development Section;
- iii. Global Health Section;
- iv. Inspectorate and Legal Sector; and
- v. Public Health Pharmacy Sector.

PUBLIC HEALTH POLICY AND SERVICES SECTION

SPECIAL HEALTH PROGRAMME

The core function of the Special Health Programme is to formulate and monitor the implementation of policies as well as identify improvement measures in the delivery of comprehensive, effective and holistic medical and health services to the *Orang Asli* community.

ORANG ASLI COMMUNITY HEALTH SERVICES

In line with the theme of the Twelfth Malaysia Plan, *Strengthening security, wellbeing and inclusivity*, several measures have been taken to ensure equitable access to health services among *Orang Asli* communities in urban, rural and remote localities. The Key Performance Indicator (KPI) for these measures is four (4) weekly Health Service visits to remote *Orang Asli* villages by the *Orang Asli* Mobile Teams with an 80 per cent achievement target. The KPI achievement for 2021 was 83.6 per cent. (Image 4.1)

Image 4.1
Health Service Visit by *Orang Asli* Mobile Team, PKD Lipis



Source: Public Health Development Division, MOH

The National COVID-19 Immunisation Programme or *Program Immunisasi COVID-19 Kebangsaan* (PICK) was commenced in 2021 to curb the spread of COVID-19. The Special Health Programme was tasked to monitor and ensure that at least 80 per cent of the *Orang Asli* adult population completed their COVID-19 vaccination. By the end of 2021, 80.2 per cent of this population were completely vaccinated through a mobile vaccination outreach programme at *Orang Asli* settlements. (Image 4.2)

Image 4.2
COVID-19 Vaccination Programme at an *Orang Asli* Settlement



Source: Public Health Development Division, MOH

Flying Doctor Services (FDS) was established in 2000 to reach *Orang Asli* who live deep in the jungle through areas in which landing zones are available. In 2021, the FDS which is based at Hospital Bahagia Ulu Kinta under the Kinta District Health Office in Perak continued to provide health services for people in ten (10) remote *Orang Asli* villages which are difficult to reach by land or water. The KPI achievement for FDS visits for 2021 was 100 per cent of the total flights planned.

A total of 580,492 visits involving *Orang Asli* patients were reported for various health services offered by the Primary Health Care Services, Ministry of Health (Table 4.1).

Table 4.1
Number of Health Visits by *Orang Asli* Community Using MOH Primary Health Care Services, 2021

Services	Number of Visits
Outpatient	157,801
Antenatal	111,685
Postnatal	3,952
Family Planning	95,276
Child Health	115,500
Home Visits	96,278
Total	580,492

Source: Public Health Development Division, MOH

Monthly meetings with the *Orang Asli* Community Public Health Services Section, Hospital *Orang Asli* Gombak (HOAG) were held to review communicable disease trends among the *Orang Asli* community. The objectives of these meetings were to monitor, analyse and discuss preventive actions for communicable diseases among the *Orang Asli* community.

The Technical Meeting for *Orang Asli* Health Services was held on 6 October 2021 via Zoom teleconference and attended by 64 officers from District Health Offices and State Health Departments, as well as Technical Officers from the Public Health Programme, MOH to discuss issues related to health services of the *Orang Asli* community.

In addition, the Director of PHDD and Special Programmes Sector made a courtesy visit to the Department of *Orang Asli* Development (JAKOA) Headquarters on 29 November 2021. The purpose of this visit was to discuss with the new Director General of JAKOA regarding the solutions and coordinating methods in the effort to enhance and improve the *Orang Asli* community health status (**Image 4.3**).

Image 4.3

Director of PHDD and Special Programmes Sector, PHDD courtesy visit to Department of *Orang Asli* Development (JAKOA) Headquarters



Source: Public Health Development Division, MOH

On 7 December 2021, the World Health Organization (WHO) visited HOAG. The purpose of this visit was to have an overview of HOAG health services in serving the *Orang Asli* community as well as to help improve the quality of life of the *Orang Asli* community (**Image 4.4**).

Image 4.4
World Health Organization (WHO) visit to Hospital Orang Asli Gombak (HOAG)



Source: Public Health Development Division, MOH

The Special Programme Sector, PHDD and Hospital Orang Asli Gombak also visited *Unit Semboyan* JAKOA Headquarters Gombak on 22 December 2021. The objective of the visit was to learn how *Unit Semboyan* JAKOA handled and coordinated with multiple agencies during emergency responses in extremely remote *Orang Asli* villages (**Image 4.5**).

Image 4.5
Special Programme Sector, PHDD and Hospital Orang Asli Gombak Visit Unit Semboyan JAKOA Headquarters, Gombak



Source: Public Health Development Division, MOH

THE PUBLIC HEALTH PROFESSION DEVELOPMENT SECTION

The Public Health Profession Development Section is responsible for the development and advancement of the Public Health profession. The section ensures the Public Health Programme

staff meet the competency standards 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 implementation of the training plan in the Public Health Programme. In 2021, a total of 1,592 courses were conducted throughout the country with a value of RM1,700,493.56 as compared to 3,148 courses with a value of RM3,582,438.89 in 2020. Due to the COVID-19 pandemic, no staff was sent abroad to attend Short-term Training Courses in 2021. The overall achievement for In-service Training Program carried out in 2020 and 2021 is shown in **Table 4.2**.

Table 4.2
In-service Training Achievement for Public Health Programme in Year 2020 and 2021

	Achievement			
	Year 2020		Year 2021	
	No. of Course Attended	Expenditure (Per cent from annual allocation)	No. of Course Attended	Expenditure (Per cent from annual allocation)
Local	3,148	RM3,582,438.89 (98.99 per cent)	1,592	RM1,700,493.56 (97.33 per cent)

Source: Public Health Development Division, MOH

In addition, this section processes the applications and monitors the use of public health facilities such as the District Health Offices, Health Clinics and Public Health Laboratories for training purposes. In 2021, a total of 30 applications were approved either for renewal of the Memorandum of Agreement (MoA) or additional facilities applications involving five (5) for the Medical Programme, 13 for the Allied Health Sciences Programme and 12 for the Nursing Programme.

GLOBAL HEALTH SECTION

WHO PROGRAMME BUDGET 2020 TO 2021

The World Health Organization (WHO) Programme Budget 2020 to 2021 was agreed upon at the 72nd World Health Assembly in May 2019. Initially, a total of 32 projects were finalised to

be implemented within the biennium. However, due to the COVID-19 Pandemic, WHO Country Office and MOH had decided to postpone them to 2021. Malaysia was awarded approximately USD620,000 with USD260,000 for the implementation of Programme Budget 2020 to 2021 and USD276,000 for National COVID-19 Response and Preparedness activities. By the end of December 2021, Malaysia had utilised 87 per cent of the awarded budget and managed to implement 21 projects.

74th WORLD HEALTH ASSEMBLY & WORLD HEALTH ASSEMBLY SECOND SPECIAL SESSION

Given the ongoing pandemic, the 74th World Health Assembly (WHA) was held from 24 to 29 May 2021 virtually. The Malaysian delegation was led by the Minister of Health and accompanied by the Director-General of Health. The session focused on the theme: *Ending the pandemic, preventing the next: building together a healthier, safer and fairer world.*

Throughout the session, Malaysia participated in several areas of priority such as Non-Communicable Diseases, Antimicrobial Resistance, Patient Safety, Poliomyelitis, Lab Biosafety, effective treatments for cancer, Rare & Orphan diseases, COVID-19 and Mental Health Response, and interpersonal violence among women and children. Following the 74th WHA, a World Health Assembly Second Special Session was held virtually from 29 November to 1 December 2021 in which Member States agreed to establish an intergovernmental body to develop a WHO convention, agreement other international instruments on pandemic preparedness and response.

24th BRUNEI DARUSSALAM-INDONESIA-MALAYSIA-SINGAPORE-THAILAND (BIMST) PUBLIC HEALTH CONFERENCE

The Global Health Section hosted the 24th BIMST Public Health Conference virtually on 24 August 2021. The fundamental purpose of this annual meeting was to engage senior health officials from BIMST countries in an open discussion on common healthcare issues faced by neighbouring nations. Malaysia, as the host country has selected the theme “Tackling the Double Burden of Malnutrition during the Pandemic” for this conference. Senior officers from the Nutrition Division and Global Health Section represented Malaysia as delegates. The Malaysian delegates were delighted to share their experiences in the implementation of nutrition activities and programmes at the state, district and health clinic levels despite the challenges of the ongoing pandemic.

72nd WHO REGIONAL COMMITTEE MEETING FOR THE WESTERN PACIFIC

This meeting was held in a hybrid manner from 25 to 29 October 2021, spearheaded by the Minister of Health, who was present in Himeji, Japan. The Western Pacific Region unanimously nominated Malaysia as Vice President for the 75th World Health Assembly in May 2022 during this session. Malaysia was also appointed as the English Rapporteur at this regional meeting. Malaysia delivered several interventions, namely on School Health, Tuberculosis, NCD & Aging, Traditional & Complementary Medicine, Health Security, AMR & COVID-19 and WHO's Sustainable Financing during technical discussions.

ASEAN HEALTH MINISTERS MEETING (AHMM)

A Special Video Conference (SVC) of the ASEAN Health Ministers Meeting (AHMM) on 'ASEAN COVID-19 Response After One Year' commenced on 22 July 2021. The objective of the meeting was to accelerate COVID-19 response in the ASEAN region and exchange updates and experiences between the ASEAN Member States. Malaysia's delegation was led by the Health Minister. Alongside the other AMS Health Ministers, Malaysia's Health Minister exchanged updates and experiences on the national vaccine rollout and genomic surveillance for SARS-COV-2. The meeting also discussed synergies in research and laboratory capacity and the development of the ASEAN Health Protocol to support post-COVID-19 recovery in the region.

ASEAN SENIOR OFFICIALS MEETING ON HEALTH DEVELOPMENT (SOMHD) MEETING AND OTHER RELATED MEETINGS

The 16th ASEAN Senior Officials Meeting on Health Development (SOMHD) and Related Meetings took place virtually in Jakarta, Indonesia from 18 to 22 October 2021. The Ministry of Health, Republic of Indonesia, as ASEAN SOMHD Chair, led the discussion throughout the five-day programme. The opening ceremony was graced by the presence of the Deputy Director General of Health (Public Health) who was also the head of the Malaysian Delegation. The Malaysian delegates consisted of ASEAN Health Cluster Country Coordinators and Deputies, as well as members from the Policy and International Relations Division, MOH. Malaysia, as the current Cluster Chair, presented the progress report on ASEAN Health Cluster 1, as well as updates in the Development of Regional Collaborative Strategy for ASEAN Drug Security and Self Reliance (ADSSR) project of Health Cluster 3. ASEAN Risk Assessment Centre (ARAC) on Food Safety was also presented by Malaysia. It was announced that in the upcoming year 2022, Laos will be the SOMHD Chair and Malaysia will resume as Vice Chair. Subsequently, the 11th ASEAN Plus Three SOMHD, 11th ASEAN-China SOMHD, 1st ASEAN-Republic of Korea (ROK) SOMHD as well as the ASEAN-Japan ASEAN – JAPAN Health Officials Meeting took place.

INSPECTORATE AND LEGAL SECTOR

Inspectorate and Legal Sector is responsible for regulating policies, planning, implementing, and evaluating all activities related to the enforcement of the Public Health Act and Regulations which encompass the Prevention and Control of Infectious Disease Act 1988 [Act 342], Disease Destruction Bearing Insect Act 1975 [Act 154], Food Act 1983 [Act 281], Control of Tobacco Product Regulation 2004 and Hydrogen Cyanide Act 1953 [Act 260].

AMENDMENT OF LAWS AND DEVELOPMENT OF STANDARD OPERATING PROCEDURE (SOP)

In 2021, the Inspectorate and Legal Sector was technically involved in three (3) amendment of laws which were the Prevention and Control of Infectious Disease Act 1988 [Act 342], proposed bill of the Tobacco Product Control Act and proposed bill of the Hydrogen Cyanide Act (Fumigation) 1953. In addition, two (2) guidelines and one (1) Standard Operation Procedure (SOP) related to Act 342 were developed to strengthen the enforcement activities related to COVID-19.

APPOINTMENT OF AUTHORISED OFFICERS AND DELEGATION OF AUTHORITY

The appointment of authorised officers under the Public Health Act and Regulations is important to ensure that all enforcement activities are carried out according to Standard Operating Procedures. The number of authorised officers appointed under the Public Health Act and Regulations is shown in **Table 4.3**. An increase in the number of authorised officers in 2021 can be related to the deployment of contract officers for the position of Environmental Health Officer and Assistant Environmental Health Officer. In addition, the delegation of authority under Act 342 was given to 34 agencies and 10 of them were authorised for issuing compounds under this Act.

Table 4.3
Appointment of Authorised Officers for the Year 2019 to 2021

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

Public Health Development Division, MOH

ENFORCEMENT OF PREVENTION AND CONTROL OF INFECTIOUS DISEASES ACT 1988

Prevention and Control of Infectious Diseases Act 1988 [Act 342] and Regulations of Prevention and Control of Infectious Diseases (Measures Within Infected Local Areas) were strengthened to prevent and control of COVID-19 pandemic as shown in **Table 4.4**.

Table 4.4
Enforcement Act 342 and Regulations of Prevention and Control of Infectious Diseases (Measures Within Infected Local Areas), 2021

Period (MCO/ CMCO/ RMCO)	Number of Inspected Premises	Number of Premises Closed	Number of Compounds Issued	Number of Paid Compounds	Number of Cases Registered in Court	Total Fine Imposed by Court (RM)
1 April - 31 December 2020	465, 267	2, 599	51, 124	41, 805	1, 033	118, 300
1 January - 31 December 2021	451,476	6,741	125,368	73,767	393	121,920

Source: Public Health Development Division, MOH

Overall, the enforcement activities under Act 342 showed a significant increasing trend in 2021 compared to previous years (**Table 4.5**).

Table 4.5
Enforcement of Prevention and Control of Infectious Diseases Act 1988 for the Year 2019 to 2021

Year	Number of Premises Inspected under Section 18 (1)	Number of Premises Closed under Section 18 (1)	Number of Compounds Issued	Total amount of Paid Compounds (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

Source: Public Health Development Division, MOH

ENFORCEMENT OF DISEASE DESTRUCTION OF BEARING INSECTS ACT 1975

12 series of *Ops Gempur Aedes* were conducted in 2021. The overall achievement of enforcement operation activities as shown in **Table 4.6**.

Table 4.6
Enforcement Of Disease Destruction of Bearing Insects Act 1975 for the Year 2019 to 2021

Year	Number of Premises Inspected	Number of Premises with Positive Breeding	Number of Compounds Issued	Number of Premises Closed Under Act 154	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

Source: Public Health Development Division, MOH

ENFORCEMENT OF CONTROL TOBACCO PRODUCT REGULATIONS 2004

Control of Tobacco Product Regulations 2004 is a subsidiary law under Food Act 1983 [Act 281] which encompasses enforcement on smoking at prohibited places, sale of cigarettes in open packs, online selling of tobacco products and others. Achievement of enforcement activities under Control Tobacco Product Regulations 2004 is shown in **Table 4.7**.

Table 4.7
Enforcement Of Control Tobacco Product Regulations 2004 for the Year 2019 to 2021

Year	Number of Notices Issued Under Section 32	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

Source: Public Health Development Division, MOH

INVESTIGATION AND PROSECUTION

Investigation and prosecution for contravention under the Public Health Act and Regulations were conducted by the Environmental Health Officer and Assistant Environmental Health Officer. The detailed achievement of the activities was shown in **Table 4.8**

Table 4.8
Investigation and Prosecution under Public Health Act and Regulations for the Year 2019 to 2021

Year	Number of Investigation Papers	Number of Consent for Prosecutions by Deputy Public Prosecutor	Number of NFA
2019	102,122	20,385	680
2020	80,144	10,515	309
2021	38,146	6,309	436

Source: Public Health Development Division, MOH

FUMIGATION

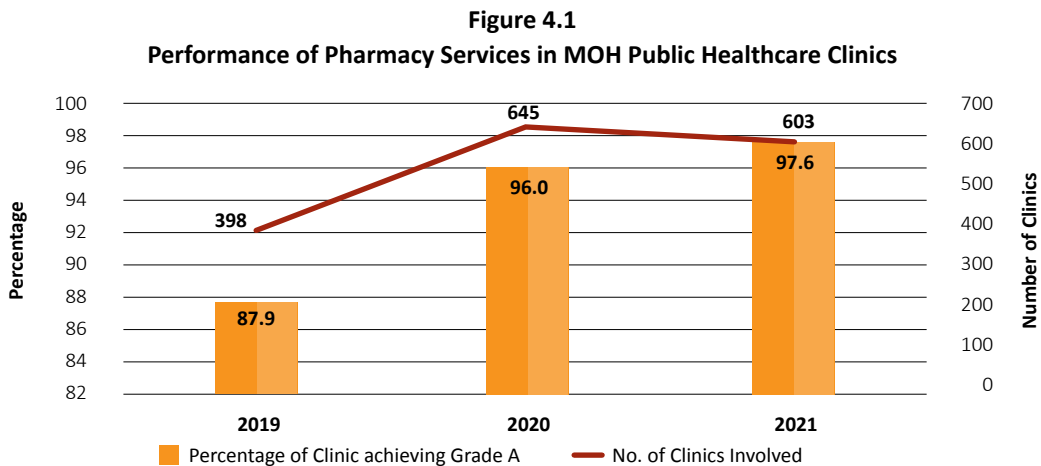
Issuance of fumigation license was in line with requirement of Hydrogen Cyanide Act (Fumigation) 1953 which require fumigation operator to be licensed for fumigation activities. In 2021, there were 116 applications of fumigation licenses and 2456 applications on renewal licenses for fumigation activities. However, due to pandemic COVID-19, the examination for new applicants has been postponed to 2022.

PUBLIC HEALTH PHARMACY SECTOR

SUPERVISION OF PHARMACY SERVICES AT PUBLIC HEALTHCARE FACILITIES

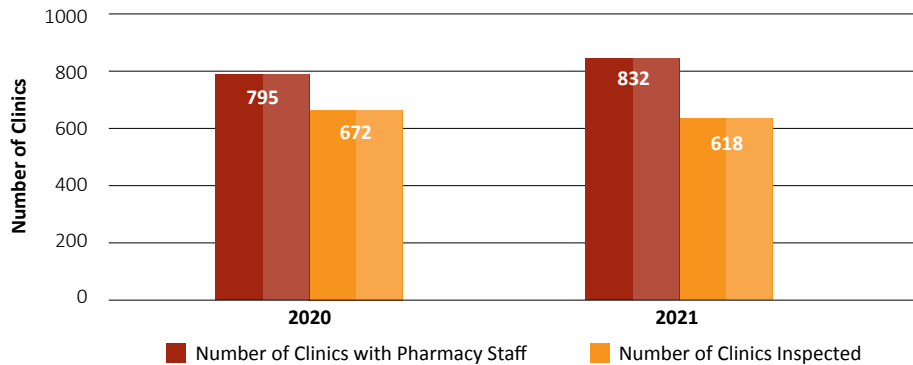
In an effort to monitor the overall performance of pharmacy services and adherence to existing policies and guidelines, a KPI was initiated in 2019. 90 percent of primary healthcare clinics staffed with pharmacy personnel were targeted to achieve Grade A service (80 to 100%) performance standards. Despite the constraints of current pandemic conditions, the benchmark standard set at achievement was maintained in 2021.

A total of 603 clinics (97.6%) from 618 clinics were inspected achieved the target Grade A in 2021. A slight increment of 1.6 per cent compared to the performance in 2020 (**Figure 4.1**). However, there was a decline in the number of supervisions conducted and upon investigation, this was attributed to the enforcement of the Movement Control Order during the pandemic as well as the targeted focus on implementing the National COVID-19 Immunisation Programme (**Figure 4.2**).



Source: Public Health Development Division, MOH

Figure 4.2
Number of Public Healthcare Clinics with Pharmacy Staff



Source: Public Health Development Division, MOH

DISEASE CONTROL DIVISION (DCD)

Disease Control Division, MOH comprises of three (3) main sections which are Non-communicable Disease (NCD) Section, Communicable Disease Section (CDC) and Surveillance Section. Vector Borne Control Sector and Entomology Unit are directly under the monitoring of Director of Disease Control Division. Each main sections comprises of a few sectors, as listed below;

1. Non-communicable Disease Section (NCD),
 - i. NCD Risk Factors Intervention Sector
 - ii. Prevention and Control of Cardiovascular/Diabetes/Cancer Sector
 - iii. Mental Health, Injury and Violence Prevention, and Substance Abuse Sector
 - iv. Tobacco Control and FCTC Sector
 - v. Occupational and Environmental Health Sector
2. Communicable Disease Section (CDC)
 - i. Tuberculosis and Leprosy Control Sector
 - ii. Zoonosis Control Sector
 - iii. Vaccine Preventable Diseases and Food Water Borne Diseases Control Sector
 - iv. Human Immunodeficiency Virus (HIV), Sexually Transmitted Infection (STI) and Hepatitis C Control Sector
3. Surveillance Section
 - i. Disease Surveillance Sector
 - ii. Disaster, Outbreak, Crisis and Emergency Sector
 - iii. International Health Regulation and Travel Health Sector
 - iv. Information and Documentation Sector

NON-COMMUNICABLE DISEASE SECTION

NCD INTERVENTION SECTOR

During the COVID-19 pandemic, the focus of *Komuniti Sihat Pembina Negara* (KOSPEN) Programme was to increase the adoption of new norm practices in daily activities that comply to COVID-19 SOPs, as well as to promote a healthy lifestyle among the communities in the KOSPEN localities.

In 2021, a total of 1,046,016 adults were screened for NCD risk factors with 93 per cent of localities having a track record of 10,000 steps, 85 per cent of localities meeting the requirements of the Healthy Menu Policy and 76 per cent of localities being able to achieve the target for number of houses joining the *Rumah Bebas Asap Rokok* (RBAR) programme. These achievements have improved year upon year since 2015.

PREVENTION AND CONTROL OF CARDIOVASCULAR/DIABETES/CANCER SECTOR

CANCER UNIT

In 2021, two (2) documents were endorsed and launched which are National Strategic Plan for Cancer Control Programme (NSPCCP) 2021 to 2025 and the National Strategic Plan for Colorectal Cancer Programme (NSPCRC) 2021 to 2025, a subset of the NSPCCP 2021 to 2025. The Colorectal Cancer Screening Programme targets asymptomatic individuals aged between 50 to 75 years and uses an immunological Fecal Occult Blood Test (iFOBT) followed by colonoscopy. From January to September 2021, a total of 38,409 clients came forward for screening compared to 31,529 in 2020, a 21.8 per cent increment. Out of these clients, 9.12 per cent were positive for iFOBT and 89.29 per cent of them agreed to be referred for colonoscopy. The COVID-19 pandemic had a negative impact on screening where only 45.27 per cent of the cases referred to the hospital actually underwent colonoscopy. 4.54 per cent were diagnosed with cancer and 24.18 per cent were positive for colonic polyps.

The pandemic also had a negative impact on the implementation of Verbal Autopsy in 2021. Of a total of 74,919 Non-Medically Certified Death (NMCD) cases registered at the National Registration Department in 2020, only 25.6 per cent were able to be investigated in 2021. More than half of the investigations were performed by phone call (56.95%). The Statistics on Causes of Death Malaysia 2021 from the Department of Statistics Malaysia (DOSM) has reported a slight increase in the percentage of MCD in 2020 (65.6%) compared to 2019 (62.8%).

CARDIOVASCULAR DISEASE AND DIABETES UNIT

In 2021, 1.8 million diabetes patients were registered in the National Diabetes Registry (NDR) and 920,000 were on active follow-up. Only 32.2 per cent of diabetes patients achieved HbA1C ≤ 6.5 per cent. Despite the COVID-19 pandemic for the past two (2) years, 13 states achieved the target of at least 30 per cent of clients having HbA1C $\leq 6.5\%$ in 2021 i.e. Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Terengganu, WP Labuan, WP Putrajaya and WP Kuala Lumpur. Selangor did not conduct the diabetes clinical audit for the year 2021 as the major focus was redirected to managing the high burden of COVID-19. The NDR Report 2020 has been released in 2021 and is available on the MOH website.

With the end of the Salt Reduction Strategy to Prevent and Control NCDs in Malaysia in 2020, the MOH has extended this strategy from 2021 to 2025 through the MAP strategy- Monitoring, Awareness and Product. The gazettelement of mandatory labelling of salt content in food packaging was approved in July 2020 and will be enforced by 2024. A strategic communication plan is being developed with plans for implementation in 2022.

As of December 2021, a total of 185 units of vending machines in health facilities have been audited nationwide. Out of these, 147 units of vending machines did not comply with the Guidelines for the Implementation of Vending Machines for Healthy Drinks and Food in Health Facilities. Annual training and audits will be continued to monitor compliance with the guidelines.

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

MENTAL HEALTH UNIT

Mental Health Screening and Intervention at the primary health care level is conducted at 1,161 Health Clinics throughout Malaysia. Screening is based on the Depression Anxiety and Stress Scale-21 (DASS-21), Whooley, Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7) questionnaires. A total of 312,398 individuals were screened in 2021 with 11,175 (3.58%) being referred to Medical Officers, Family Medicine Specialists (FMS) or Psychiatrists. Out of these, 1,695 (15.17 %) were referred for further assessment and diagnosed to have mental health problems.

The Mental Health and Psychosocial Support Services (MHPSS) were set up by the MOH at the national, state and district levels. The services which are incorporated in the MHPSS include Pre-Post Deployment Briefing and procedures which include Mental Health Screening, the Helpline for Mental Health and Psychosocial Support Services and Training for Psychosocial First Aid. From 1 January to 31 December 2021, a total of 212,319 calls were received, with 159,771 (74.53%) requiring emotional and psychological support and counselling.

In conjunction with the World Mental Health Day on 10 October 2021, the MOH has launched the National Strategic Plan for Mental Health, which was formulated to address mental health problems in Malaysia. This National Strategic Plan outlines several strategies including promoting mental health to various groups in society, as well as ensuring the provision and access to comprehensive and quality mental health services.

ALCOHOL PREVENTION AND SUBSTANCE ABUSE UNIT

Until December 2021, a total of 319 health clinics provided alcohol screening and intervention programs, and 109 communities have been trained nationwide. In 2021, eight (8) states reported methanol poisoning, involving 104 cases with 65 deaths (fatality rate: 63 per cent). All cases were reported to consume alcoholic beverages suspected to be contaminated with methanol.

The One Stop Center for Addiction (OSCA) program has been implemented in six (6) health clinics (KK) since 2017. This program has been expanded nationwide with a target of one (1) health clinic in each state. A total of 57 health clinics have been identified to provide this service where 40 Family Medicine Specialists, four (4) Psychiatrists, 88 Medical Officers, 24 Psychological Officers, 21 Pharmacists, five (5) Medical Social Work Officers 52 Paramedics, 6 Public Health Specialists and 13 Occupational Therapist Officers have been trained to implement this program.

VIOLENCE INJURY PREVENTION UNIT

For the suicide prevention program, among the initiatives undertaken in 2021 are:

- i. The National Suicide and Fatal Injury Registry (NSFIRM) is in the process of development and is expected to commence in 2023;
- ii. In conjunction with World Suicide Prevention Day on 10 September 2021 with the theme *Bertindak Segera, Harapan Terbina*: fact-sheets have been prepared in four (4) languages i.e. Malay, English, Mandarin and Tamil. For the first time, an awareness advocacy video related to suicide prevention was developed involving those with lived experiences related to suicidal behavior;
- iii. Stakeholders have reached an agreement to decriminalize suicide attempts by repeal or amendment of Section 309 of the Penal Code for the offence of attempted suicide; and
- iv. The Suicide Prevention Training Module for First Line Responders has been prepared with input from NGOs and People with Lived Experiences. The training for first line responders such as police, fire department personnel and also NGOs will be commenced in 2022.

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

The National Strategic Plan for the Control of Tobacco and Smoking Products for 2021 to 2030 that has been approved by the Cabinet of Malaysia on 14 April 2021 outlines three (3) main strategies:

- i. Empowering the community and strengthening multi sectoral participation;
- ii. Strengthening the law and enforcement on the Control of Tobacco and Smoking Products; and
- iii. Multi-sectoral collaboration with professional bodies, NGOs and private agencies in implementing the Malaysia Quit Smoking Services (mQuit).

Based on the Ottawa Charter principle, community empowerment is one of the main elements to create behavioral change from smoking to non-smoking. Recognising the problem of smoking and the COVID-19 pandemic is interrelated, research conducted around the world and in Malaysia shows that smokers were at higher risk of having severe complications if they were infected by COVID-19. Thus, various strategies have been implemented including community empowerment in carrying out activities towards curbing the smoking problem.

These activities include the Malaysia Home without Smoking Environment (MyHOUSE). This programme was initiated and conducted by two (2) NGOs which are the National Cancer Society of Malaysia (NCSM) and the Malaysian Women's Organisation for Tobacco Control and Health (MyWATCH). This programme is an advocacy programme for the community to declare their house free from any smoking activities. In line with the new norms of life during COVID-19, both NGOs cooperated with the MOH and Ministry of Women, Family and Community Development to develop a website to enable the community to register their houses through online registration. This programme is also supported by the Malaysian Drug Prevention Association (PEMADAM) through the involvement of their volunteers as community advisory partners or Rakan Nasihat Komuniti (RNK).

The registration for MyHOUSE programme can be made through the website at www.my-house.com.my. The programme had received registration for 1,461 houses. Other activities that had been carried out were educational workshops on health promotion and preparation of promotional materials to introduce this programme to the community. The participants that have registered in the MyHOUSE programme were required to put the MyHOUSE signage at their houses. This programme will be further expanded by targeting grassroots communities nationwide.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH SECTOR

OCCUPATIONAL HEALTH UNIT

In 2021, the Occupational Health Unit (OHU) has been involved in the management of COVID-19 pandemic among the working population, that include development and updates of policies and guidelines, data analysis of workers as well as information and advice on managing COVID-19 at the workplace. The MOH COVID-19 Guidelines that were updated include Annex 21: Management of Healthcare Worker (HCW) During COVID-19 Pandemic; Annex 25: COVID-19: Management Guidelines for Workplaces; Annex 27a: *Tindakan Pencegahan, Kawalan Infeksi dan Penggunaan Personal Protective Equipment (PPE) Di Fasilitas Tahanan dan Rumah Perlindungan*; and other related annexes of the COVID-19 Management Guidelines by MOH.

In addition, other occupational health activities were carried out such as prevention activities, and notification and investigation of occupational injuries and diseases. Under the Sharps Injury Surveillance (SIS) Program, a total of 984 cases of sharps injuries were notified, a decrease of 19.6 per cent compared to the 1,177 cases reported in 2020. Compared to the year 2020, there was a reduction of 24.4 per cent and 46.2 per cent in the numbers of reported Accidents and Injuries (not including sharp injuries) among healthcare workers and Occupational Poisonings, respectively. Meanwhile, there were 59 cases of occupational lung diseases notified in 2021 compared to 400 cases in 2020.

ENVIRONMENTAL HEALTH UNIT

In 2021, the Environmental Health Unit (EHU) was involved in assisting the Crisis Preparedness and Response Centre (CPRC) in dealing with the COVID-19 pandemic i.e. coordinating information and guidance to the public through risk communication; coordinating quarantine exemption applications for those who qualify and developing and reviewing SOP for various sectors. This involved updating the COVID-19 Management Guidelines; the Annex 36: Cleaning and Disinfection Procedures in Public Places and Annex 41: Guidelines for the Temporary Evacuation Center for Disaster Victims to Avoid COVID-19.

The National Flood Operations Room was opened by the EHU from 18 December 2021 to 17 January 2022 for the management of the Northeast Monsoon floods. As the technical agency to offset development impacts, EHU had reviewed and commented on 49 development project reports in different categories, and attended 55 Environmental Impact Assessment (EIA) committee meetings, to provide input on the health risks of these projects. Routine environmental health inspections of prisons, temporary detention depots (DTS) and day care centers (PJH) were conducted throughout the year. A total of 12 out of 18 (66.67%) DTS, 476 out of 1,332 (35.74%) PJH and 14 out of 41 (34.15%) prisons were inspected in the first cycle, while 23 out of 41 (56.10%) prisons were inspected in the second cycle last year.

KOSPEN PLUS PROGRAMME

To date, 1,113 agencies have conducted the KOSPEN Plus wellness programme involving 72,545 workers since the program started six (6) years ago. A total of 134 agencies from that number were enrolled in the year 2021. In response to the COVID-19 pandemic, KOSPEN Plus remains relevant and continues to provide health intervention and promotion activities at the workplace. The KOSPEN Plus has adapted its implementation to follow the new norms in the workplace through digital transformation by strengthening the content of the KOSPEN Plus website (www.moh.gov.my/kospenplus). A total of 4,248 (85.8%) of workers were screened for NCD risk factors through the KOSPEN Plus programme this year. Other activities include the development of a KOSPEN Plus YouTube channel to publish videos, infographics and webinars. This programme has also conducted and organised the Virtual Run Challenge: “Accelerate Your Performance” in conjunction with Labour Day with over 17,000 entries.

COMMUNICABLE DISEASE SECTION

TUBERCULOSIS & LEPROSY PREVENTION AND CONTROL SECTOR

NATIONAL TUBERCULOSIS PREVENTION & CONTROL PROGRAM

Tuberculosis (TB) remains a global public health problem in many countries including Malaysia. In 2021, the total number of notified TB cases were 21,727 (Notification Rate of 64 per 100,000 population), a decrease of 1,917 cases (8%) from 23,644 cases (Notification Rate 72 per 100,000 population) in 2020. Total number of TB deaths for 2021 was 2,288 with Mortality Rate of 6.8 per 100,000 population.

Of the 21,727 cases notified in 2021, 20,083 (92.4%) were new cases, 1,103 (5.1%) were relapse cases, 353 (1.6%) treatment after default cases, 165 (0.8%) treatment after failure cases and 23 (0.1%) were unknown. Of all TB cases registered, 17,260 (79.4%) were pulmonary TB cases, 3,556 (16.4%) were extra-pulmonary TB cases and 888 (4.1%) were pulmonary TB, extra-pulmonary TB cases and 23 (0.1%) were unknowns. The achievements of the National TB Control Programme in the last five (5) years are summarized in **Table 4.9**. The TB prevention and control program is committed to reduce the TB burden in Malaysia towards the target to end the TB epidemic by the year 2035.

Table 4.9
Summary Achievements of National TB Control Programme (2017-2021)

	Year				
	2017	2018	2019	2020	2021
Total TB cases (Notification rate per 100,000 population)	26,168 (80.7)	25,837 (78.6)	26,352 (81.1)	23,644 (72.4)	21,727 (64)
TB Mortality (Mortality rate per 100,000 population)	2,098 (6.48)	2,184 (6.65)	2,205 (6.88)	2,320 (7.10)	2,288 (6.8)
Total TB Pediatrics (Age <15-year-old)	738	728	863	771	734 (9.8)
TB co-morbid HIV (%)	1,463 (6.4)	1,352 (5.9)	1,312 (5.8)	1,114 (6.5)	1,137 (5.9)
TB among MOH health care workers (Incidence per 100,000 HCW)	287 (118.0)	305 (126.5)	305 (124.1)	279 (111.6)	243 (97.2)
Rifampicin Resistant/ Multi Drug Resistant TB (RR/MDR-TB)	352	192	159	193	196
Treatment Success Rate (Malaysian) (%)	83	89	87	86	88
BCG coverage (%)	98.5	98.4	98.5	98.8	98.8
Contact Screening at First Visit	188,642	179,423	177,121	136,952	106,711

Source: TB/Leprosy Control Sector, MOH

NATIONAL LEPROSY CONTROL PROGRAM (NLCP)

In 2021, a total of 166 leprosy cases were reported; a decrease of 17 per cent compared to 201 cases in 2020. The declining trend is noted since COVID 19 pandemic. Within the past 10 years, Malaysia reported 1,966 leprosy cases cumulatively, with an annual average of 196 cases. From the total registered cases, 570 cases (29%) had a history of close contact. The leprosy cases in 2021 that were detected through Active Case Detection as well as those detected at Community Health Clinics were the highest ever recorded at 14 per cent, and 42 per cent, respectively. Both achievements have proven that training of healthcare workers is effective and its continuity is vital to get more trained healthcare workers to be involved in case detection and treatment, particularly for those working in endemic areas.

ZOONOSIS CONTROL SECTOR

The Zoonosis Sector is under the Communicable Disease Control Section of the Disease Control Division, MOH, that looks into the Prevention and Control of Zoonotic Diseases Programme. Under the Prevention and Control of Infectious Diseases (PCID) Act 1988 [Act 342], six (6) zoonotic diseases are gazetted for mandatory notification; Avian Influenza, Ebola, Leptospirosis, Nipah, Plague and Rabies. Brucellosis, Q fever and Melioidosis are administratively notifiable

diseases, while some zoonoses are under the purview of other sectors and not monitored directly by the Zoonosis Sector; such as zoonotic Malaria, Japanese Encephalitis, Bovine Tuberculosis and Salmonellosis. Apart from these diseases, this sector is responsible for monitoring Hand, Foot and Mouth Disease (HFMD).

MONITORING OF ZONOTIC DISEASES

During COVID-19 pandemic, it was noted that the incidence of some zoonoses such as leptospirosis dropped. This may be contributed by the movement control order (MCO), closure of schools and reduced recreational activities. In 2021, there were 10 human Rabies cases reported in Sarawak and all succumbed to the disease. All cases did not come immediately for post-bite treatment. There were no cases of Brucellosis, Q fever, Avian Influenza, Ebola, Nipah or Plague reported.

MONITORING OF HFMD AND MELIOIDOSIS

The incidence of HFMD dropped significantly in 2021. It was contributed by the closure of schools, pre-schools and nurseries during the COVID-19 pandemic. The enterovirus in circulation was Coxsackie A16. Ten (10) Melioidosis cases were notified and all of them have comorbid of diabetes.

WORLD ZONOSIS DAY 2021

In 2021, for the second time since 2020, the MOH Malaysia celebrated World Zoonosis Day. A webinar was organized together with the Department of Veterinary Services (DVS) Malaysia and One Health University Network (MyOHUN). The topics presented were related to Preventing the Next Zoonotic Pandemic.

VACCINE PREVENTABLE DISEASES AND FOOD WATER BORNE DISEASES CONTROL SECTOR

POLIOMYELITIS

Following the polio outbreak in 2019 and 2020, a polio vaccination campaign was conducted in Sabah and Labuan targeting children aged less than 13 years old, despite the challenges faced during the COVID-19 pandemic. Acute Flaccid Paralysis Surveillance (AFP) and environmental surveillance for poliovirus were strengthened. Polio outbreak response assessments were conducted by international polio experts, and the end of the outbreak was officially declared in September 2021. To ensure that Malaysia remains polio free, it is crucial to ensure optimal polio vaccination coverage nationwide. AFP and environmental surveillance for poliovirus must be of high quality to ensure that polio cases and polioviruses, if present, are detected.

MEASLES

Measles incidence continued to decrease in 2021, contributed by the closure of educational and economic sectors during the Movement Control Order. No measles deaths were reported in 2021. This is a positive trend towards measles elimination, where the target is to achieve zero locally transmitted measles cases by 2023 and sustain this achievement for three (3) consecutive years to attain measles elimination status by 2025. It is important that measles vaccination coverage is optimised nationwide to achieve measles elimination.

OTHER VACCINE PREVENTABLE DISEASES

Diphtheria, Pertussis and Hepatitis B also showed a decreasing trend in 2021. Neonatal tetanus cases increased, among non-citizens in Sabah, neonates whose mothers did not attend antenatal checks, and babies from home birth attended by unskilled persons.

THE NATIONAL COVID-19 IMMUNISATION PROGRAMME (PICK)

The National COVID-19 Immunisation Programme (PICK) commenced on 24 February 2021. The initial target was to have 80 per cent of the adult population aged 18 years and above complete vaccination by the end of 2021. It was a whole-of-government and whole-of-society approach, coordinated by the Minister of Science, Technology and Innovation who was appointed as the Coordinating Minister of COVID-19 Immunisation Task Force (CITF). On 1 November 2021, the PICK was handed over to MOH where achievement at that time was 96.6 per cent of the adult population having completed two doses of COVID-19 vaccine. MOH has continued the PICK and expanded it into three (3) more scopes i.e. adolescent vaccination of PICK-Adolescent aged between 12 to 17 years old (commenced on 15 September 2021), booster dose vaccination or PICK-Booster (commenced on 13 October 2021) and children vaccination or PICKkids (will be commenced in February 2022). At the end of 2021, 97.7 per cent of the adult population have completed COVID-19 vaccine and 26.9 per cent have received their booster dose, whereas 87.6 per cent of adolescents have completed COVID-19 vaccine.

FOOD AND WATERBORNE DISEASES

FOOD POISONING

Data did not show any significant changes in incidence rates and number of episodes of food poisoning between the year 2011 to 2019, but there was a significant decrease in both between 2019 to 2021. The outbreak of COVID-19 was one of the contributing factors, where schools were closed frequently to minimize the risk of infection among students.

In 2021, out of 202 episodes of food poisoning, 32 episodes (15.8%) episodes occurred in Ministry of Education (MOE) schools, 17 episodes (8.4%) occurred in Non-MOE schools, 48 episodes (23.8%) in institutions besides schools, 53 episodes (26.2%) occurred at homes and 52 episodes (25.7%) occurred in other localities.

CHOLERA, TYPHOID, HEPATITIS A AND DYSENTERY

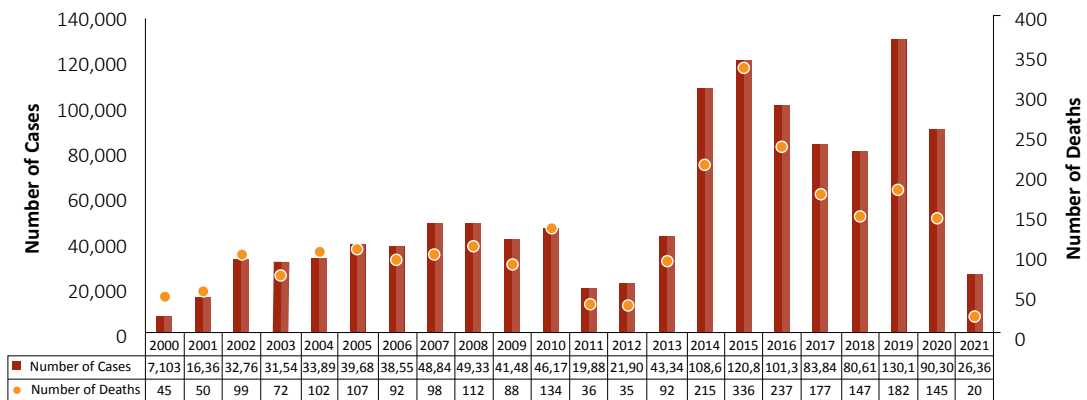
Incidence Rates for Typhoid, Cholera, Dysentery and Hepatitis A show a downward trend between 2001 and 2006. However, there were no significant changes between 2017 and 2021. Since 2016, the annual incidence rates for Typhoid, Cholera, Dysentery, Hepatitis A was 1 case per 100,000 population.

VECTOR BORNE DISEASE SECTOR

DENGUE

In 2021, Malaysia reported 26,365 dengue cases, a reduction of 70.8 per cent compared to the year 2020 (90,304 cases). Dengue deaths declined from 145 deaths in 2020 to 20 deaths in 2021 (**Figure 4.3**), with concurrent decline in case fatality rate (CFR) from 0.16 per cent in 2020 to 0.08 per cent in 2021. These statistics were the lowest recorded for the past decade. Despite the significant decline in dengue cases in 2021, Malaysia should beware of resting on its laurels, knowing that dengue surveillance data in this country shows a cyclical pattern with peaks every four (4) to five (5) years. Based on the last peak in 2019, dengue is expected to peak again in 2023 or 2024.

Figure 4.3
Dengue Cases and Deaths in Malaysia for the Year 2000 to 2021



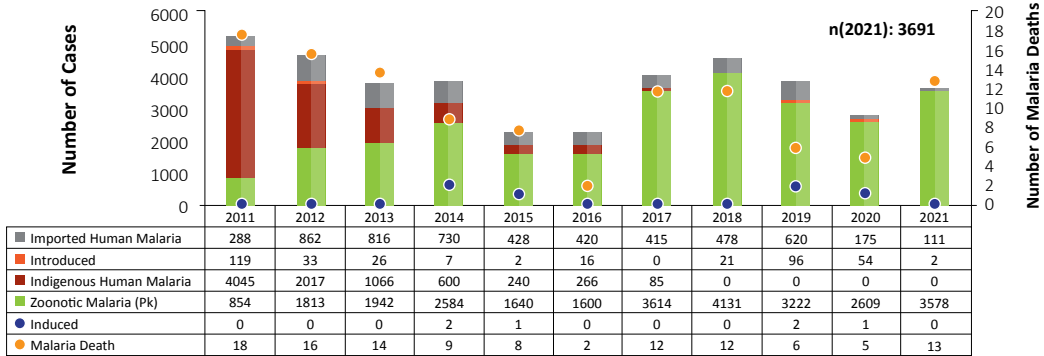
Source: Vector Borne Disease Sector, MOH

MALARIA

Malaysia has now recorded zero indigenous malaria cases for four (4) consecutive years since 2018. In 2021, the total number of imported and introduced human malaria was 111 cases, a reduction of 64 cases (36.6 per cent) compared to 175 cases in 2020. On the other hand, zoonotic malaria increased by 37.0 per cent from 2,609 cases in 2020 to 3,575 cases in 2021.

Malaria deaths increased from five (5) deaths in 2020 to 13 deaths in 2021 (**Figure 4.4**). All malaria deaths reported in 2020 and 2021 were attributed to Knowlesi (Zoonotic Malaria).

Figure 4.4
Malaria Cases and Deaths in Malaysia from 2011 to 2021

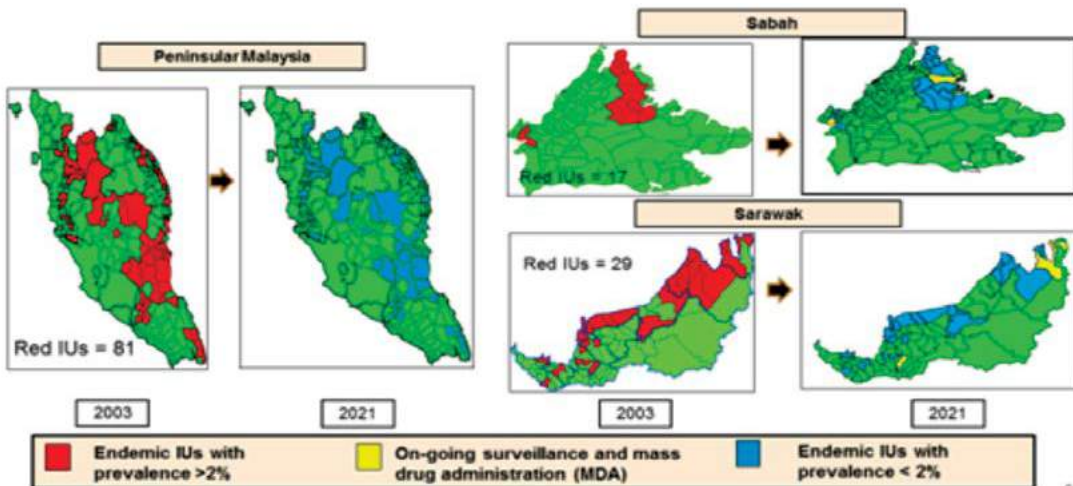


Source: Vector Borne Disease Sector, MOH

LYMPHATIC FILARIASIS (LF)

Under the Lymphatic Filariasis Elimination Programme (LFEP) Programme, the prevalence of lymphatic filariasis (LF) has been reduced to less than 2 per cent in all 81(100 per cent) endemic mukims in Peninsular Malaysia. Whereas in Sabah and Sarawak, five (5) more endemic mukims from a total of 46 are undergoing active surveillance and mass drug administration using triple drug regimen (Ivermectin + Diethylcarbamazine + Albendazole) to bring down the LF prevalence to less than 2 per cent by the year 2025. A comparison of endemicity maps between 2003 and 2021 is shown in **Figure 4.5**.

Figure 4.5
Lymphatic Filariasis Endemicity Map for the Year 2003 and 2021

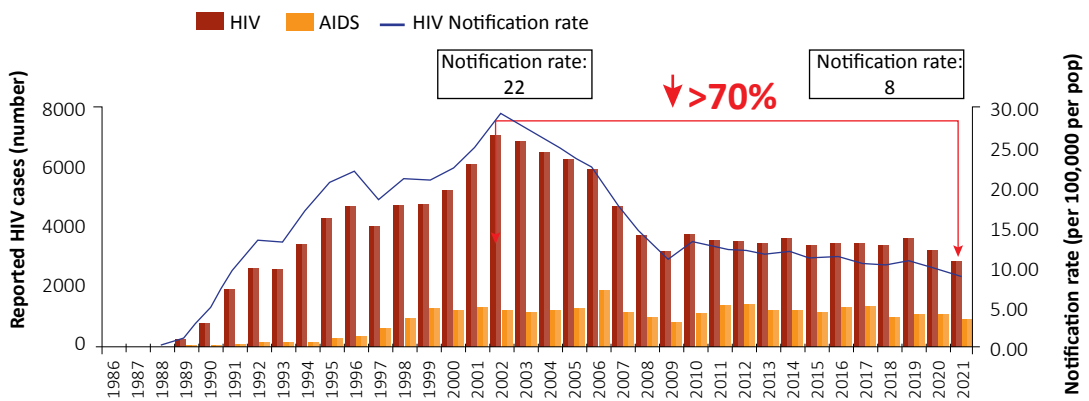


Source: Vector Borne Disease Sector, MOH

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

Since 1986, when the first case of HIV was reported in Malaysia, MOH has recorded many successes in controlling the HIV epidemic. Between the years 2002 and 2021, HIV new infections in Malaysia has reduced by 70 per cent (from 28.5 cases notified per 100,000 population to 8.5 cases notified per 100,000 population) (Figure 4.6), while the HIV/AIDS related deaths have stabilized. The plateauing of new HIV case notification rates for the past decade, despite increasing testing and treatment, is due to shifts in major risk factor from needle-sharing to sexual transmission (Figure 4.7).

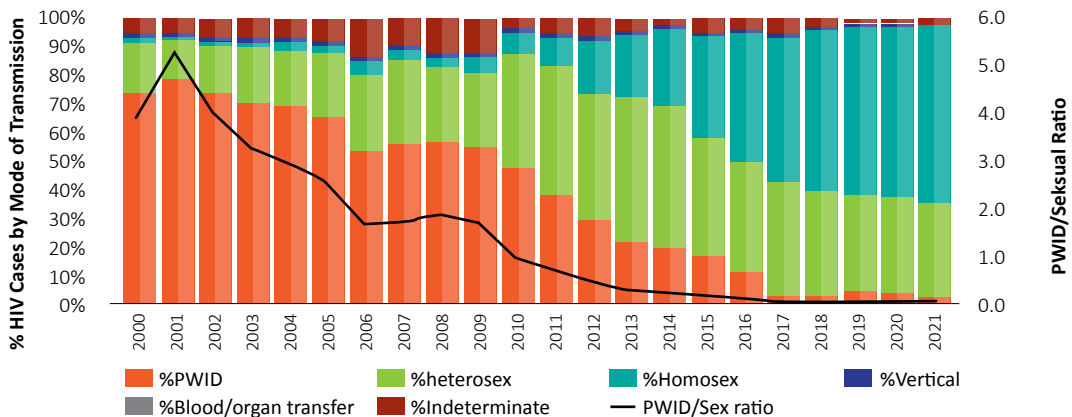
Figure 4.6
Reported HIV, AIDS and HIV Notification Rates, Malaysia from 1986 to 2021



Source: HIV/STI/Hepatitis C Sector, MOH

The decline among PWID is the result of Harm Reduction programme incepted in 2006, whilst low condom use among other sub-populations has contributed to increasing infection through sexual transmission. Currently, sexual transmission contributes to 96 per cent of the new HIV cases.

Figure 4.7
Reported HIV Cases by Mode of Transmission and PWID/Sex Ratio, Malaysia for the Year 2000 to 2021



Source: HIV/STI/Hepatitis C Sector, MOH

The way forward is to scale up the prevention and accelerate treatment through:

- i. Enhancing HIV screening services beyond the static health facilities to include community-based testing and self-testing;
- ii. Accelerating treatment to all, as treatment results in viral suppression, which stops onward sexual transmission; and
- iii. Mitigate sexual transmission of HIV among key populations. Currently MOH is collaborating with the Ministry of Education, private practitioners as well as NGO to initiate the use of pre-exposure prophylaxis (PrEP) among high-risk populations.

PREPAREDNESS, SURVEILLANCE AND RESPOND SECTION

DISEASE SURVEILLANCE SECTOR

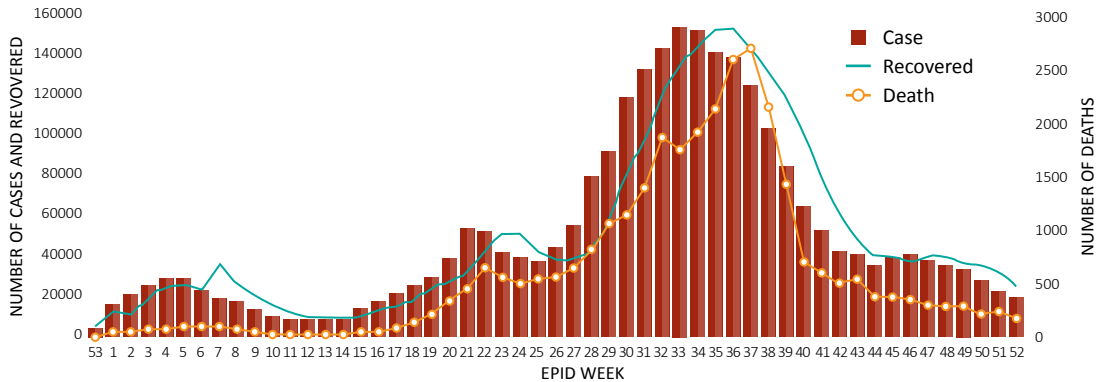
COVID-19 IN MALAYSIA

Cumulatively, as of 31 December 2021, Malaysia recorded a total of 2,758,086 COVID-19 cases with 31,487 deaths. In 2021 alone, 2,645,076 COVID-19 cases were recorded; 31,016 death cases (1.2%) and 2,596,437 recovered cases (98.2%). Three (3) peaks were plotted throughout 2021 i.e. during Epidemiological Week (EW) 4/2021, EW 21/2021 and EW 33/2021.

The first peak was associated with screening by the Social Security Organization (SOCSO) that was mostly located at workplaces in the Klang Valley area. The second peak started following the Aidilfitri celebrations. The Delta variant was first recorded in April 2021 and the number of cases continued to grow. Therefore, despite the movement control order (MCO) since 12 May 2021 and the implementation of Phase 1 of the National Recovery Plan since 16 June 2021, reported cases in Malaysia continued to increase rapidly. The third spike started from EW 25/2021 to EW 33/2021. With the widespread Delta variant of SARS-CoV-2 virus, the highlight was on 26 August 2021 when Malaysia logged a record high of 24,599 new cases. During this period, the Klang Valley area was highly affected which led to the establishment of the Greater Klang Valley Special Task Force (GKV STF) to mitigate the impact of rising COVID-19 cases on our healthcare system. The initiatives introduced include the virtual CAC (COVID-19 Assessment Centre), digital HSO (Home Surveillance Order), e-Contact Tracing, geofencing and self-testing. After eight (8) weeks of intensive strategic planning and implementation with multiple stakeholders, in addition to the enhancement of our National COVID-19 Immunisation Programme (PICK), a healthcare crisis was averted and the situation improved. Beginning EW 34/2021, the trend constantly decreased till the end of 2021.

With more than 95 per cent of the adult population being fully vaccinated, Malaysia expects to treat COVID-19 as endemic by the end of 2021 with less than 1,200 cases daily and fewer than 10 deaths a day for seven (7) consecutive days. However, Malaysia has decided to delay the transition into the endemic phase as there was much uncertainty regarding the spread of the latest variant of concern (VOC) i.e. the Omicron variant.

Figure 4.8
Daily Reported COVID-19 Cases, Recovery and Deaths in Malaysia for the Year 2021



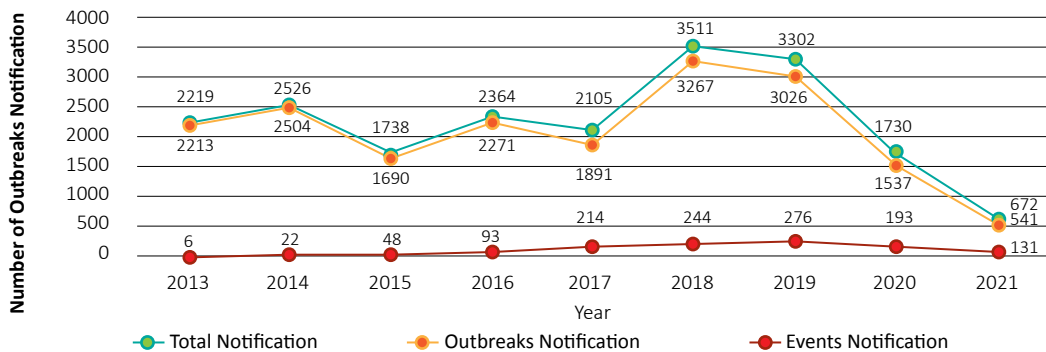
Source: National CPRC, MOH

DISASTER, OUTBREAK, CRISIS AND EMERGENCY MANAGEMENT SECTOR

OUTBREAK AND DISASTER SURVEILLANCE

In 2021, 672 notifications were reported on the e-Wabak System and Event Based Reporting System. A total of 541 outbreak notifications and 131 disaster incident notifications were reported to the Disaster, Outbreak, Crisis and Emergency Management Sector (DOCE) as shown in **Figure 4.9**. Among the major outbreaks reported were Food Poisoning, HFMD, URTI, ILI, and Cholera. The main Disaster Incidents reported were Floods, Fires, Landslides, Methanol Poisoning and Storms as shown in **Table 4.10**. Overall, the incidence of epidemics and disasters has decreased compared to the previous year.

Figure 4.9
Outbreak and Disaster Surveillance



Source: National CPRC, MOH

Table 4.10
Outbreaks and Disaster Reported in the Year 2021

OUTBREAK		DISASTER	
Outbreak	No.	Disaster	No.
Food Poisoning	202	Flood	65
HFMD	122	Fire	20
URTI	73	Landslide	13
ILI	42	Methanol Poisoning	10
Cholera	30	Storm	8

Source: National CPRC, MOH

ACTIVATION OF THE NATIONAL CRISIS PREPAREDNESS AND RESPONSE CENTER (CPRC) OPERATION ROOM

In 2021, there were five (5) operational rooms that had been activated by the National Crisis Preparedness and Response Center (CPRC); two (2) Flood Disaster Operational Rooms on 7 January and 18 December 2021, National COVID-19 Immunisation Program (PICK) Operational Room on 23 January 2021, Operating Standards of Compliance and Enforcement Operational Room (SOP) for the Melaka Election on 1 November 2021 and Operating Standards of Compliance and Enforcement Operational Room (SOP) for the Sarawak Election on 5 December 2021.

Two (2) operation rooms were initiated in 2020, namely the Dengue and COVID-19 Pandemic Operations Rooms. Four (4) operation rooms were activated in 2021 were subsequently closed; the first and second Flood Operations Room, the Melaka Election SOP Compliance Enforcement Operations Room and the Sarawak Election SOP Compliance Enforcement Operations Room. The Polio Operations Room was activated on 7 December 2019 then closed on 10 September 2021 following the receipt of an official notification letter on the end of the polio epidemic in Malaysia from the WHO Country Office. Three (3) operation rooms are still activated and will continue until 2022, namely the Dengue, COVID-19 Pandemic and the COVID-19 National Immunisation Program (PICK) Operation Rooms. The PICK operating room monitors the administration of vaccines to those who have not yet received vaccination, and manages the administration of the booster or the third dose.

RISK COMMUNICATION

The CPRC Facebook Page (<https://www.facebook.com/kkmcprc>) was created in 2013 to facilitate the sharing of information among the public and the CPRC. The information shared on the site is updated on a daily basis. This site provides advice and public health information to promote health as well as to avoid panic among the public.

In 2021, the CPRC Facebook page received a large number of likes with 74,808 likes among users who wanted to get information on the COVID-19 pandemic.

Table 4.11
Activities of the CPRC Facebook Page from 2017 to 2021

Activity	2017		2018		2019		2020		2021	
	No.	%	No.	%	No.	%	No.	%	No.	%
<i>Likes (Support by user)</i>	14,219	53	15,586	54	16,807	49	51,903	41	74,808	35
<i>Comments (by user)</i>	1,157	4	1,009	4	1,369	4	10,312	8	30,312	14
<i>Shares (by CPRC Admin)</i>	425	2	523	2	1,236	4	15,211	12	33,015	15
<i>Views (by user)</i>	9,653	34.9	10,062	35.9	12,362	36	42,331	34	69,023	32
<i>PM (Private Messages by user)</i>	33	0.1	26	0.1	88	0.2	211	0.1	322	0.1
<i>Uploads Posting, Information, graphic (by CPRC Admin)</i>	1,588	6	1,659	6	2,633	7	6,354	5	8,326	4
Total	27,075	100	28,865	100	34,495	100	126,322	100	215,806	100

Source: National CPRC, MOH

INTERNATIONAL HEALTH REGULATIONS & TRAVEL HEALTH SECTOR

ACTIVITIES INTERNATIONAL HEALTH REGULATIONS & TRAVELER HEALTH SECTOR 2021

The International Health Regulations and Travel Health Sector implements programs related to the International Health Regulations (IHR) 2005 and also Travel Health. This sector carries out activities related to the implementation of IHR 2005, such as monitoring health activities at the Point of Entry (POE), and health screening of pilgrims and health of migrants, especially foreign workers. In 2000 and 2021, activities were focused on the control and prevention of COVID-19 at the POE.

The achievement of activities by sector is as follows:

COVID-19 screening of travelers arriving at Point of Entry

Table 4.12 shows the total COVID-19 screening of travellers at POE by state in 2021.

Table 4.12
Cumulative COVID-19 Screening at POE during 2021

Points of Entry (State)	Total Arrivals	Total Screening	Total Referrals to Hospital	Total Referrals to Quarantine Station MKN	Sign on /Sign off Crew	Home Quarantine	PCA	RGL	MHTC	DCEV	Direct Flight Sign Off Crew
Perlis	112,079	112,079	0	9	0	0	0	0	0	0	0
Kedah	283,363	283,364	0	337	33	38	0	0	0	0	0
Pulau Pinang	50,501	50,121	1	6,008	283	4,455	1	14	131	0	0
Perak	27,650	21,833	0	1,608	107	988	0	0	1	0	0
Selangor	552,246	532,982	41	155,965	2,152	92,560	0	121	422	84	3
Negeri Sembilan	14,415	14,415	0	191	185	0	0	0	0	0	0
Melaka	29,397	18,308	2	1,265	1,740	469	0	0	0	0	6
Johor	1,655,044	1,654,799	0	30,049	6,758	15,755	19,059	312	124	238	0
Pahang	33,951	33,951	13	18	18	0	0	0	0	0	0
Terengganu	20,765	15,215	0	22	22	0	0	0	0	0	0
Kelantan	43,277	43,087	23	85	16	3	0	0	0	0	0
Sarawak	42,359	36,706	1	16,738	588	39	0	0	1	0	0
Sabah	30,813	30,719	1	2,552	9	2	0	0	0	0	0
Labuan	16,353	16,288	0	16,179	14,390	120	0	0	0	0	0
Total	2,912,213	2,863,867	82	231,026	26,301	114,429	19,060	447	679	322	9

Source: National CPRC, MOH

Screening of Travelers Arriving from Countries at Risk of Yellow Fever

Table 4.13 shows the number of yellow fever screenings carried out at the country's borders. The declined rate in the Yellow Fever screening trends in POE in 2020 and 2021 is due to the sudden drop in the number of travellers due to the COVID-19 pandemic.

Table 4.13
Yellow Fever Screening at International Borders

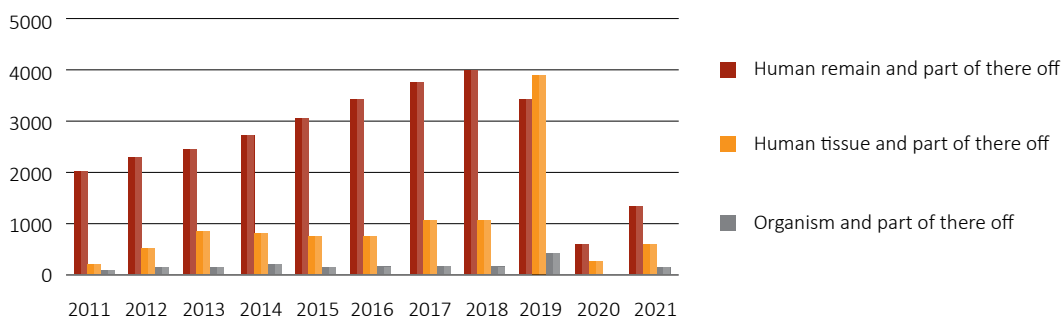
Year	Total Screened Travellers	Travellers With Valid Certificate	Quarantined Travellers	Travellers Under Health Surveillance
2017	31,184	31056 (99.6%)	72 (0.38%)	6 (0.02%)
2018	39,187	39,060 (99.7%)	117 (0.28%)	10 (0.02%)
2019	67,530	67,421 (99.84%)	45 (0.07%)	2 (0.002%)
2020	6,030	6,027 (99.95%)	3 (0.05%)	0 (0.0%)
2021	4,865	4,803 (98.73%)	56 (1.15%)	6 (0.12%)

Source: Health Information System, MOH

Import & Export of Bodies, Human Tissues, Organisms and Pathogenic Substances

Figure 4.10 shows that there was a drastic reduction in permits in 2020, indicating the effect of the COVID-19 pandemic on import and export activities at the country's entry points. However, permit issuance increased again by 2021.

Figure 4.10
Import / Export Human Remain, Human Tissue and Organism and Part of There Off From the Year 2011 to 2021



Source: International Health Regulation Sector, MOH

Assessments and Monitoring of Yellow Fever Vaccination Centers

The evaluation and monitoring activities of the Yellow Fever Vaccination Center could not be fully implemented due to the COVID-19 pandemic. In 2021, four (4) private facilities have been designated as Yellow Fever Vaccination Centers.

The Use of BLESS in the Import and Export of Bodies, Human Tissues & Organisms and also Pathogenic Materials from 2017 to 2021

Table 4.14 shows the performance of BLESS in the processing of import permits and the export of human corpses, Organisms and Pathogenic Materials.

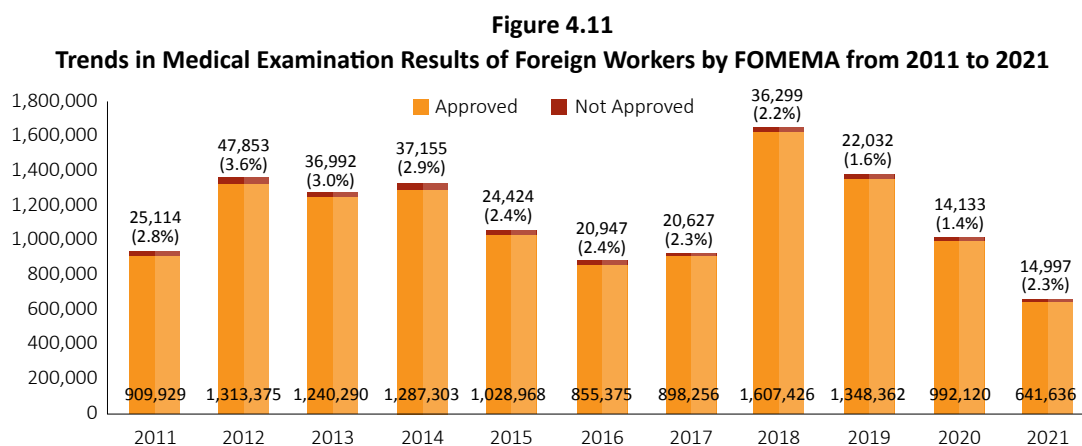
Table 4.14
Total Import / Export Human Remains, Human Tissue and Organism and Part of thereof using BLESS for the Year 2017 to 2021

Permit	Total Application					Total Application with BLESS					Percentage of Application with BLESS				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Import/ Export Human Remains and part of thereof	3,800	3,974	2,128	604	1,361	1,255	1,330	1,400	470	937	33.0	33.5	65.0	77.8	68.8
Import/ Export Human Tissue and part of thereof	1,084	1,077	880	266	566	1,005	1,005	842	216	525	92.7	92.7	96.0	95.6	92.8
Import/ Export Organism and part of thereof	121	122	137	24	174	121	121	124	20	173	100.0	99.2	91.0	83.3	99.4

Source: International Health Regulation Sector, MOH

Health Examination of Foreign Workers

The number of medical examinations of foreign workers conducted by the FOMEMA panel clinic is as shown in **Figure 4.11**



Source: FOMEMA Sdn. Bhd.

FAMILY HEALTH DEVELOPMENT DIVISION

COVID-19 ASSESSMENT CENTER (CAC)

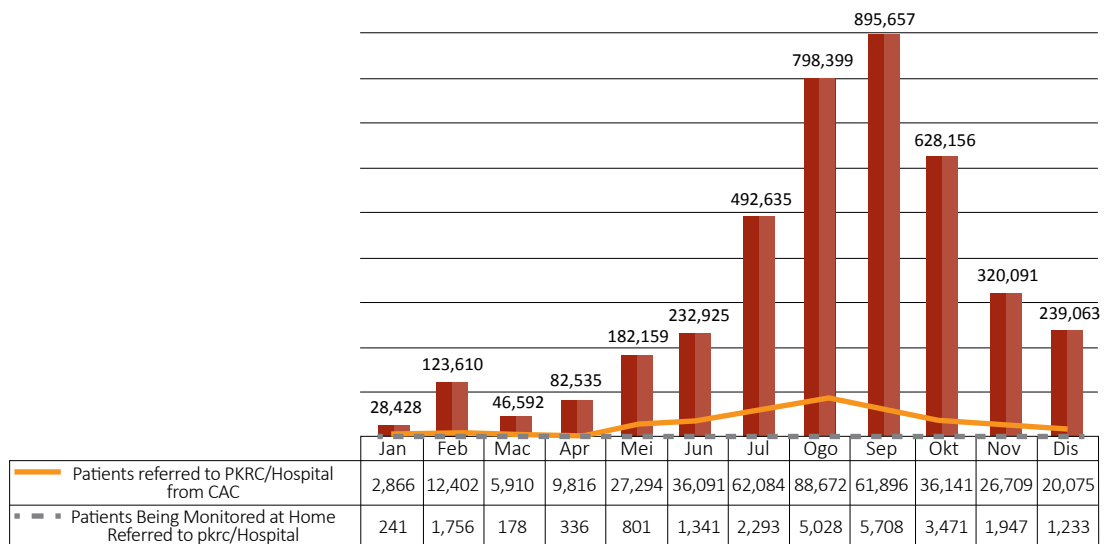
The COVID-19 Assessment Center (CAC) was established to conduct the assessment of COVID-19 patients for home monitoring. It acts as a one-stop center to identify Category 1 and 2 COVID-19 patients who are suitable to undergo home isolation. The CAC function is carried out by a health team consisting of Public Health Physician, Family Medicine Specialist, Medical Officers, Assistant Medical Officers, Health Nurses and Assistant Environmental Health Officers.

Starting from January 2021, a total of 148 CACs has been operating in stages throughout the country and up until December 2021, the number of CACs in Malaysia is 351. Depending on local suitability and needs, CAC operates in stadiums, community halls, halls or government health facilities.

Apart from assessing patients, CAC also monitors patients' progress during the isolation period, coordinates referrals to the COVID-19 Quarantine and Treatment Center (PKRC) or hospital and issues release orders to cases who have completed isolation.

Data shows that 5 to 10 per cent of patients attending CAC referred to PKRC/Hospital as they are not suitable to be monitored at home, while 2.5 to 5 per cent of patients monitored at home were referred to PKRC/Hospital as they developed worsening symptoms. Attendances to CAC peaked during the month of July to October 2021 (**Figure 4.12**).

Figure 4.12
Patient Attendance to CAC in 2021



Source: Family Health Development Division, MOH

CLINICAL & TECHNICAL SUPPORT SERVICES

COVID-19 DIAGNOSTIC TESTING IN PRIMARY HEALTH CARE

To reduce the waiting time for results of COVID-19 RT-PCR laboratory tests, primary health care facilities deployed the use of RTK Ag tests, to speed up the testing of those suspected of positive COVID-19. Emergency procurement was carried out in two (2) phases with a total of 1,211,650 RTK Ag test kits. A central contract was also put in place to provide an additional 6,044,250 RTK Ag test kits to meet the needs of all primary health care facilities and public hospitals. This showed the increased demand for rapid testing in primary healthcare, to provide the best care for the people. Additionally, a central contract to provide 9,013,500 packed viral transport medium (VTM) kits with nasopharyngeal and oropharyngeal swabs to all public health care facilities was established. Both emergency procurement and central contract for these diagnostic tests were carried out using funds provided under Kumpulan Wang COVID (KWC).

MEDICAL EQUIPMENT TO AUGMENT PREPAREDNESS AT PUBLIC VACCINATION CENTERS (PPV)

The National COVID-19 Immunisation Programme was rolled out in March 2021. Apart from MOH health facilities being used as Public Vaccination Centers (PPV), an additional 267 PPV were set up by MOH nationwide in facilities such as public halls and stadiums. Since vaccination activities were implemented outside existing health facilities, the availability of adequate medical equipment in each Center was essential to ensure the smooth running of the program as well as preparedness in handling emergency situations.

A total of six (6) categories of emergency medical equipment were procured through central emergency procurement measures over a period of four (4) months, from 29 June to 14 October 2021, at a cost of RM4,049,643.70 and supplied to all 267 PPVs. These consist of:

- i. Digital Sphygmomanometer Set (BP, Pulse, SpO₂);
- ii. Oxygen Tank (10 Liters) with Regulator and Trolley;
- iii. Automated External Defibrillator (AED) With Rechargeable Battery and three (3) Set Electrode Pads;
- iv. Laryngoscope Set;
- v. Adult and Child Resuscitator Kit; and
- vi. Portable Suction Machine.

COVID-19 ASSESSMENT CENTERS BY PRIVATE MEDICAL PRACTITIONERS (CAC PMP)

With the sharp rise in cases leading to high admissions at hospitals and Low Risk Quarantine Centers (PKRCs) in early 2021, government COVID-19 Assessment Centers (CACs) were set up in January 2021 to manage Category 1 and 2 (Mild) COVID-19 patients by home monitoring. Shortly thereafter, PMPs were invited to assist MOH in performing certain functions of the CAC

including home monitoring and issuing Home Surveillance Orders (HSO) to COVID-19 patients. This was an optional task, promoted through PMP associations, whereby interested PMP could write in to MOH to request this appointment. This was made possible by the MOH enrolling the interested PMPs, and the Health Minister appointing them as authorised officers under the Prevention and Control of Infectious Diseases Act [Act 342]. This public-private partnership initiative was mooted following engagement sessions with various PMP associations.

Initially, virtual briefing sessions for PMPs on the implementation of this home monitoring program were conducted in collaboration with the Family Health Development Division, Public Health Development Division, Disease Control Division, and Family Medicine Specialists. Subsequently, as the enrolment of PMPs increased, PMPs were asked to refer to the latest guidelines. To facilitate the home monitoring initiative, virtual consultation of patients was allowed, limited to the pandemic duration. In 2021, 1,409 of these PMPs were appointed under Act 342. MOH provided funding at a rate of RM10/patient/day for a maximum of 10 days of home monitoring, to reimburse the PMPs involved. For PMP to monitor eligible patients, they need register themselves with the nearest DHO and submit periodic reports, so that the burden of care shared across the public and private sectors could be estimated.

NEW DESIGN OF HEALTH CLINICS WITH INFECTIOUS DISEASE AREA

As one of the measures in Infection Prevention and Control in the face of the COVID-19 Pandemic, all health clinics of Types 2-6 had a designated area outside the main building as part of the standard design (Pre-Approved Plan – [PAP]) for the management of infectious diseases. Triaging was done in this area outside the main clinic building. Cases identified as not having infectious disease were allowed to enter the main clinic building for further management; however, those suspected of having infectious diseases were managed in this infectious disease area. The infectious disease area was complete with dedicated waiting and registration areas, and consultation rooms for examination and treatment with direct access to X-ray, laboratory, pharmacy and emergency services. Necessities such as sinks and washrooms were made available nearby outside the main clinic building. All new health clinics approved for development in RMKe-12 will adopt this new design.

VIRTUAL CLINIC SERVICE

The Virtual Clinic Service enables clients to get Primary Health Care services remotely in accordance to new norms, as well as to improve clients' satisfaction by saving time and increase productivity and accessibility to health services. Guidelines on virtual clinics have been prepared to standardise the services among health care personnel.

Virtual clinic (VC) is a virtual, live and interactive health service that includes clinical consultation and treatment plans between the health care provider and clients. It is complementary to the existing health services. The services delivered include chronic disease, respiratory,

physiotherapy, occupational therapy, dietetic, pharmacy, follow up, quit smoking services, screening, Directly Observed Treatment, Short-course (DOTS), and Maternal and Child Health services.

The team led by a Family Medicine Specialist includes medical officers, assistant medical officers, pharmacists, physiotherapists/occupational therapists and information technology (IT) personnel. A total of 40 health centers were involved in delivering virtual health services in Malaysia. As of December 2021, 29,311 clients benefited from these services.

The distribution of training and health promotion materials to identified health centers empower health care providers to take full advantage of the use of virtual clinics in delivering Primary Health Care services that are in line with new norms as well as digitalisation of health.

Image 4.6

Visit to Empower Health Care Provider on Use of Virtual Clinic



Source: Family Health Development Division, MOH

INFECTION PREVENTION AND CONTROL

The Compliance to Standard Precautions Practices Audit involving 116 Healthcare Clinics, 68 Rural Clinics, nine (9) Maternal and Child Health Clinics, 14 Community Clinics and three (3) mobile clinics in 2021 showed overall performance of 97 per cent, in which all states demonstrated more than 90 per cent compliance. Hand Hygiene Compliance Survey conducted at 317 health clinics in 2021 with all categories of healthcare providers audited showed an increase in compliance with hand hygiene practices compared to 2020.

ANTIMICROBIAL STEWARDSHIP (AMS)

In 2021, 100 per cent of healthcare clinics with Family Medicine Specialist (FMS) conducted AMS Clinical Audits except; Kedah (0%) and Sarawak (89%). The overall achievement of appropriate antibiotic prescription was 75 per cent, an increase of 8 per cent compared to 2020. The element of health education for antibiotic compliance and side effects to patients showed the lowest percentage, followed by drug allergy status and case referral appropriateness.

PATIENT SAFETY

A total of 176 incidents were reported in 2021. The highest number of reporting were from Selangor and Federal Territory of Kuala Lumpur & Putrajaya, followed by Perak and Melaka. No incident reports were received from Kedah, Johor and the Federal Territory of Labuan. Medication Error was the highest reported incidence followed by the number of patients falling in primary healthcare premises.

MIGRATION PROJECT FROM TELEPRIMARY CARE (TPC) SYSTEM TO TELEPRIMARY CARE – ORAL HEALTH CLINICAL INFORMATION SYSTEM (TPC-OHCIS)

Teleprimary Care (TPC) System is a legacy system that has been used in 96 government health clinics since 2005 and it has reached its end-of-life status. Hence, the new TPC-OHCIS System will be replacing the legacy system, along with new enhanced and expanded scope of Primary Health Care services. The deployment of TPC-OHCIS started in five (5) health clinics in Federal Territory of Kuala Lumpur and Putrajaya, including the Super Type 1 Klinik Kesihatan Kuala Lumpur (KKKL), in which attendance can reach up to 4,000 patients per day. As at 31 December 2021, a total of 55 (57.3%) health clinics have migrated to TPC-OHCIS System. The numbers of health clinics involved include five (5) in Federal Territory of Kuala Lumpur and Putrajaya, 15 in Pahang, five (5) in Sabah, 24 in Johor, 11 in Pahang and 10 in Perlis. An additional 41 health clinics in Selangor and Sarawak will migrate to TPC-OHCIS by March 2022.

The main challenges in this migration project are poor infrastructure readiness of our clinics in handling an increasing number of patients in their respective operation areas. In addition, it is difficult to deploy ICT systems as pandemic fever and infectious cases need to be seen outside of the clinic building under temporary structures such as tents. The expanded scope of CAC and PPV resulting in changes of work flow and increasing amount of hardware needed to run the system poses more strain on this project.

VIRTUAL COVID ASSESSMENT CENTRE (CAC)

Virtual CAC was implemented for residents in the Klang Valley, namely Selangor, the Federal Territory of Kuala Lumpur and Putrajaya and the District of Seremban, Negeri Sembilan, from 25 July 2021. This initiative works by empowering individuals to monitor and report their health status. Through the implementation of Virtual CAC, positive individuals who are asymptomatic and not in the high-risk group (age more than 60 years, those with comorbidities or pregnant women) do not need to attend the CAC. They are required to do self-monitoring instead, and report their health status using the MySejahtera application on a daily basis. Individuals will also receive Home Surveillance Order (HSO) and Release Order (RO) digitally, without the need to attend a physical CAC. The CAC Virtual Service has been expanded nationwide since mid-September 2021.

Individuals who report symptoms, especially warning signs such as fever, difficulty breathing, worsening lethargy, chest pain, cyanosis, fainting and drowsiness will receive SMS and Automated Voice Recording (robocall) calls asking them to go to a nearest health facility for further examination. In addition, individuals who report two (2) or more warning signs will receive a call from the Virtual CAC Outbound Team medical team to confirm the individual's condition and provide ambulance assistance when required.

The entire process involves strategic collaboration between private agencies to ensure that the interventions implemented are effective. It involves TM One which provides the CAC Helpline call center, installation of hunting lines in PKD Operations Room as well as CAC around Greater Klang Valley and SMS broadcast service for sending SMS to identified individuals. In addition, TIMEdotCom also helped by providing Automated Voice Recording (Robocall) services for groups of individuals who have not yet answered Home Assessment Tool (HAT) questions in the Sejahtera application and for individuals who report Warning Signs; and VOIP (Voice over Internet Protocol) phone accounts used by Virtual CAC Outbound Caller medical personnel to make calls to identified patients.

Guidelines on Home Monitoring and Clinical Protocol at Primary Care for Category 1 and 2 Mild Confirmed COVID-19 Cases were produced and e-COVID training was carried out nationwide.

OUTSOURCING OF AMBULANCE SERVICES DURING COVID-19 PANDEMIC

During the peak of COVID-19 pandemic in 2021, the need for additional ambulances in managing COVID-19 cases became essential to transport patients from their home to a COVID-19 Assessment Center (CAC) or to an appropriate health facility for further management. 10 ambulances were outsourced from a private company to overcome the shortage especially in Selangor and Kuala Lumpur. Maha Mas Medic Services Sdn Bhd provided ambulance services for 24 hours from 16 August to 14 September 2021 at RM195,000 per month. These ambulances

were stationed at the CAC or health clinics, during operational hours and then deployed to the nearest hospital. This arrangement enhanced the quality of health care delivered to the patients and the approach was in line with the MOH Strategic Plan to reduce morbidity and mortality from COVID-19 infection. Due to the increased utilisation of ambulance services, the period of outsourcing was extended for another two (2) months from October to December 2021. The outsourcing strategy helped to fill gaps in patient care created by the COVID-19 pandemic.

MATERNAL HEALTH SERVICES

Malaysia has made remarkable progress in improving maternal health care services to an extraordinary level. The achievement of key maternal service indicators exceeded 90 per cent in 2021. These include antenatal screening (at least one (1) visit), safe birth and postpartum screening, with a coverage of 90, 99.3 and 96.2 per cent, respectively. The average antenatal visit per person exceeded 11 visits. The Maternal Mortality Ratio (MMR) had been stagnant since 2000, at 24.4 per 100,000 live births (LB) and remained at 24.9 per 100,000 LB in 2020. The five (5) main causes of maternal deaths in Malaysia were Postpartum Hemorrhage, Pulmonary Embolism, Associated Medical Conditions, Hypertensive Disorders in pregnancy and Amniotic Fluid Embolism.

The total number of new family planning acceptors registered at MOH clinics decreased from 126,086 (2019) to 120,437 (2020). However, the number of active users increased from 354,987 in 2019 to 359,077 in 2020.

Vaccine uptake among pregnant women and surveillance of maternal mortality due to COVID-19 infection was optimised to ensure safe pregnancy and birth. In December 2021, a revised Perinatal Care Manual, 4th Edition was launched with the objective to strengthen the care throughout the continuum of pregnancy among health workers in hospitals and clinics.

CHILD HEALTH SERVICES

Primarily, child health services that had been provided in health clinics include health promotion, prevention, health appraisal, early detection and intervention for growth and developmental problems, treatment and rehabilitation services for children from 0 to 6 years. Activities at primary health facilities resumed as usual during the COVID-19 pandemic.

ATTENDANCE OF CHILDREN TO PRIMARY HEALTH CARE CLINICS

Compared to 2020, the attendance of infants under the age of 1 year decreased from 54.20 per cent to 49.96 per cent, while children aged 1 to 4 years had increased from 29.79 per cent

to 33.52 per cent. Attendance among children aged 5 to 6 years had dropped from 13.76 per cent to 12.23 per cent.

DECLARATION OF MALAYSIA AS POLIO-FREE

After 27 years of being polio-free, the country reported its first case on 8 December 2019, and efforts were made through the setup of the Rapid Response Team involving representatives from Child Health Sector, Disease Control Division, Sabah State Health Department and Labuan State Health Department. The World Health Organization (WHO) declared Malaysia free from polio on 10 September 2021. The declaration came following a comprehensive assessment of polio control and prevention measures carried out in Malaysia by an evaluation team consisting of a panel of international experts.

NEONATAL, INFANT AND UNDER 5 DEATH RATES

Collaboration and coordination of data has been implemented with the Department of Statistics Malaysia in providing technical input for the publication of Vital Statistics Year 2021 as in the previous years. The mortality rate of children under 5 years decreased in 2020. Neonatal deaths (0-28 days) accounted for 1,827 cases (56.3 per cent), while 869 cases (26.7 per cent) deaths were among infants aged 28 days to 1 year old and a total of 552 cases (17.0 per cent) were toddler deaths (1 to 4 year old) were reported during the same period. The leading causes of neonatal deaths were congenital malformations and conditions during perinatal period, where the majority of cases were not preventable. Preventable deaths such as injuries and infections were mostly among children aged 28 days to 4 years.

SCHOOL HEALTH SERVICES

The school health programme was established in 1967 to ensure the students achieve an optimal level of health. School health services which comprised health education, screening, health appraisal, immunisation, treatment, related were provided to pre-school children to Form 4 students. During the COVID-19 pandemic, school health services were implemented according to the new norms. The average coverage of school health services compared to enrollment for students in Year 1, Year 6 and Form 3 exceeded 97 per cent for the past five (5) years.

In 2021, the highest percentage of overweight school children among Year 1, Year 6 and Form 3 students with 9.5 per cent, 21.6 per cent and 10.6 per cent respectively was in Terengganu. Obesity was the main health related issue in Perak (33.3 per cent), Terengganu (18.9 per cent) and Negeri Sembilan (9.5 per cent).

The achievement of Measles and Rubella (MR) and Diphtheria (DT) immunisation among Year 1 and Tetanus (ATT) vaccine for Form 3 students surpassed 97 per cent of the enrollment by school

year. However, the achievement of completed Human Papilloma Virus (HPV) immunisation in 2021 among female Form 1 students compared to enrollment decreased by 50 per cent compared to 2020. This was due to the Movement Control Order announced in early 2020 which led to school closures. This decline was also affected by the constrained global HPV vaccine supply.

In 2021, a total of 29,680 Form 4 students were offered Thalassemia screening services in schools. Of those who were offered the screening, 90.6 per cent school children obtained written consent to undergo the screening. However, only 26,436 underwent the screening. A total of 6,802 students (25.7 per cent) were suspected carriers of Thalassemia, while a total of 3,301 students (12.5 per cent) were suspected of having anemia due to iron deficiency anemia (IDA). Although there was a decrease in the number of screenings, the incidence of students suspected of being Thalassemia carriers and those with IDA remained in the same range of 23 to 27 per cent and 11 to 13 per cent respectively compared to the previous year.

ADOLESCENT HEALTH SERVICES

As of September 2021, a total of 171,435 adolescents (3.2%) underwent health screening. The five (5) main problems identified were nutritional health issues 13,188 cases (7.7%), risky behavioral health problems 3,236 cases (1.9%), sexual and reproductive health issues 1,240 cases (0.7%), mental health problems 657 cases (0.4%) and physical health problems 1,113 cases (0.6%).

The Age-Specific Fertility Rate (ASFR) among adolescents 15 to 19 years old has decreased from 28 per 1,000 per population (1991) to 8 per 1,000 (2019) (Department of Statistics Malaysia, 2019). Thus, the number of new antenatal cases among adolescents registered in MOH primary health facilities had also decreased from 11,024 (2017) to 7,560 (January-November 2021). It was found that 3,009 (39.8%) were unmarried adolescents and 6,355 (84.1%) were adolescents who had quit schooling. For 2021, Sarawak recorded the highest number (1,519 cases) of teenage pregnancy registered at MOH primary health facilities, followed by Sabah (1,187 cases) and Pahang (681 cases) (data from State Health Department, December 2021).

ADULT HEALTH SERVICES

CERVICAL CANCER SCREENING AND EARLY DETECTION OF BREAST CANCER PROGRAMME

The Cervical Cancer screening programme targets women aged 30 to 65 who have had sexual experience. In general, 90 per cent of cervical cancers are caused by Human Papilloma Virus (HPV). Thus, HPV screening which is able to detect the presence of high-risk HPV was introduced in 2019 in phases. The first phase involved the states of Kedah, Kuala Lumpur, Putrajaya, Kelantan, while the second and third phases were expanded to the states of Selangor, Negeri

Sembilan, Johor and Terengganu in 2020 and 2021. In 2021, a total of 196,303 women were screened, of which 189,365 (11.3%) women underwent Pap smear screening while 6,938 (0.4%) women were screened with HPV tests. In regards to HPV testing, the majority of women preferred self-sampling methods compared to assisted sampling. A total of 6,727 (97%) women opted for self-sampling while 211 (3%) women were assisted by health staff. Further analysis found that the majority of women, 5,624 (94.3%) were HPV negative. A total of 268 (4.5%) women were found to be HPV positive (HPV 16/18 and non-HPV 16/18) and referred for further investigation. However, only a small proportion of women who had undergone colposcopy were found to have pre-cancerous lesions and invasive cancers. These women, 29 (0.5%) with pre-cancer and two (2) women with invasive cancer were referred to gynae-oncologist for further management.

Regarding the Breast Cancer Early Detection Programme, Clinical Breast Examination (CBE) is one of the screening methods in health clinics. As of September 2021, a total of 999,969 (17%) women aged 20 years and above underwent CBE. From CBE, 1,792 (0.18%) women were found to have abnormal findings and were referred for further evaluation. Concerning mammogram screening programmes, 23,291 women aged 40 above were screened for breast cancer risks. There were 11,087 (5.0%) women were found to have risk factors for breast cancer. All of them were referred for mammogram screening but only 4,721 (42.6%) of women underwent the screening. This was due to the improvised standard operating procedure related to COVID-19 Pandemic. Mammography had identified 71 (1.5%) women with breast cancer and these women were referred for further management.

ELDERLY HEALTH CARE SERVICES

Elderly Health Services was introduced in 1996, based on the National Elderly Health Policy and Plan of Action; adapting the Public Health Framework by WHO with the concept of Healthy Aging to optimise the health of the elderly.

The National COVID-19 Immunisation Programme (PICK) was initiated on 24 February 2021 to all eligible citizens and non-citizens. Phase 2 began on 19 April 2021 targeting patients with health problems, elderly and people with disabilities, including those in institutions or care centers for the elderly. This programme was implemented through various initiatives such as:

- i. Appointment by MySejahtera at MOH facilities such as Vaccine Administration Centers (*PPV*), Health Clinics (*KK*), Hospitals and Private Clinics (Protect Health);
- ii. Mobile Team Units from the District Health Offices provide services to the senior citizens at both the registered and unregistered institutions/care centers; and
- iii. NGO Mobilization Teams visited the bedridden and disabled senior citizens.

The estimated population of senior citizens in Malaysia (2020) was 3.5 million (10.7%). As of 31 December 2021, a total of 3,330,248 (95%) seniors had completed two (2) doses of COVID-19 vaccination. A total of 1,022 elderly institutions/centers (registered and unregistered) were

visited where a total of 21,089 senior citizens and 7,140 employees completed two (2) doses of COVID-19 vaccination. The administration of booster doses to the elderly were introduced as an effort to provide optimal protection. As of 31 December 2021, a total of 1,400,133 (42%) seniors had received booster doses.

HEALTH SERVICES FOR PEOPLE WITH DISABILITIES

Outreach health services to bed-ridden patients and Persons with Disabilities (PWD) in the community through Domiciliary Health Care (DHC) Services continued its services despite the COVID-19 pandemic. DHC is a strategy to ensure continuous and comprehensive health care. Home visits for the domiciliary programme were conducted with an emphasis on prevention and infection control. Apart from conducting physical visits to patients' homes, telecommunication media were also utilised for non-critical and less urgent cases. Consultation and follow-up treatment were delivered online for specific cases as needed.

The palliative medicine element has been integrated into the DHC since 2016 involving 50 health clinics. In an effort to strengthen the services, various aspects to improve the quality of life of terminal patients are considered, such as treating pain symptoms as well as providing psychosocial, spiritual and emotional support to patients and their family members.

In 2021, a total of 1,515 patients and their family members had benefited from DHC in which 70 per cent of them were the elderly. For palliative care services, 100 patients were enrolled in the programme in the year 2021.

In 2021, the percentage of detection of disabilities among children aged 0 until 1 year had been used as a key performance indicator for the Early Childhood Intervention Programme. These performance indicators are an important element in the early detection of disability among children. This indicator indicates that when more children are screened at an early age, early intervention can be performed holistically. A total of 788 (0.16%) children out of 487,957 estimated live births were confirmed to have a disability and were given early intervention and referred to the designated multidisciplinary teams for further assessment and rehabilitation.

HEALTH LITERACY DEVELOPMENT SERVICES

Health Promoting Clinic (HPC) is the best platform in promoting health through health education activities. This is because the health clinic is the first point of contact with the community. The concept of this programme is promoting and delivering health messages at health clinics. HPC focuses on the display, presentation and layout of health education materials and the practice of corporate image.

This programme started in 2014 which involved four (4) health clinics in the state of Selangor as a pilot project and was expanded to the other states in 2015. Until 2021, this programme has expanded to 539 health clinics throughout Malaysia and a total of 230 clinics (42.7%) were awarded as Health Promoting Clinics.

NUTRITION DIVISION

NUTRITION POLICY & PLANNING SECTION

NATIONAL NUTRITION POLICY OF MALAYSIA (NNPM) 2.0

Malaysia is currently facing a double burden of malnutrition with the co-existence of undernutrition and overnutrition within the same household or even within the same person. Stunting and wasting among children aged below 5 years are increasing while childhood obesity and other diet related non-communicable diseases (NCDs) are also on the rise. Thus, the National Nutrition Policy of Malaysia (NNPM) 2.0 has been formulated as a mandate which gives impetus in maintaining, enhancing and achieving the well-being of the population. The NNPM 2.0 was officially launched by Prime Minister of Malaysia on 27 July 2021. This policy is the primary reference for the development and implementation of all nutrition and nutrition-related activities in Malaysia.

The NNPM 2.0 was a revised version of NNPM 2005. Its revision is in line with the rapid changes of dietary patterns and the increase of double burden of malnutrition in Malaysia. This NNPM also takes into consideration global commitments such as the Sustainable Development Goals (SDGs) 2015-2030 and Global Nutrition Targets (GNT) 2021. It also considers national commitments and strategies related to nutrition such as the Malaysia Five-Year Plan and the Shared Prosperity Vision 2030.

The NNPM 2.0 vision is to achieve nutritional well-being for a healthy nation through three (3) missions:

- i. to reduce the double burden of malnutrition of the populations;
- ii. to enhance food and nutrition security through sustainable food systems; and
- iii. to strengthen the health systems and multi-sectoral collaborations and partnerships in nutrition-specific and nutrition-sensitive strategies and programmes.

There are 13 strategies in this NNPM 2.0 which are translated into action via the National Plan of Action for Nutrition of Malaysia (NPANM) III. This plan adopted multi-sectoral and multi-stakeholder approaches.

FOOD SYSTEMS SUMMIT (FSS) 2021

Food Systems Summit 2021 was a global platform to achieve the Sustainable Development Goals (SDGs) by 2030. It was guided by five (5) Action Tracks (ATs), the Summit involved the key players from the world from all sectors. The five (5) ATs are:

- i. AT1: Ensure Access to Safe and Nutritious Food for All;
- ii. AT2: Shift to Sustainable Consumption;
- iii. AT3: Boost Nature Positive Production at Sufficient Scale;
- iv. AT4: Advance Equitable Livelihoods; and
- v. AT5: Build Resilience to Vulnerabilities, Shocks and Stress.

Malaysia had participated in this summit, led by the Ministry of Agriculture and Food Industries and The Food Safety and Quality Division, MOH as a curator and convenor for AT1, respectively, with involvement of Nutrition Division, MOH.

TOKYO NUTRITION FOR GROWTH (N4G) SUMMIT

The Tokyo N4G Summit (N4G) 2021 provided a historic opportunity to accelerate the world's efforts to tackle the global challenges of malnutrition in all its forms. Tokyo N4G Summit 2021 was held on the 7 and 8 December 2021, hosted by the Government of Japan. The Summit convened all stakeholders to develop programmatic and financial commitments based on thorough review of their existing policies and programmes, and provided a platform for participants to show their commitments as well as share their experiences. All commitments were recorded in the outcome document of the Tokyo N4G Summit 2021. Malaysia participated in the summit and committed to the Establishment of a Guideline on the Implementation for the Healthy Central Kitchen (HCK) for Children at Childcare Centre and Kindergarden. The aim of the HCK is to inculcate healthy eating practices from young age to subsequently reduce the prevalence of double burden of malnutrition at older age. The concept of Healthy Central Kitchen is adapted from Japan's Shokuiku concept.

THE MID-TERM REVIEW OF THE NATIONAL PLAN OF ACTION FOR NUTRITION OF MALAYSIA (NPANM) III, 2016 TO 2025

The National Plan of Action for Nutrition of Malaysia (NPANM) III, 2016 to 2025 is a 10-year plan to address nutrition problems in the country. The mid-term review of the Plan was conducted to assess the status of implementation and to improve the nutrition programmes and activities under this plan. The priorities and way forward of nutrition's programmes and initiatives in the country have also been identified for the second term implementation of NPANM III. This review takes into consideration the 12th Malaysia Plan's direction, the National Nutrition Policy of Malaysia NNPM 2.0 as well as nutrition commitments at national and international levels. The mid-term review process has involved representatives from various ministries, government and non-governmental agencies, universities and non-governmental organisations (NGOs). In

advocating the implementation of the second term of the plan, a Handbook: Mid-term Review of the National Plan of Action for Nutrition of Malaysia (NPANM) III, has been published as a guide and reference at different level of implementation. In addition, to strengthen the monitoring of this Plan, an online monitoring system (MS-NPANM) is actively being developed to replace the manual monitoring mechanism.

INVOLVEMENT OF NUTRITION DIVISION UNDER THE FOOD SECURITY POLICY CABINET COMMITTEE (FSCC)

The Food Security Policy Cabinet Committee (FSCC) was established on 25 March 2020 based on the Cabinet's responses to the impact of COVID-19 on the country's food and nutrition security. The FSCC is chaired by the Prime Minister and is coordinated by the Ministry of Agriculture and Food Industry (MAFI). There are four (4) clusters under the FSCC namely Availability, Accessibility, Food Safety & Nutrition and Stability & Sustainability Cluster. The Nutrition Division and Food Safety & Quality Programme plays a role as the joint secretariat for the Food Safety and Nutrition Cluster which is chaired by the Secretary General, MOH. In addition, there is a representative from the Nutrition Division in all other clusters. The National Plan of Action for Food Security Policy, 2021 to 2025 has also been developed and has been agreed upon by the cabinet level committee. There are several nutrition activities that have been integrated into this action plan.

REVIEW AND DEVELOPMENT OF MALAYSIAN DIETARY GUIDELINES

The Malaysian Dietary Guidelines (MDG) is the main reference for healthy eating at various levels which is intended for health professionals, as well as those who conduct nutrition education directly or indirectly to the public. The MDG development takes into account the nutritional status, recommended nutrient intakes for Malaysians, latest scientific evidence, culture and religion practiced by the society. The publication of *Panduan Diet Malaysia* (PDM) is coordinated by the Nutrition Guidelines Technical Working Group, under the National Food and Nutrition Coordinating Committee. Activities such as Focus Group Discussion (FGD) with health professionals and consensus sessions with stakeholders were conducted before each MDG was published. This is to ensure it is being understood and not congruent with other policies in the country. In 2021, the MDG 2020 focuses on the adult population aged 18 to 59 years and the Malaysian Food Pyramid (MFP) 2020 as a reviewed result of MDG 2010 and the MFP 2010 revision. Advocacy via various platforms such as live broadcasts on television and Facebook, periodic posts on social media as well as online talks to relevant ministries and agencies were actively conducted. The MDG for Children and Adolescents and MDG for Vegetarians drafts are also being updated based on information in the MDG 2020 and MFP 2020.

NUTRITION RESEARCH PRIORITIES IN MALAYSIA FOR TWELFTH MALAYSIA PLAN (2021 TO 2025)

The Nutrition Research Priorities (NRP) was established since Tenth Malaysian Plan (MP), based on the national needs as delineated in the National Plan of Action for Nutrition of Malaysia (NPANM) to underscore the importance of nutrition in enhancing population health, preventing diet-related diseases and strengthening food and nutrition security. The NRP for Twelfth Malaysia Plan (Twelfth Plan) (2021 to 2025) was developed and comprised of seven (7) research priority areas in the NRP for Twelfth Plan namely;

- i. Maternal, Infant and Young Child Nutrition;
- ii. National Food and Nutrition Situation;
- iii. Life Course Approach to Food Intake and Dietary Practices;
- iv. Nutritional Deficiencies and Excesses;
- v. Overweight and Obesity;
- vi. Diet-Related Non-Communicable Diseases; and
- vii. Nutrient and Non-nutrient Composition of Foods.

The top three (3) ranking of topics in each research priority area of the NRP have been adopted into the Health Research Priority Setting for Twelfth Malaysia Plan under the Nutrition, Food Safety and Quality chapter. In 2021, the first Webinar on the NRP in Malaysia for Twelfth Plan was organised by the Technical Working Group on Nutrition Research, under the purview of the National Coordinating Committee of Food and Nutrition and co-organised by the Nutrition Division, Ministry of Health Malaysia, the Nutrition Society of Malaysia (NSM) and the National Sports Institute of Malaysia (ISN). Two (2) sessions of the Webinar were conducted on 15 July 2021 (co-organised by NSM) and 23 July 2021 (co-organised by ISN).

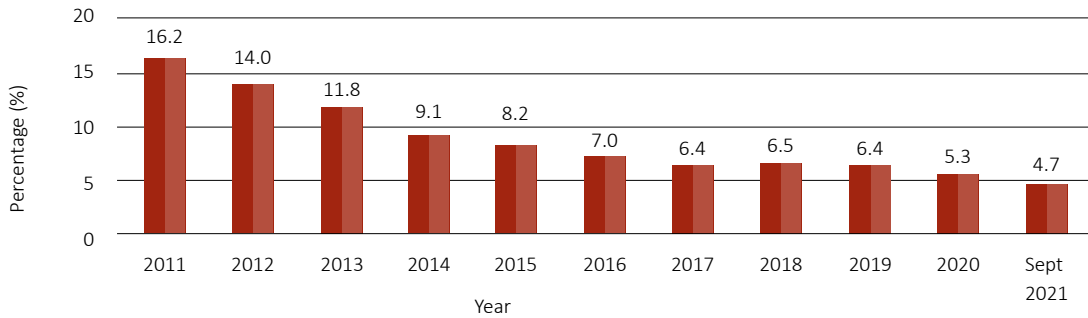
This webinar attracted a total of 908 participants. Generally, most of the participants were researchers from universities (32%) and nutritionists (30%), followed by person in-charge from research management centers (21%), professional bodies (5%) and others (12%).

FAMILY NUTRITION SECTION

PREVENTION AND CONTROL PROGRAMME FOR ANAEMIA AMONG PREGNANT MOTHERS

Iron deficiency anemia (IDA) is the common cause of anemia among pregnant mothers. It occurs due to the increment of iron and other vitamin requirements for the development of fetus and maternal physiological changes during pregnancy. The percentage of anemia among pregnant mothers (Hb less than 11gm/dl) who attended government health clinics at 36 weeks of gestation decreased from 16.2 per cent in 2011 to 4.7 per cent in September 2021. The trend of achievement is as shown in **Figure 4.13**.

Figure 4.13
Percentage of Anemia Among Pregnant Mother (Hb < 11gm%) Attending Government Health Clinic at 36 Weeks of Pregnancy for the Year 2011 - September 2021

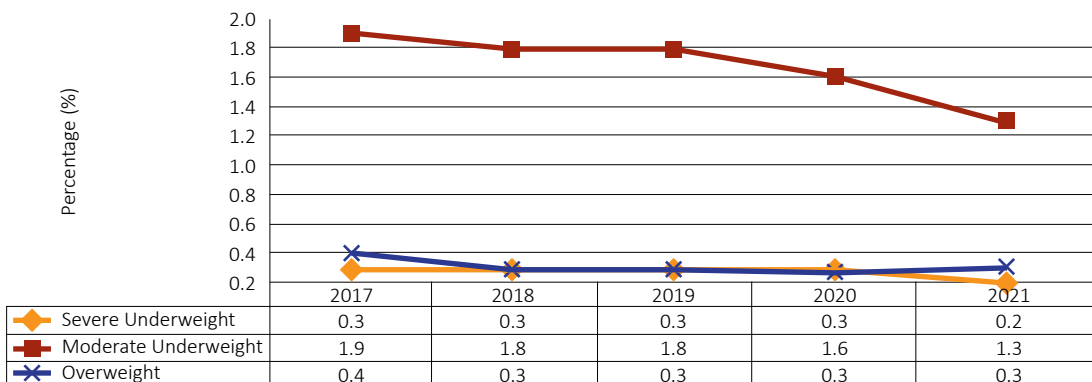


Source: Health Informatics Centre, MOH

NUTRITIONAL STATUS FOR CHILDREN BELOW 5 YEARS IN MALAYSIA

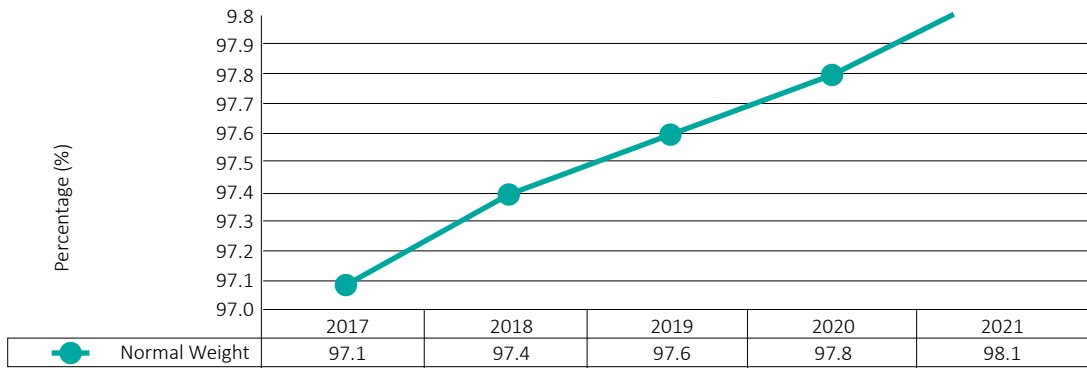
Generally, data from Health Clinics under MOH, in 2021 shows that the status of child nutrition under 5 years old has been improved with the percentage of children with normal weight increased from 97.8 per cent (2020) to 98.1 per cent (2021). The percentage of children with severe and moderate weight problems decreased from 0.3 per cent (2020) to 0.2 per cent (2021) and 1.6 per cent (2020) to 1.3 per cent (2021) respectively. The clinics trend from 2017 to 2021 is shown in **Figure 4.14** and **4.15**.

Figure 4.14
Nutritional Status of Children under 5 Years in Malaysia for Severe Underweight, Moderate Underweight and Over Weight for the Year 2017 to 2021



Source: State Health Department, 2021

Figure 4.15
Nutritional Status of Children under 5 Years in Malaysia for Normal Weight for the Year 2017 to 2021

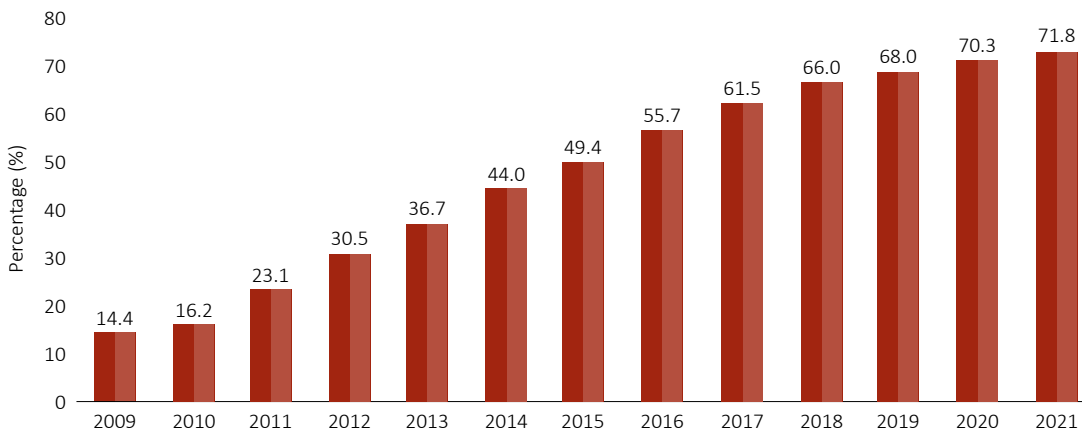


Source: State Health Department, 2021

INFANT AND YOUNG CHILD FEEDING

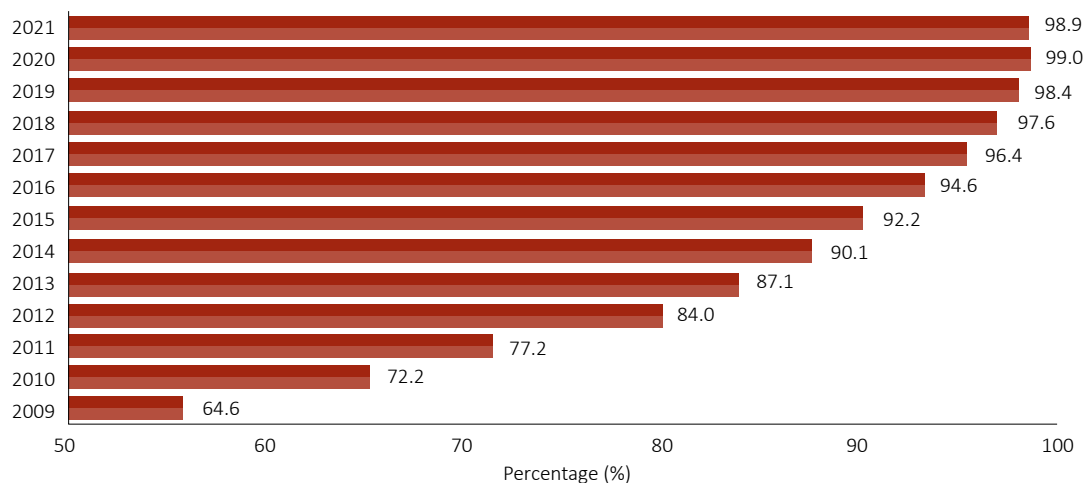
The percentage of exclusive breastfeeding from birth until 6 months has been increased from 70.3 per cent in 2020 to 71.8 per cent in 2021. Meanwhile, the timely initiation of complementary feeding at 6 months remains high throughout the years. The trend from 2009 to 2021 has shown in **Figure 4.16** and **4.17**.

Figure 4.16
Exclusive Breastfeeding Practices at 6 Months from the Year 2009 to 2021



Source: State Health Department, 2021

Figure 4.17
Timely Complementary Feeding Practices at 6 months from the Year 2009 to 2021



Source: State Health Department, 2021

BABY FRIENDLY HOSPITAL INITIATIVE

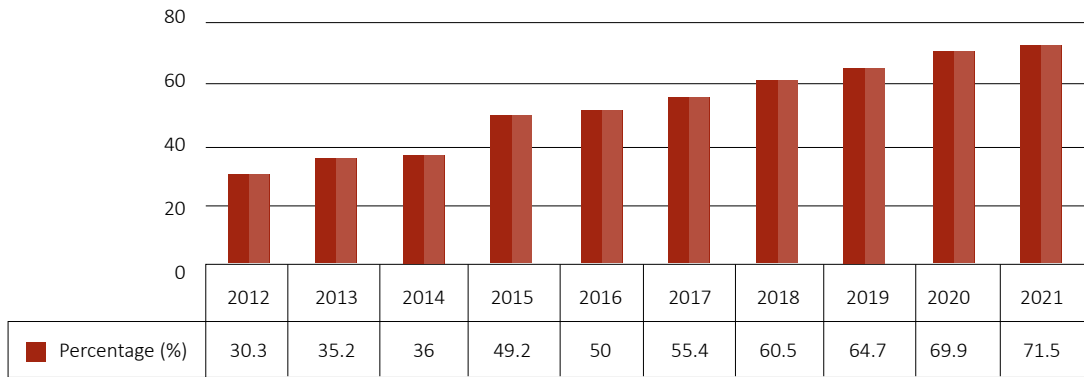
Baby Friendly Hospital Initiative is a global initiative by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) that has been implemented in Malaysia since 1993. This initiative ensures that all baby friendly maternity facilities practice the 10 Steps to Successful Breastfeeding. As of December 2020, a total of 159 hospitals providing mother and child services in Malaysia have been recognized as Baby Friendly Hospital of which 133 hospitals under the Ministry of Health Malaysia, three (3) hospitals under the Ministry of Higher Education Malaysia, three (3) Hospitals under Ministry of Defense Malaysia and 22 are Private Hospitals. New Guidelines for the Implementation of the Baby Friendly Hospital during COVID-19 published and revised in order to help motivate facilities providing maternity and newborn services and supporting mothers to breastfeed during COVID-19 pandemic.

REHABILITATION PROGRAMME FOR MALNOURISHED CHILDREN

Rehabilitation Programme for Malnourished Children is the government's effort to improve the nutritional status of malnourished children aged 6 months to below 6 years among low-income households and poor families. Starting in 2021, the Poverty Line Index (PLI) 2019 has been used to screen the eligibility based on their household income.

In 2021, a total of 6,221 malnourished children from low-income households enrolled in this programme. As for this year, based on **Figure 4.18**, 71.5 per cent have managed to increase weight during the assessment period in 2021. Despite the COVID-19 pandemic, this percentage continues to show a trend from time to time.

Figure 4.18
Percentage of Malnourished Children with Increased Body Weight for the Year 2012 to 2021



Source: State Health Department

Image 4.7
Rehabilitation Programme for Malnourished Children



Underweight Children in the program with the food aid (food basket) received every month.

Health assessment to underweight children in the program by nurse during routine health clinic appointment.

Source: State Health Department

COMMUNITY FEEDING PROGRAMME (PCF)

The Community Feeding Programme was started in 2013. This is a complementary programme to strengthen the implementation of Rehabilitation Programme for Malnourished Children by increasing the nutritional status of children aged between 6 months to 6 years from hardcore poor households among indigenous people.

There are 49 centers in Perak, Pahang and Kelantan in 2021 benefiting 1,378 indigenous children. The achievements for both indicators of this programme showed over the target which is 95.3

per cent for the percentage of coverage (target: $\geq 95\%$) while 27.4 per cent for percentage of recovery for malnourished children after six (6) months in the programme (target: $\geq 25\%$)

Figure 4.19
Percentage of Coverage for Malnourished Children in Community Feeding Programme for the Year 2017 to 2021

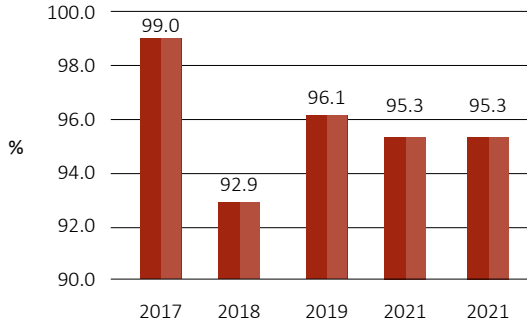
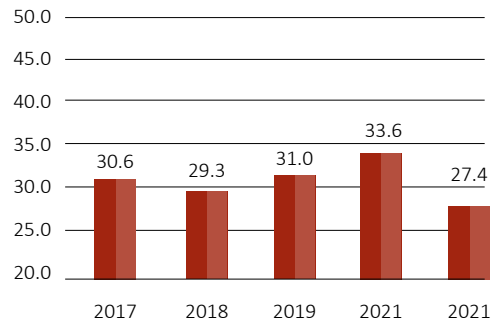


Figure 4.20
Percentage of Recovery for Malnourished Children after 6 Months in the Programme for the Year 2017 to 2021



Source: State Health Department, 2021

Image 4.8
Community Feeding Programme (PCF) Activities



Source: State Health Department

NUTRITION ACTIVITIES INVOLVING PARENTS IN KINDERGARTENS AND PRESCHOOLS

This activity aims to empower parents on healthy eating so that they can be role models to their children. Reporting on nutrition activities involving parents has been conducted in government preschool institutions of MOE, kindergartens of Community Development Department (KEMAS) and Department of National Unity and Integration (JPNIN). As of December 2021, 82.4 per cent (13,419 of government kindergartens and preschools institutions) have conducted these activities. These activities show an increase of almost 30 per cent compared to 2020. Activities

that have been carried out with parents include *Projek Pintar Botani*, healthy eating tour, cooking demonstrations, healthy bento preparation, nutrition collage and establishment of nutrition information corner. However, about 2,858 kindergartens and preschools were unable to carry out these activities due to the constraints of the COVID-19 outbreak that is still ongoing in the country.

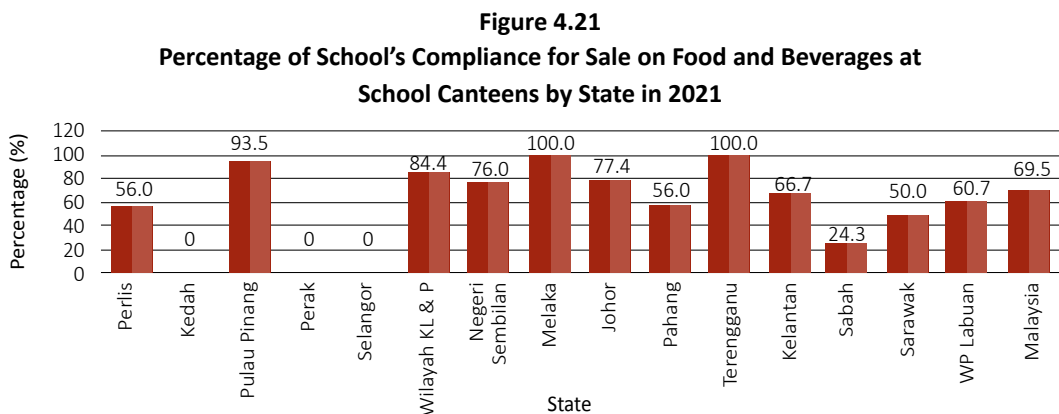
NUTRITIOUS SCHOOL MEAL PROGRAMME (HiTS)

The Nutritious School Meal Programme (HiTS) is a package of nutritious meals consisting of carbohydrate and protein sources, vegetables and fruits for school children. The participation of the students into this programme is on a voluntary basis. Currently, 70 schools had implemented HiTS throughout Malaysia, with nine (9) new schools implementing HiTS in 2021. However, until December 2021, HiTS has not started in two (2) states; Kelantan and Sarawak. To further support the HiTS activities, the Nutrition Division, MOH has uploaded HiTS infographic material on the website and Facebook of the Nutrition Division.

SALE ON FOODS AND BEVERAGES AT SCHOOL CANTEEN

The foods and beverages sold in the school canteens were monitored to ensure their compliance to the School Canteen Management Guidelines. This activity was reported to the Nutrition Division twice a year in June and December. There were only 228 schools rewarded with certificates of appreciation for their compliance in 2021.

As shown in **Figure 4.21**, 69.5 per cent (291 schools out of a total of 419 schools monitored) of schools complied with the school canteen guidelines. Among all states, Melaka and Terengganu had the highest percentage of compliance, with all schools monitored being in compliance (100%). Thus, to improve the compliance, Healthy Catering Training and continuous guidance to the canteen operators would be strengthened.



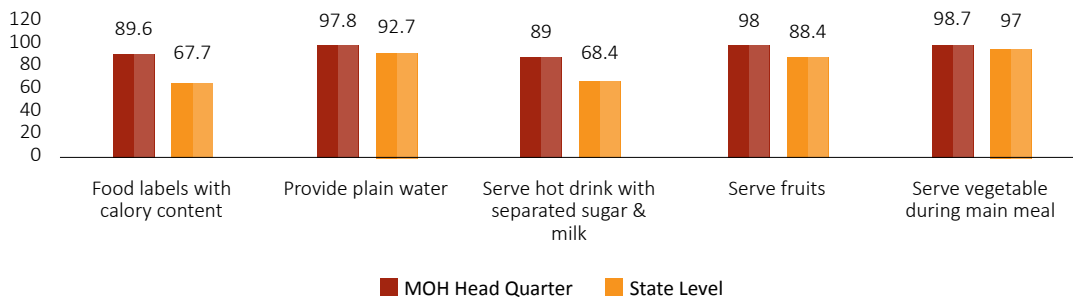
Source: State Health Department

ADULT AND ELDERLY NUTRITION

HEALTHY FOOD PREPARATION DURING MEETINGS (PHSSM)

Healthy Food Preparation during Meetings (PHSSM) is an initiative by the MOH to encourage healthy eating practices in the workplace by serving healthier food choices to the meeting participants. PHSSM has been implemented in MOH since 2011. By December 2021, 21 out of 29 (72.4 per cent) Divisions at MOH Headquarters has implemented PHSSM, which involved 1,323 meetings. PHSSM also has been implemented at state level which involved 1,611 meetings in 2021. The details of the implementation of PHSSM at the MOH Headquarters and state level according to the PHSSM criteria are shown in **Figure 4.22**.

Figure 4.22
Percentage of PHSSM Implementation According to PHSSM Criteria at the MOH Headquarter and State Level For The Year 2021



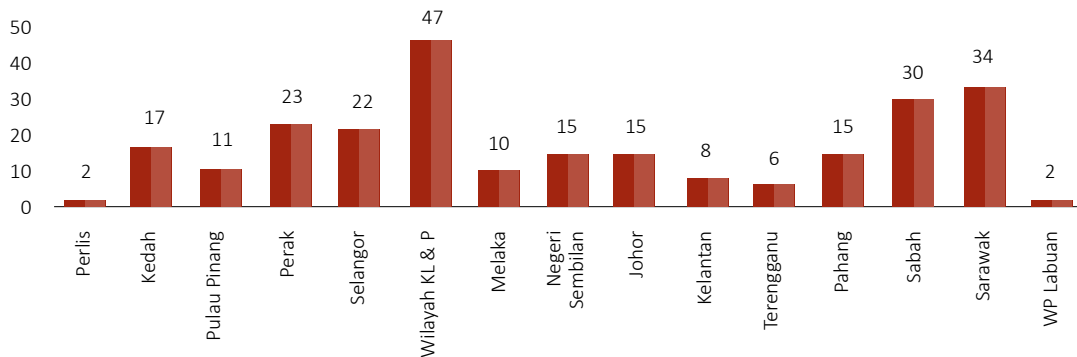
Source: State Health Department

HEALTHY CAFETERIA

Healthy Cafeteria recognition is one of the initiatives taken by the MOH in supporting healthy eating practice among Malaysians. This recognition is awarded to cafeterias which prepare, serve and sell healthy, clean and safe food in accordance with Healthy Cafeteria Recognition Guidelines.

In 2021, 25 cafeterias in health facilities and one (1) cafeteria in other government agencies have been recognized as Healthy Cafeterias. Federal Territory of Kuala Lumpur has the highest number of Healthy Cafeterias with 47 outlets, followed by Sarawak and Sabah with 34 and 30 outlets, respectively. **Figure 4.23** shows the number of Healthy Cafeterias by state in 2021.

Figure 4.23
Number of Healthy Cafeterias by State in 2021



Source: State Health Department

HEALTHY CATERING TRAINING

In 2021, two (2) Healthy Catering Training sessions were conducted in the MOH Headquarters. The first session involved 12 food operators and food handlers who provided food services at the Ministries building in Complex E, Putrajaya and the second session involved 75 chefs, sales managers and banquet managers from the hotel industry. At the state level, a total of 4,411 schools have been trained with Healthy Catering which includes canteen operators, cooks and assistant cooks from 8,550 schools with canteens throughout Malaysia. This covers an achievement of 51.6 per cent against the target of KPI for Healthy Catering Training 2021 which is 60 per cent. There are districts/areas/divisions unable to achieve the Healthy Catering Training target due to the closure of school canteens in line with the implementation of Movement Control Order in 2021 in curbing the spread of COVID-19 epidemic. Although the training sessions were continued online, there were food operators and food handlers who faced internet access constraints especially in rural areas and internet data purchase constraints among low-income food entrepreneurs and handlers.

COMMUNITY & INTER AGENCY NUTRITION

HEALTHY EATING ACTIVITIES INVOLVING PARENTS IN CHILD CARE CENTERS

Healthy eating activities that involved parents in childcare centers focused on empowerment of parents in fostering healthy eating practices. Environmental support systems are essential in nurturing healthy eating practices in children under 5 years of age. In 2021, the achievement for these activities was 84 per cent, with 567 out of 675 childcare centers under the management of ministries and government departments such as Community Development Department

KEMAS, the Department of National Unity and National Integration and the National Genius Children's Center (PAGN) having carried out healthy eating activities. All childcare centers under *Perpaduan* (41 units) and PAGN (89 units) have carried out nutrition activities with parents. These activities include nutrition talks, healthy cooking/bento competitions, supermarket trips, home cooking videos, production of learning materials and others.

EMPOWERMENT OF PARENTS AND TEACHERS' ASSOCIATION (PTA) INITIATIVE TO COMBAT OBESITY AMONG SCHOOL CHILDREN *CARA HIDUP ANDA TERBAIK* - (C-HAT)

The C-HAT initiative is a smart collaboration with Ministry of Education (MOE) which empowers trained PTA members as ambassadors to address obesity problems among school children. The C-HAT initiative has been selected as the Key Performance Indicator (KPI) of the Director of the Nutrition Division in 2021, the percentage of PTAs that have a C-HAT Head Coach (JU) implement nutrition and health activities, with the target of 100 per cent of those PTAs implementing such activities.

Two (2) online briefing sessions were held on 14 April 2021 and 26 July 2021. A total of 38 PTA members were trained and appointed as new C-HAT JU bringing the total number of C-HAT JU to 81 people from 70 schools and 41 districts. In addition, the C-HAT Module video was produced as an advocacy facilitator of the C-HAT Initiative for PTA members, particularly those in rural areas, in the time of the COVID-19 pandemic. For the year 2021, meetings and discussions on collaborations with *Kumpulan Penggerak Ibu Bapa, Komuniti & Swasta* (KPIBKS) were also held with KPIBKS Johor and KPIBKS Perak to discuss the way forward of the programme and forms of collaboration that can be carried out. Due to virtual school time constraints as well as the emphasis of school administrators on the learning syllabus, only 20 per cent (14/70) of school PTAs with C-HAT JU have implemented nutrition and health activities in the year of 2021.

TRIM & FIT WEIGHT MANAGEMENT PROGRAM MODULE BRIEFING

Trim & Fit Weight Management Program Module Briefing was held on 22 to 24 September 2021. The briefing was attended by 83 officers from each state consisting of KPAS Officers, Family Physicians, Nutritionists, Pharmacists, Medical Rehabilitation Officers (Physiotherapy), Health Education Officers and Psychological Officers.

The main objective of this briefing is to train a team from each state in preparation for the implementation of the program expansion. The briefing included a talk on the Health Screening Module, Motivation Assessment, Obesity and Health, Abuse of Supplements and Slimming Pills, Healthy Eating Practices, Motivation, Exercise and Physical Activities, Monthly Activities and Weekly Activities. The way forward in the year 2022 is to hold a briefing on this module at the state and district levels by the state's coordination team.

CODE OF ETHICS FOR THE MARKETING OF INFANT FOODS AND RELATED PRODUCTS

Code of Ethics for the Marketing of Infant Foods and Related Products has been implemented in Malaysia since 1979 to protect breastfeeding practices from the marketing activities of infant formula milk products, complementary foods, feeding bottles, teats and pacifiers. The Code of Ethics is implemented through activities of the state monitoring team to detect alleged violations by companies and professionals or health personnel.

A total of 258 complaints on alleged violations of the Code were received from 15 states, one (1) companies' competitor and one (1) individual for monitoring sessions conducted throughout 2020. A total of 35 (13.6%) complaints met the criteria to be brought to the discussion of the Disciplinary Committee on the Code of Ethics for the Marketing of Infant Foods and Related Products held in 2021. A total of 12 complaints on alleged violations involving eight (8) companies, six (6) infant formula milk companies and two (2) feeding equipment companies were discussed at the meeting. The committee has decided that all (100%) of the alleged complaints discussed were valid and imposed penalties.

The Code of Ethics also conducts vetting on labels and information materials of infant formula milk products and complementary foods to control promotion through product marketing. During 2021, a total of 84 labels and information materials of infant formula products and complementary food were received from 14 manufacturers and distributors of infant formula and complementary foods. A total of 77 materials have met the checklist and have been discussed in five (5) series of Vetting Committee on the Code of Ethics for The Marketing of Infant Foods and Related Products Meeting which was held throughout 2021. Following the meeting, the total number of approval codes issued for 2022 is 76.

HEALTHIER CHOICE LOGO (HCL) MALAYSIA INITIATIVE

The Healthier Choices Logo (HCL) Malaysia is was initiated on 20 April 2017. Those HCL products are considered the healthier option when compared to the other products within the same category. In general, the HCL initiative aims to help consumers to make informed choices by merely looking at the front label of food packages, and to identify healthier products compared to others in the same category. Moreover, HCL encourages the food and beverage industries to conduct reformulation and change the recipes of the products and hence manufacture healthier products in the market. A HCL Expert Committee has been established and is responsible for HCL's nutrient criteria revision since 2018. Beginning 1 April 2019, HCL applications and authentications solely depend on the latest HCL nutrient criteria released. Presently, a total of 530 cumulative products have been authenticated with the HCL Logo up until 31 December 2021. The continual support and efforts from multi stakeholders are required to strengthen the implementation of this HCL initiative. Also, HCL advocacy and promotion will be carried out from time to time to boost up consumer awareness and understanding towards HCL initiative.

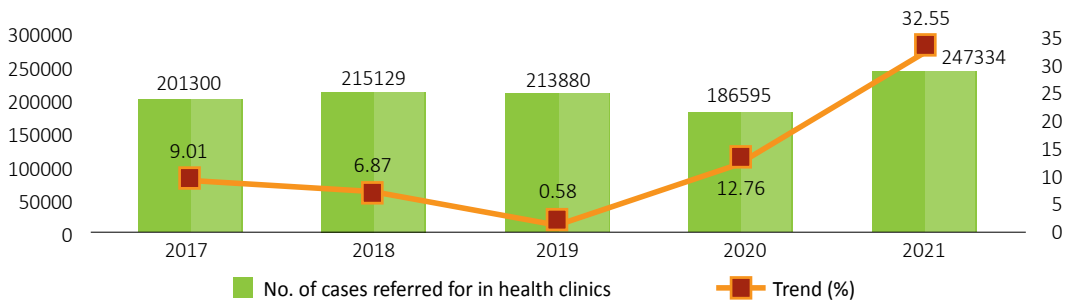
NUTRITION ADVOCACY THROUGH VARIOUS MEDIA PLATFORMS

Nutrition advocacy has been given focus and intensified using social media platforms in the event of the COVID-19 epidemic in 2021. This situation has limited physical encounters for the implementation of nutrition advocacy activities at all levels, especially the health clinics and the community level. Among the social media platforms being used are Facebook, Instagram, Twitter and YouTube. To date, the Nutrition Division official Facebook page has a total of 221,000 followers, Instagram (20,000 followers), Twitter (22,000 followers) and YouTube Channel (3,000 subscribers). A total of 517 nutrition-related infographics were being shared and a total of 33 Facebook Live sessions were conducted this year. In addition, nutrition messages have also been advocated using electronic media through television and radio interview slots and publication of nutrition articles in printed media.

NUTRITION CONSULTATION

Nutrition consultation service was carried out by 329 nutritionists covering 332 health clinics throughout Malaysia. The nutritional consultation sessions were being conducted either on an individual basis or in groups that covered pregnant mothers, infants and young children, adolescents, adults and elderly. **Figure 4.24** indicates a total of 245,565 cases being referred for nutritional consultation in 2021. The number of referred cases increases to about 32.55 per cent compared to the number of cases referred in 2020 (186,595). The increase was believed to be closely related with the implementation of nutrition consultation conducted on a group basis. Therefore, the coverage of the total number of clients increased at the same time.

Figure 4.24
Trends and Number of Cases Referred for Nutrition Consultation by Nutritionist in Health Clinics throughout Malaysia for the Year 2017 to 2021



Source: Reten RCP 201 (2021)

SMARTPHONE APPLICATION MyNutriDiari 2 (MND2)

In line with the current technology developments, the MyNutriDiari 2 (MND2) smartphone application was introduced. The MND2 application was designed to help users to monitor the amount of calories they consume in order to obtain their ideal weight. As of December 2021, a total of 177,716 users have downloaded the application.

HEALTH EDUCATION DIVISION (HED)

Health literacy may be defined as personal competencies to access, understand, appraise and use information that impact the process of making decisions about health in daily life. High levels of health literacy could improve the health and quality of life of the community. The functions of the HED have been implemented through the National Agenda for Healthy Malaysia (ANMS) by focusing on four (4) Thrusts namely Strengthening the Promotion of Healthy Living Culture, Strengthening Health Wellness Services, Strengthening Self Health Control and Strengthening Environmental Cleanliness.

ENHANCING PROMOTION OF HEALTHY LIVING CULTURE

Health Promotion is process of enabling and empowering people, communities and societies to take charge of their own health and quality of life. Various activities implemented and media platforms used to ensure that the community benefits from accurate and instant health messages at the grassroots level.

PROMOTION OF HEALTH LIVING CULTURE THROUGH MEDIA

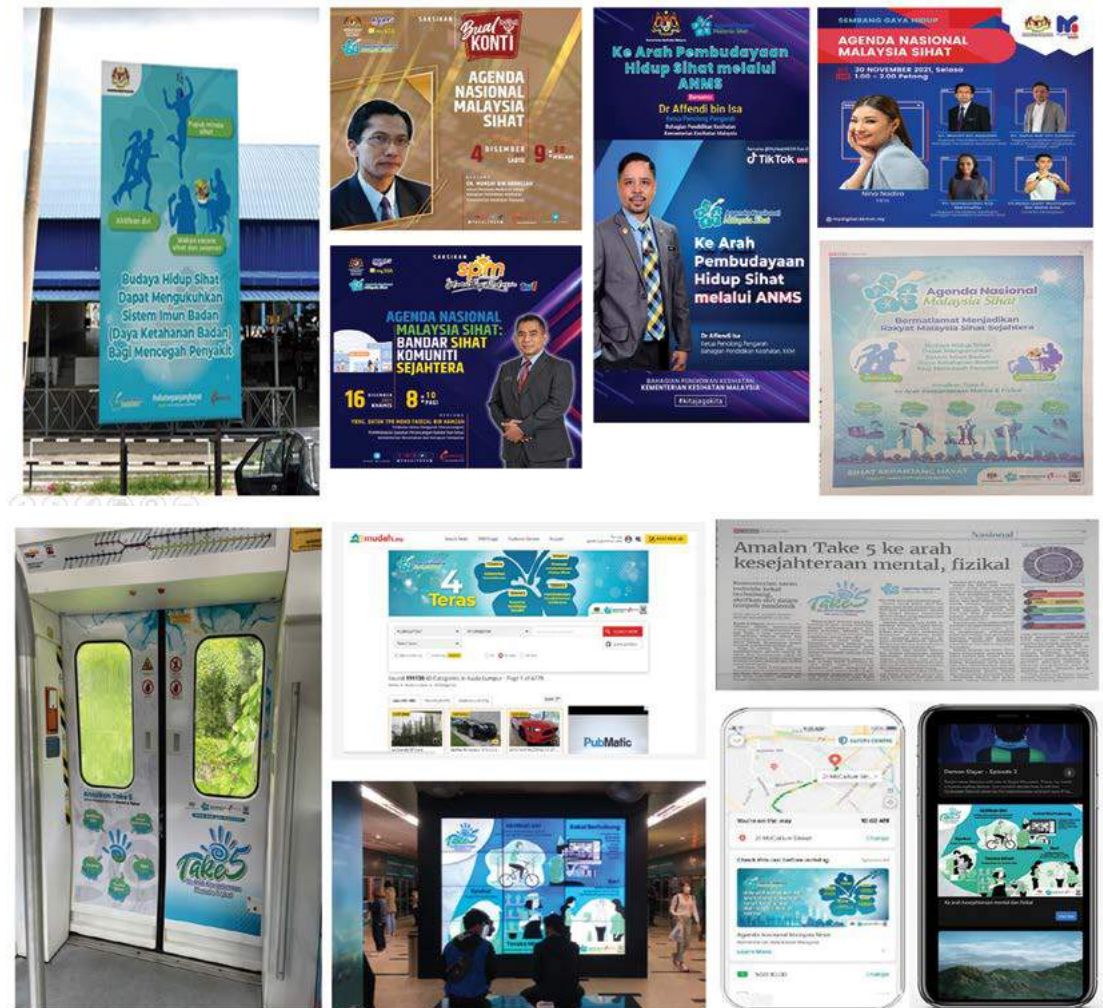
HED launched the Campaign on Healthy Living Culture through ANMS as a strategy to increase awareness, understanding and empower people to adopt healthy living culture. Throughout 2021, a total of 5,720 health promotion and education materials related to healthy living culture have been developed consisting of various materials such as infographics, videos, e-magazines, pamphlets, posters, buntings and others (**Image 4.9**).



Source: Health Education Division, MOH

Various media channels are optimally used to promote the healthy living culture such as social media (Facebook, Twitter, Telegram, Youtube, TikTok and Instagram), conventional media (television and radio), printed media (*advertorial* and *center spread*) and outdoor media. Apart from these, promotion on healthy living culture was also advertised via online apps (Grab, Mudah, Carousel, Waze, Viu and Spotify) and public transports (Commuter Wrap and LED board at LRT/Monorail Station) (Image 4.10).

Image 4.10
Promotion on Media Channels



Source: Health Education Division, MOH

PROMOTION OF HEALTH LIVING CULTURE THROUGH ACTIVITIES

Healthy living culture was also promoted via implementation of activities campaign launching ceremony, webinar, e-learning, FBLive, celebration of special health days, competitions (Langkah Merdeka, MyHealth Challenge, Video Challenge and Virtual Run) and others.

ANMS LAUNCHING CEREMONY

The ceremony was launched by the Prime Minister on 11 November 2021 via live telecast on the Selamat Pagi Malaysia (SPM) program at SPM Studio, Wisma Berita, Angkasapuri, Kuala Lumpur. The activities carried out at the event include launching speech by the Prime Minister, Health Chit Chat with Health Minister and invited panels, launching of ANMS promotional materials and ANMS ministerial commitment video broadcasting. The live telecast via SPM was reached to 276,000 people (**Image 4.11**).

Image 4.11
ANMS Launching



Source: Health Education Division, MOH

ANMS EXHIBITION IN CONJUNCTION WITH 100 HARI ASPIRASI KELUARGA MALAYSIA

HED participated in an exhibition at the *100 Hari Aspirasi Keluarga Malaysia (AKM)* Program at KLCC on 9 to 12 Disember 2021. The exhibition aimed to promote the ANMS and *Let's Talk Minda Sihat*. Activities carried out during the exhibition include Fitness Screening, *Warga Sihat* Health Screening (SKWS), Healthy Eating, Information on COVID-19 Care Package (PPC) and Feedback Sharing on Wall of Health. A total of 2,628 attended the exhibition that was held for five (5) days (**Image 4.12**).

Image 4.12
ANMS Exhibition in Conjunction with *100 Hari Aspirasi Keluarga Malaysia*



Source: Health Education Division, MOH

LAUNCHING OF LET'S TALK MINDA SIHAT MEDIA CAMPAIGN

The Let's Talk Minda Sehat Media Campaign was launched by Minister of Health on 10 October 2021 in conjunction with World Mental Health Day via FBLive on the official Facebook of MOH. The campaign aims to empower communities and encourage family members and friends of those in need to help and support them for better mental health wellbeing. The launching ceremony that was broadcasted on social media reached a total of 313,362 people with a number of 225,400 FBLive viewers (**Image 4.13**).

Image 4.13
Launching of Let's Talk Minda Sehat Media Campaign



Source: Health Education Division, MOH

Image 4.14
Competition and Infographic of T.A.L.K.



Source: Health Education Division, MOH

WEBINAR HIDUP BERSAMA-SAMA VIRUS COVID-19: KANAK-KANAK DAN REMAJA

This webinar was used as a medium to promote a healthy living culture. Entitled *Hidup Bersama-Sama Virus Covid-19: Kanak-Kanak Dan Remaja* this webinar was held on 30 September 2021. Its aim was to raise public awareness, especially children and adolescents, on the preparation to live with COVID-19 phase. A total of 3,077 participants participated in this webinar with 159,000 views and 614,800 reaches. Among the topics presented during this webinar sessions were *Alam Persekolahan: Hidup Bersama-sama Virus COVID-19, Remaja dan COVID-19, Take 5, Pengoperasian Sekolah di Fasa Pemulihan Negara* and Standard Operation Procedure (SOP) *Sesi Persekolahan (Image 4.15)*.

Image 4.15

Hidup Bersama-Sama Virus COVID-19: Kanak-Kanak dan Remaja Webinar



Source: Health Education Division, MOH

VIRTUAL E-LEARNING

Virtual E-Learning interactive education and promotion was implemented using HePiLI Network's Facebook and Instagram platforms. A total of four (4) Facebook live sessions and four (4) competitions were carried out with a total of 6,712 participants, 809,260 reaches and 181,100 views.

FBLIVE WORKOUT

A total of 31 FBLive Workout sessions were implemented from 19 January 2021 to 27 November 2021 involving fitness coaches and Wellness Hubs throughout Malaysia. This FBLive session has reached 93,570 people, received 303,460 views and involved 167,998 participants (Image 4.16).

Image 4.16
FBLive Workout Session



Source: Health Education Division, MOH

WORLD CANCER DAY

World Cancer Day was celebrated on 4 February 2021 with the theme *I am and I will*. The celebration was jointly organised by the Health Education Division and the Cancer Unit, Disease Control Division, Ministry of Health Malaysia. Among the activities held were the World Cancer Day Virtual Run, Selfie Lavender Cancer Awareness Challenge and webinar sessions (Image 4.17).

Image 4.17
World Cancer Day Infographic



Source: Health Education Division, MOH

WORLD PHYSICAL ACTIVITY DAY 2021 (WOPAD)

World Physical Activity Day (WoPAD) was held on 6 April 2021 with the theme *Every Step Counts*. The launching ceremony was officiated by the Minister of Health and Broadcasted live on the MOH official social media platform. Various activities were held such as Virtual Run,

Steps Challenge and TikTok Challenge (Image 4.18). In conjunction with this event, there a ceremony was held to officiate the opening of the MoH Gymnasium and a prize presentation for KOSPEN@Activ on 12 April 2021.

Image 4.18
World Physical Activity Day Infographics

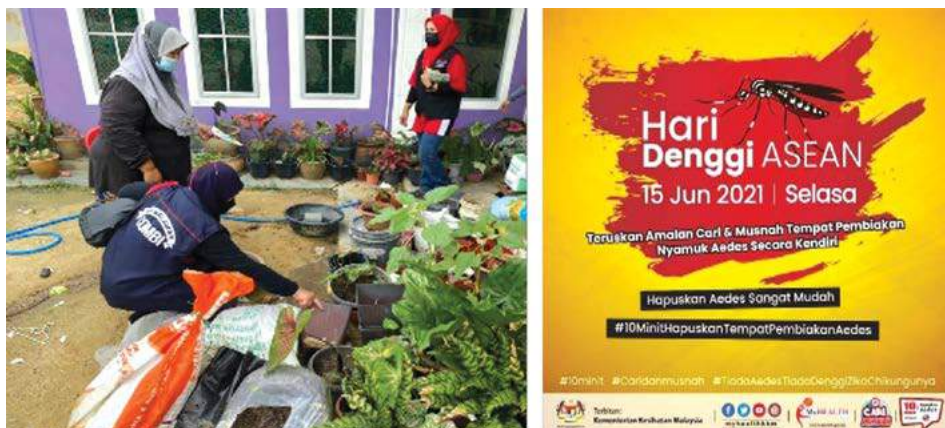


Source: Health Education Division, MOH

ASEAN DENGUE DAY FOR SUSTAINABLE ENVIRONMENT

The National ASEAN Dengue Day was celebrated on 15 June 2021 virtually with the theme *10 Minutes to Eliminate Aedes*. The celebration was aimed at raising awareness on self-practice in environmental clean-up activities and destroying Aedes breeding sites regularly (Image 4.19).

Image 4.19
“Search & Destroy” of Aedes Breeding Sites Activity and Health Education Pamphlet



Source: Health Education Division, MOH

MOH'S NATIONAL SPORT DAY

The National Sports Day celebration at MOH level was officiated by the Minister of Health Malaysia on 8th October 2021. The event was jointly organised by the Health Education Division and the Management Services Division. Various activities were held such as Tabata Workout, Fit Challenge, TALKXERCISE (ACTIVE 8-5) and IFitOnz Non-Stop (**Image 4.20**).

Image 4.20
MOH's National Sport Day Infographics



Source: Health Education Division, MOH

ENHANCING HEALTH WELLNESS SERVICES

Health wellness services including the Wellness Hubs and Wellness on Wheels (WoW) supports health promotion, the culture of healthy living among the people as well as environmental sustainability.

WELLNESS HUBS

Wellness Hub is a facility that provides integrated health promotion services to the local community by focusing on health wellness services to foster healthy living culture and environmental sustainability that supports health and well-being. The expansion and upgrading of wellness hubs in the states were implemented in stages and by phases. The upgrade and repair projects at Wellness Hub in 2021 involved five (5) Wellness Hubs, namely Wellness Hub Kerteh, Wellness Hub Kota Bharu, Wellness Hub Sultanah Aminah Hospital, Wellness Hub Pekan and Wellness Hub Telok Datok.

To strengthen the implementation of Wellness Hub services, Exercise Variation Courses and Exercise Plans for weight management interventions are organized together with certified fitness trainers. A total of three (3) course sessions were implemented with the participation of

100 health officers who were certified as fitness coaches. In 2021, a total of 36,262 customers received services at 28 Wellness Hubs nationwide.

WELLNESS ON WHEELS (WoW)

WoW is an innovation in the delivery of mobile health wellness services that is easily accessible and close to the people, equipped with services and equipment for the convenience of the community to access during outreach activities. As of December 2021, there were 17 WoW developed nationwide (**Image 4.21**). There were 58 outreach activities carried out by WoW and 4,895 activities implemented by Health Promotion Mobile Vehicles.

Image 4.21
Wellness Hub dan Wellness on Wheels (WoW)



Source: Health Education Division, MOH

EMPOWERING SELF HEALTH CONTROL

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

ENHANCING IMPLEMENTATION OF COMMUNITY EMPOWERMENT PROGRAM

Health empowerment programs are implemented for volunteers and health agents in various settings such as communities, workplaces and educational institutions and they are strengthened through capacity building and engagement.

MYCHAMPION CAPACITY BUILDING

MyCHAMPION consists of volunteers who are appointed and trained to assist the MOH in delivering health-related messages. MyCHAMPION consists of COMBI volunteers, KOSPEN, Health Advisory Panel, IKON GIGI, Duta Kenali Ubat, HePiLi and strategic partners. As of 31

December 2021, there were 700 volunteers who have been trained to become MyCHAMPION with a total of 1,109,609 activities implemented with the local community to ensure that they adopt the new norms, adhere to Standard Operating Procedures (SOPs), perform self-health controls and take vaccinations (**Image 4.22**).

Image 4.22
MyCHAMPION Activity



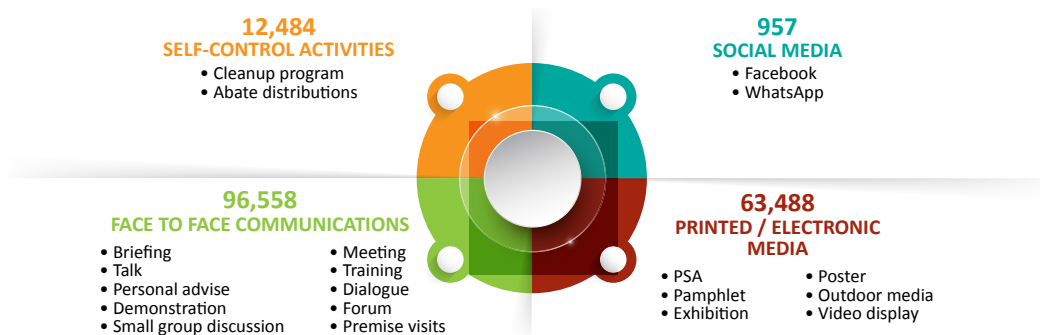
Source: Health Education Division, MOH

COMMUNITY EMPOWERMENT THROUGH COMMUNICATION FOR BEHAVIORAL IMPACT (COMBI)

COMBI is a social mobilisation and communication strategy to influence and empower individuals, families and communities to embrace the culture of healthy living and environmental cleanliness. The main goal of COMBI is to create own self responsibility on health so that the community themselves are able to identify local health issues, to make decisions and take remedial action through the implementation of healthy lifestyle and environmental cleanliness activities. In 2021, COMBI implemented various educational activities, promotion and empowerment of healthy living culture, new norms compliance with SOPs as well as activities to encourage vaccination in the community (**Figure 4.25**).

Figure 4.25

Health Education, Promotion and Community Empowerment by COMBI



Source: COMBI Information System (CoMBis), MOH

In addition, activities involving the management and empowerment of local leaders and communities for the Aedes Wolbachia Mosquito Expansion Project were carried out in four (4) states namely Kelantan, Melaka, Pahang and Negeri Sembilan.

EMPOWERMENT OF STRATEGIC PARTNERS

HED conducted engagement sessions with strategic partners comprising of public and private agencies as well as Non - Governmental Organizations (NGOs) in an effort to expose them to healthy living culture initiatives. Throughout 2021, a total of 391 strategic partners were involved in meetings, webinars, briefings and town halls.

In an effort to strengthen cooperation with strategic partners to promote healthy living culture, a Memorandum of Cooperation (MoU) between MOH and Ministry of Unity Malaysia has been signed on 31 March 2021. Among the scopes of cooperation are to develop a healthy and productive community through healthy lifestyle practices and new norm behaviors, to add value to Unity Community programs and activities through the adoption of basic health education elements and COVID-19 preventive surveillance and to train volunteers among the *Komuniti Perpaduan*.

The empowerment of the community in voicing out their right to have a smoke-free environment through the Speak Out Campaign has been implemented in collaboration with NGOs and the Cameron Highland Municipal Council. The collaboration included outreach activities to empower residents around Cameron Highland to say “NO” to cigarette smoke (**Image 4.23**).

Image 4.23

Speak Out Campaign Activities with NGO dan Cameron Highland Municipal Council



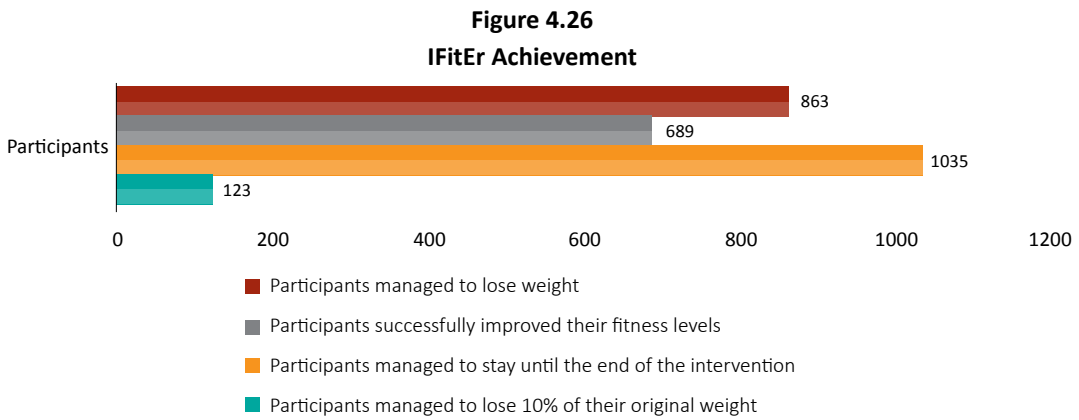
Source: Health Education Division, MOH

ENHANCING HEALTH PROMOTION INTERVENTION PROGRAM

An intervention program with an emphasis on the modification of behaviour so that individuals are able to act upon preventing and controlling health risk factors themselves.

I FIT AND EAT RIGHT (IFITER) WEIGHT MANAGEMENT PROGRAM

The IFitEr program is implemented in all Wellness Hubs throughout Malaysia to facilitate overweight and obesity communities to manage their weight through healthy lifestyle interventions (**Figure 4.26 and Image 4.24**).



Source: Health Education Division, MOH

Image 4.24
I Fit And Eat Right (IFitEr) Activities

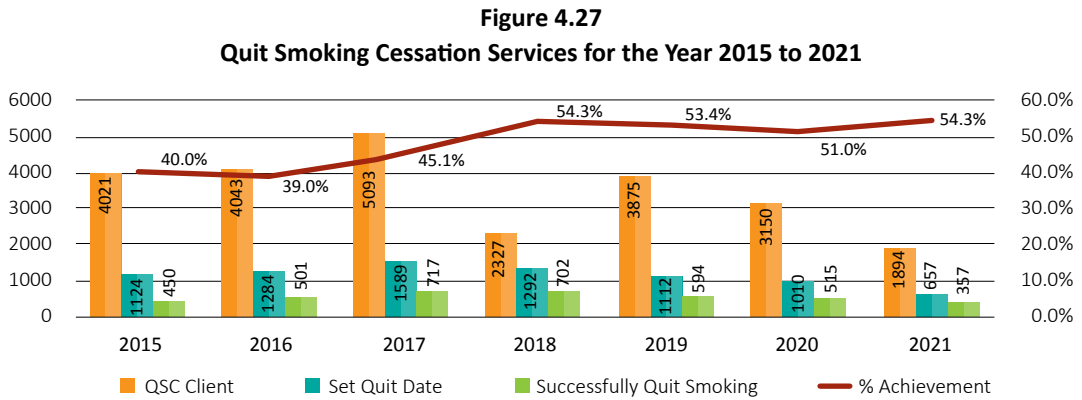


Source: Health Education Division, MOH

Apart from that, the KOSPEN@Activ was initiated to promote an active lifestyle among MOH staff and the general public. As of December 2021, a total of 138,327 MOH employees have activated the BookDoc Activ application and a total of 155 KOSPEN@Activ challenges have been organised.

QUIT SMOKING CESSATION SERVICES

The service aims to help smokers to quit smoking through behavior modification therapy techniques, pharmacotherapy or a combination of both within a cohort period of six (6) months. In 2021, there was a decrease in the number of clients who enrolled in smoking cessation services compared to 2020 due to the COVID-19 pandemic (**Figure 4.27**).



Source: Health Education Division, MOH

5 MEDICAL



MEDICAL DEVELOPMENT DIVISION (MDD)

Medical Development Division 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 health care. All these functions are fulfilled by four (4) sections as below:

- i. Medical Services Development Section;
- ii. Medical Profession Development Section;
- iii. Quality In Medical Care Section; and
- iv. Malaysian Health Technology Assessment Section.

MEDICAL SERVICE DEVELOPMENT SECTION

HOSPITAL MANAGEMENT AND SERVICES UNIT (HMSU)

Despite the challenges of the COVID-19 pandemic, HMSU managed to achieve numerous achievements. Two (2) guidelines were revised and published; Procedure on Discharge Against Medical Advice and Guidelines for Voluntary Services in the Ministry of Health Malaysia's Facilities. Full Paying Patient (FPP) services are provided in 10 hospitals. Under the *Hospital Mesra Ibadah Program (HMI)*, 64 Jabatan Kemajuan Islam Malaysia (JAKIM) officers have been posted to 55 hospitals and institutions. Four (4) out of 118 MOH facilities implementing the HMI Program were certified as Ibadah Friendly Hospitals. Taiping Hospital and Cyberjaya Hospital were upgraded, new Sri Aman II Hospital and Johor State Medical Record Centre were established. MalaysianDRG Casemix system was expanded to 28 hospitals, bringing to 88.3 per cent of MOH hospitals using the system. HMSU has successfully coordinated an outsourcing initiative involving 49 MOH hospitals and 113 private hospitals with 47.7 per cent of cases done in private hospitals.

The Hospital Information System (HIS)@KKM was implemented in three (3) states; Negeri Sembilan, Perak and Kelantan. The development of Health Information Exchange (HIE) for Electronic Medical Record (EMR) kicked off in December 2021. Crisis Preparedness and Response Centre (CPRC) Hospital System has been actively used as a platform for nationwide data collection, monitoring and analysis of resources utilisation and allocation of MOH hospitals for COVID-19 management throughout 2021. There are 42 established Cluster Hospitals involving a total of 140 MOH Hospitals and Institutions were strengthened, while Hospital Tengku Ampuan Rahimah, Klang (HTAR), the pilot project for Lean Hospital under Lean Healthcare initiative, obtained Recognition as a LEAN organization by the Malaysian Productivity Corporation (MPC).

SURGICAL SERVICES UNIT

Efforts to ensure the sustainability of surgical service delivery were carried out. The strategies to reduce the backlog of surgical cases were implemented via outsourcing of surgical cases through a public-private partnership, implementation of the extension of hours on Saturday elective operations in all specialist hospitals and mass surgical initiatives such as mass cataract surgeries in Hospital Raja Perempuan Zainab II. To increase the accessibility of surgeries nationwide, Global Surgery Framework and Ecosystem was expanded in Perak and Johor which involved Hospital Gerik and Hospital Mersing. To strengthen ICU services, RM170 million and RM60 million were secured for the procurement of ICU equipment in MOH hospitals nationwide and upgrading ICU facilities in Sabah and Sarawak, respectively. Besides, 15 field hybrid ICUs with the capacity of 146 ICU beds were also established. Otorhinolaryngology (ORL) services were expanded to 6 new centres to accommodate the increasing workload in Hospital Kluang, Hospital Kuala Lipis, Hospital Keningau, Hospital Labuan, Hospital Langkawi and Hospital Slim River. Daycare service is further expanded by developing two (2) new Ambulatory Care Centres (ACC) in Hospital Umum Sarawak and Hospital Sultanah Aminah, giving more access to daycare procedures.

Despite a long halt of transplant service in 2021 due to the surge of COVID-19 cases, 91 referrals were made for potential deceased organ and tissue donors. From 17 actual deceased donors, 52 organs and tissues were procured and transplanted, mainly between October and December. As of living donor transplants, 62 kidney and liver transplant surgeries managed to be conducted throughout Malaysia. To address issues of resource limitations, 10 living donor transplants (3 out of which are by Corporate Social Responsibility (CSR) were carried out via an outsourcing initiative to two private hospitals.

In addition, three (3) service guidelines were published i.e. the National MOH Cochlear Implant Program: 10-year report, Guideline for Teleaudiology Services and Guidelines for Purchasing of Implants/Prosthesis by Orthopaedic Patients. To increase awareness of organ donation, Organ Donation Awareness Week was conducted from 13 to 20 August 2021. Till December 2021, 1.52 per cent of the total Malaysian population has pledged to be organ donors, including 8,489 new pledgers who signed up in 2021. For the target under 100 days Health Minister's KPI, both indexes for reduction of general surgery backlog cases via outsourcing and procurement of 172 additional ICU beds were achieved.

O&G AND PAEDIATRIC SERVICES UNIT

Despite these challenging times, O&G and Paediatrics Services Unit have successfully published three (3) documents which are the Handbook of Children's Palliative Care Malaysia, Guidelines on Induction of Labour and the National Assisted Reproductive Technology (ART) Policy.

The National Training Program for Paediatric Palliative Care Malaysia was conducted from 27 to 29 November 2021 to train healthcare professionals in delivering paediatric palliative care in MOH hospitals. The National Thalassaemia Registry Report workshop to develop the Annual Thalassaemia Registry Report was also conducted in November 2021.

CLINICAL SUPPORT SERVICES UNIT (CSSU)

Among the achievements attained by the (CSSU) in 2021 was the successful production and publication of two (2) guidelines i.e. the Guideline for the Registration of Radiological Examinations in Ministry of Health (MOH) Hospitals and Institutions as well as the most awaited Guidelines for Management of Under-Five Children Brought in Dead (BID) to Ministry of Health Facilities which was a result of a multi-disciplinary effort led by the Forensic Medicine Service alongside the Emergency, Paediatric and Family Medicine Department.

Sports Medicine Service has also effectively organized the Second National Sports Medicine Symposium (Virtual) 2021 which launched live from Hospital Tuanku Ja'afar, Seremban from 31 March to 1 April 2021. This annual event is based on the objective focused on shared knowledge, technical expertise, and experience among Sports Medicine Specialists, medical officers in hospitals and health clinics, physiotherapists, and other hospital personnel. This 2-days virtual symposium was attended by local healthcare and medical personnel and managed to garner the attention of international audiences.

Meanwhile, Nuclear Medicine Service has successfully secured the procurement for the replacement of four (4) SPECT-CT machines under the Second Rolling Plan (RP2) for the Development Project of the 12th Malaysian Plan as the replacement of the currently obsolete and Beyond Economic Repair (BER) equipment is crucial in ensuring that patients receive the appropriate management and medical care especially for the cancer patients.

The Rehabilitative Medicine Service had been directly involved in the development of the Post COVID-19 Management Protocol which outlined the management and treatment of COVID-19 patients who suffer from continuous symptoms and long-standing complications requiring rehabilitative intervention upon discharge from the hospital.

MEDICAL RESOURCE UNIT (MRU)

In 2021, the Development Division has approved a total of RM19.3 million to the Medical Programme for the procurement of medical devices while RM136,492,815 has been carried forward to 2021 for projects that cannot be implemented by the Medical Development Division in 2020. Of that amount, RM14,300,000 was allocated to MRU, whilst RM5 million was distributed directly to MOH hospitals. A total of RM98,627,399 was spent by MRU based on the acceptance letter provided by the tender.

This unit has also managed three (3) procurements for projects to upgrade existing medical devices in MOH hospitals, namely Direct Digital Radiography, Biplane Angiography System and Computed Tomography Simulation. In 2021, there were two (2) consumable item tenders and six (6) reagents with instrument placement tenders which were coordinated by the Medical Resource Unit. In addition, there were five (5) COVID-19 tenders implemented during the year.

This unit also collaborated with the Procurement and Privatisation Division (BPPs) for the procurement and monitoring of 387 disposable products/consumables which are listed in the Approved Product Purchased List (APPL) 2017 to 2019 under the MOH Concession Agreement (MUS). Currently, the APPL contract is in the Interim period until the direction of the concession is finalized. Following the COVID-19 pandemic, a total of six (6) Personal Protective Equipment (PPE) items were listed as new products in the APPL interim period while one of the existing PPE items was re-tendered as a precautionary measure by the MOH to create a PPE Stockpile locally.

In 2021, the MRU was responsible for managing the emergency procurement to handle the COVID-19 pandemic. Initially, the emergency procurement was implemented at *Pusat Tanggungjawab* (PTJ) level, but was done later at the central level based on the 25th to 27th series. However, the allocation will be channelled to the receiving PTJ. The total allocation approved was RM290,226,732 for medical devices. For PPE items, the allocation approved under the COVID-19 Fund was RM40.5 million for the procurement of Glove, Jumpsuit and Face Shield. Due to time constraint, the allocation channelled and spent for emergency procurement to the Medical Development Division was RM22,668,785.

MEDICAL SERVICE UNIT

Several guidelines have been published by Medical Services Unit in the year 2021, including Post COVID-19 Management Protocol, Electroconvulsive Therapy Treatment Guidelines, Pre-Hospital Admission Screening Guidelines for COVID-19 patients, caregivers and hospital visitors, Clinical Management Of Confirmed COVID-19 Case In Adult and Paediatric, Guideline On Management Of Coronavirus Disease 2019 (COVID-19) In Dialysis Centres & Nephrology Units, Guideline On Management Of Electroconvulsive Therapy During COVID-19 Pandemic and COVID-19 Management Guidelines in Malaysia.

There is also involvement in several studies related to COVID-19 disease with physicians, Institute of Clinical Research, National Institute of Health (ICR-NIH) and Disease Control Division, among those studies are Real-World Evaluation of COVID-19 Vaccines under PICK (RECoVaM) study and smoker association study and COVID-19. Several publications have been co-produced and published in international journals, including PICK-ing Malaysia's Epidemic Apart: Effectiveness of a Diverse COVID-19 Vaccine Portfolio, Waning COVID-19 Vaccine Effectiveness for BNT162b2 and CoronaVac in Malaysia: An Observational Study, Association of

Smoking and Severity of Covid-19 Infection Among 5889 Patients In Malaysia: A Multi-Center Observational Study. A workshop on Long COVID Management was held on 29 to 30 March 2021 at the Medical Device Authority (MDA) Cyberjaya involving multidisciplinary experts to develop guidelines for Long COVID case management and discuss holistic management, reduce morbidity and reduce complications.

Further development of medical subspecialties has also been implemented. Three (3) MENTARI new centres have been established, namely MENTARI Kuala Pilah in Negeri Sembilan, Sandakan and Tawau in Sabah. This brings the total number of MENTARI to a total of 31 in 2021. Hepatitis C treatment services have been expanded to 391 MOH health facilities throughout Malaysia covering 58 hospitals and 332 health clinics compared to 2020, where only 284 MOH health facilities covering 52 hospitals and 231 health clinics. Five (5) new Gastroenterology-Hepatology centres have been established involving 5 MOH hospitals i.e. Ampang Hospital, Melaka Hospital, Sarawak General Hospital, Kulim Hospital and Penang Hospital, with the additional seven (7) new gastroenterologists in 2021. An ultrasonography endoscopy centre has been set up at Raja Perempuan Zainab II Hospital, Kota Bharu Kelantan. Peritoneal Dialysis units in MOH hospitals have been expanded to 34 units throughout Malaysia. The development of palliative services in five (5) new hospitals: Hospital Melaka, Hospital Tengku Ampuan Afzan, Pahang, Hospital Sultanah Aminah, Johor, Sarawak General Hospital and Hospital Queen Elizabeth, Sabah; with the additional of five (5) new palliative medicine physicians in 2021.

MEDICAL PROFESSIONAL DEVELOPMENT SECTION (MPDS)

POSTGRADUATE MEDICAL SPECIALISATION & SUB SPECIALISATION UNIT

MASTERS OF MEDICINE

The Master of Medical Programme for basic specialties is conducted by eight (8) local public universities in collaboration with the MOH, Malaysia. In 2021, there were 23 areas of specialty training and 39 MOH hospitals have been accredited by universities as training centres for the Master of Medical Programme. The increase of scholarship slots for Master of Medical Programme over the years has resulted in the rise of the number of specialists produced annually. In 2021, there were 815 medical officers graduating from the programme, as compared to 762 in 2020, 657 in 2019 and 550 in 2017.

THE SPECIALTY TRAINING PROGRAMME - PARALLEL PATHWAY IN MOH MALAYSIA (MEMBERSHIP AND FELLOWSHIP FROM INTERNATIONAL COLLEGIATE)

Medical officers in MOH also have the opportunity to pursue specialty training via Parallel Pathway Specialty Training Programmes in MOH Malaysia which are conducted locally or in

combination with overseas attachment. Currently, there are 15 programmes for 14 specialities available in MOH Malaysia including two (2) programmes for Family Medicine. As of 31 December 2021, 72 medical officers have completed training from various parallel pathway programmes (**Table 5.1**). There is a reduction from the previous year because most examinations have been cancelled due to COVID-19 pandemic.

Table 5.1
Number of Graduates from Parallel Pathway Programme for the Year 2017 to 2021

Discipline	Qualification	2017	2018	2019	2020	2021
Internal Medicine	MRCP	78	172	170	164	47
Paediatric	MRCPCH	39	40	65	18	4
O&G	MRCOG	6	26	19	1	0
Ophthalmology	FRCOphth	0	0	0	0	2
Clinical Oncology	FRCR Oncology	0	0	0	0	1
Anaesthesiology	FCAI	1	0	1	0	1
Radiology	FRCR	1	6	11	4	1
Psychiatry	MRCPsych	3	3	3	2	10
Forensic	DMJPath	0	0	1	0	0
Pathology	FRCPath	0	0	0	0	1
Urology	FRCS UROLOGY	0	0	0	0	5
Total		128	247	270	189	72

Source: Medical Development Division, MOH

SUBSPECIALTY PROGRAMME

MOH Subspecialty Training Programme is a structured programme conducted by MOH since 2002. The training program is done either fully local or combination local and overseas. In 2021, the number of *Hadiah Latihan Persekutuan* (HLP) slots offered for this programme were 329 compared to 250 slots in 2019.

SPECIALIST PROFESSION UNIT

GAZETTEMET OF SPECIALISTS AND SUBSPECIALISTS

Every doctor with recognised post-graduate qualification has to be gazetted by the Special Gazettement Committee which is chaired by the Director-General of Health and three (3) panel members; in accordance to Section 27, Chapter F of the Public Service's General Order. In 2021, 749 clinical specialists were gazetted as compared to 727 in 2020 (**Table 5.2**).

Table 5.2
Total Number of Gazetted Specialist for the Year 2017 to 2021

Total Number of Gazetted Specialists				
2017	2018	2019	2020	2021
707	777	603	727	749

Note: Including Specialist on Contract Appointment

Source: Medical Development Division, MOH

CLINICAL SPECIALISTS IN MOH HOSPITALS

The number of specialists and subspecialists in MOH Hospitals are increasing in trend. In 2021, the total number of specialists from various specialities and subspecialities were 7447. This number has increased as compared to 2020 when there were 5820 specialists working in the MOH. Even though there is an increase in the number of specialists every year, it is still not enough to cater the needs of the country as we are moving towards developed countries (Table 5.3).

Table 5.3
Number of Clinical Specialists in MOH Hospitals for the Year 2017 to 2021

Disciplines	No. of Specialists (Including subspecialty trainee and specialists on contract basis)				
	2017	2018	2019	2020	2021
Anaesthesiology	533	573	558	591	735
Cardiology	68	76	99	99	98
Cardiothoracic Surgery	19	18	18	18	19
Dermatology	47	54	73	77	76
Emergency Medicine	271	324	331	376	475
Forensic	31	34	33	38	47
General Medicine	790	764	830	591	1084
General Surgery	321	342	323	219	411
Hand and Microsurgery	0	0	0	0	0
Nephrology	75	94	113	106	106
Neurology	37	47	51	50	50
Neurosurgery	57	58	55	49	67
Nuclear Medicine	25	27	28	34	36
Obstetrics & Gynaecology	329	371	389	459	502
Ophthalmology	278	288	294	322	401
Orthopaedic	328	358	358	392	488
Otorhinolaryngology	162	187	183	201	257
Paediatric	478	500	498	620	663

Disciplines	No. of Specialists (Including subspecialty trainee and specialists on contract basis)				
	2017	2018	2019	2020	2021
Paediatric Surgery	32	36	35	37	50
Pathology	384	422	422	494	613
Plastic Surgery	31	36	36	41	50
Psychiatry	223	245	257	284	365
Radiology	339	379	388	426	511
Radiotherapy & Oncology	34	35	32	36	46
Rehabilitation Medicine	62	70	68	74	90
Respiratory Medicine	43	55	60	58	57
Sports Medicine	27	32	34	40	47
Urology	35	35	35	32	37
Transfusion Medicine	41	47	48	56	66
Total	5,100	5,507	5,649	5,820	7,447

Note: Excluding Family Medicine Specialists, Public Health Specialists and Dental Specialists

Source: Medical Development Division, MOH

HOUSEMANSHIP TRAINING PROGRAMME UNIT

The housemanship training programme is a training period that every newly graduated doctor needs to go through in order to obtain the full registration licence to practise medicine in Malaysia. Since 2008, the duration of housemanship training has been increased to two (2) years where they are needed to undergo four (4) months training in six (6) different disciplines. The purpose of the programme is to equip house officers with appropriate attitude, knowledge, skills, and experience to work safely in Malaysia's healthcare sector.

Overall, about 4,007 house officers were appointed last year.

Few improvements have been made in year of 2021:

- i. Accreditation of Hospital Banting as a new Housemanship Training Hospital. Therefore, this makes the total number of Housemanship Training Hospitals to 51 hospitals (47 KKM hospitals, three (3) university hospitals, one (1) Hospital Angkatan Tentera Malaysia) with 12,189 training slots;
- ii. A new guideline for houseman training during Pandemic COVID-19 version 2.0 dated 18 January 2021;
- iii. A new guideline for houseman training during Pandemic COVID-19 version 3.0 dated 8 August 2021; and
- iv. A new version logbook for nine (9) postings being produced and used throughout the Pandemic COVID-19.

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.

Table 5.4

User, Supervisor, Provider and Health Services Scheme in MyCPD 2.0 for the Year 2021

User	Supervisor	Provider	Health Services Scheme
270,800	23,819	1,494	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).

MEDICAL CARE QUALITY SECTION (MCQS)

Medical Care Quality Section spearheads various quality and safety programmes throughout the country. These include Patient Safety, Infection Prevention and Control, Top Management (Technical Programme), Hospital and Clinical Performance Monitoring, Occupational Safety and Health aspect of MOH Hospitals, Accreditation and Standards, Clinical Audit, MOH Hospital Complaint Management and Person Centred Care. During COVID-19 pandemic, this section also plays an important role in infection prevention and control aspect of COVID-19, surveillance of COVID-19 mortality and mortality review, management/surveillance of COVID-19 cases among MOH hospital staff, spearheading COVID-19 Immunisation Program at MOH Hospitals, producing guidelines/SOP related to COVID-19, Clinical Guidelines on COVID-19 Immunisation and committee member of *Jawatankuasa Teknikal Perubatan Bantuan Khas Kewangan Kesan Mudarat Vaksin*.

Table 5.5

Policy/Guideline/SOP Produced in 2021

Title
Healthcare COVID-19 Infections Outbreak in Healthcare Facilities
Post COVID-19 Management Protocol
Guidelines On Ventilation In Healthcare Setting To Reduce Transmission of Respiratory Pathogens
Clinical Guidelines on COVID-19 Immunisation In Malaysia
Malaysian Patient Safety Goals 2.0 Guidelines on Implementation & Surveillance

Cont. Table 5.5

Guideline on The Management of Unintended Retained Surgical Item (URSI)
Clinical Performance Verification Form Guideline
Standard Operating Procedures (SOP) In Dealing With COVID-19 In The Workplace For Medical Programs At MOH Headquarters
Standard Operating Procedures (SOP) For Mobilization of MOH Staff Nationwide For Patient Treatment And Control Of COVID-19 Infection and Transmission
Malaysian Patient Safety Goals 2.0 Guidelines on Implementation & Surveillance
Guideline on The Management of Unintended Retained Surgical Item (URSI)
Director-General of Health Malaysia Circular No. 5/ 2021: Implementation of COVID-19 National Immunisation Programme Phase 2
Director-General of Health Malaysia Circular No. 22/ 2021: Implementation of Malaysian Patient Safety Goals 2.0 Initiative in all Health Facilities and Medical Institutions in Malaysia
Director-General of Health Malaysia Circular No. 23/ 2021: Management of the Unintended Retained Surgical Item

Source: Medical Development Division, MOH

Table 5.6
Surveillance Conducted in 2021

Title
Multidrug Resistant Organism (MDRO) & Methicillin-resistant Staphylococcus aureus (MRSA) Bacteraemia Surveillance
Point Prevalence Survey on Healthcare Associated Infection
Infection Prevention and Control Audit Surveillance
Online Incident Reporting for MOH Hospitals (e-IR)
Malaysian Patient Safety Goals
Key Performance Indicator (KPI) Surveillance for top management in KKM technical sectors.
Complaints Related to MOH Hospitals
Perioperative Mortality
Violence Against Healthcare Workers In MOH
COVID-19 Mortality
COVID-19 Surveillance Among Healthcare Workers in MOH Hospitals and Medical Institutions
COVID-19 Vaccination Surveillance SPPV MOH Hospitals/Medical Institutes

Source: Medical Development Division, MOH

Table 5.7
Conference and Seminar Organised in 2021

Title
World Hand Hygiene Day and Infection Prevention & Control Seminar
National Infectious Diseases Conference 2021
World Antimicrobial Awareness Week & Antimicrobial Resistance (AMR) Seminar (Image 5.1)
Workshop on Malaysia: Malaysian action plan on antimicrobial resistance (MyAP-AMR) 2017 to 2021 Performance Report and Development of MyAP-AMR 2022 to 2026
Malaysia World Patient Safety Day 2021 Webinar (Image 5.1)

Source: Medical Development Division, MOH

Table 5.8
Technical Report Produced in 2021

Title
Annual Report on Infection Prevention & Control and Antimicrobial Resistance Containment Program 2020
MyAP-AMR 2017 to 2021 Performance Report
Wound Care Surveillance Report 2020
COVID-19 Pandemic Report (2020): Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III) Advancing implementation of the International Health Regulations 2005
Hospital Performance Indicator for Accountability (HPIA) 2020
Perioperative Mortality Review (POMR) e-Bulletin 2021
Malaysian Patient Safety Goals Report (2020)
Management Review Report QMS ISO 9001:2015 Medical Program

Source: Medical Development Division, MOH

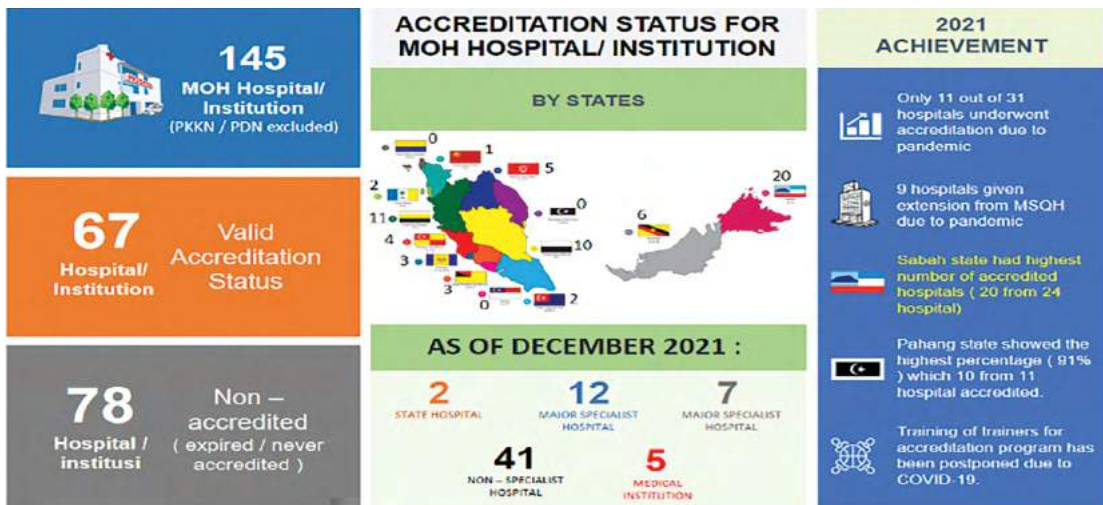
Image 5.1
Accreditation of MOH Hospital/ Institution



World Antimicrobial Awareness Week 2021



Launching of Malaysian Patient Safety Goals 2.0



Source: Medical Development Division, MOH

MALAYSIAN HEALTH TECHNOLOGY ASSESSMENT SECTION (*MaHTAS*)

MaHTAS plays an important role in the assessment of health technologies and clinical evidence to provide input for a sustainable, efficient and quality healthcare system in Malaysia. Health technology evaluation reports, clinical practice guidelines and other research synthesis are developed using a systematic, transparent and multi-disciplinary approach. These reports are intended for decision making to policies related to health technology priority settings, resource allocations and reimbursements within all levels of healthcare in appraising and synthesising scientific evidence.

ACHIEVEMENTS

Throughout 2021, MaHTAS has been actively involved in joint efforts to combat the COVID-19 pandemic by conducting rapid assessment on health technologies that are used for prevention, detection, control as well as treatment of COVID-19 disease. A total of 41 MaHTAS COVID-19 Rapid Evidence Updates have been produced, and these reports can be accessed directly at the following link: <http://covid-19.moh.gov.my/kajian-dan-penyelidikan/mahtas-covid-19-rapid-evidence-updates>.

In addition, MaHTAS has also produced two (2) Health Technology Assessment (HTA) reports, 22 Technology Review (TR) reports, of 20 were recommended for routine or selective use or for research purpose, 29 Information Briefs (IB), three (3) TechBrief reports, 11 TechScan reports and five (5) Clinical Practice Guidelines (CPGs). Titles of these reports and guidelines are as listed in (Table 5.9 to 5.11).

Table 5.9
List of HTA Reports, TechBrief Reports and CPGs Produced in 2021

Health Technology Assessment (HTA)		Clinical Practice Guideline (CPG)	
1.	Hyperthermic Intraperitoneal Chemotherapy (HIPEC) as an adjuvant therapy for Peritoneal Surface Malignancy (PSM)	1.	Management of E-cigarette or Vaping Use-Associated Lung Injury (EVALI) (First Edition)
		2.	Management of Gout (Second Edition)
2.	<i>Targeted Therapies in Combination with Neoadjuvant Chemotherapy for HER2-positive Breast Cancer and Economic Evaluation</i>	3.	Management of Schizophrenia (Second Edition)
		4.	Management of Dementia (Third Edition)
		5.	Management of Tuberculosis (Fourth Edition)

Source: MaHTAS, MOH

Table 5.10
List of TR Produced in 2021 Based on Recommendation

Recommended (for routine or selective use)	
1.	Targeted therapies in combination with hormonal therapy as first line treatment for hormone-receptor positive and HER-2 negative metastatic breast cancer
2.	Resuscitative endovascular balloon occlusion of the aorta (REBOA)
3.	Transbronchial cryobiopsy for lung biopsy in interstitial lung disease
4.	Hepatitis C virus screening and surveillance tests for dialysis patients
5.	Strategies to eliminate mother to child transmission of hepatitis B
6.	Pneumococcal PPSV23 vaccination for elderly
7.	Human papillomavirus (HPV) vaccination - an update
8.	Pulsed electromagnetic field therapy - an update
9.	Repetitive Transcranial Magnetic Stimulation (rTMS) in Stroke and other Neurological Conditions
10.	Acupuncture in neurological disorder (Guillaine Barre, transverse myelitis, post-stroke & Bell's palsy)
11.	Using laser fluorescence to detect tooth decay within the tooth structure
12.	Delirium Unit in Geriatric Ward
13.	Therapeutic drug monitoring for anti-TB
14.	Custodial HTK as a replacement of blood cardioplegia in cardiac surgery
15.	Mobile C-Arm Fluoroscopy for Cardiothoracic Surgery
16.	Viscoelastic haemostatic assay for non-cardiac surgery
17.	Driving Simulator
18.	Virtual reality (VR) for amblyopia (lazy eyes)
19.	Digital assisted oral & crania - maxillofacial surgery
20.	Platelet rich plasma, platelet rich fibrin & concentrated growth factor centrifuge machine for treatment of periodontal therapy
Not Recommended	
1.	Refurbish medical devices
2.	Intra-articular hyaluronic acid with sorbitol/mannitol for osteoarthritis

Source: MaHTAS, MOH

Table 5.11
List of TechBrief, Tech Scan and MaHTAS COVID-19 Rapid Evidence Review Produced in 2021

TechBrief Reports	
1.	Respiratory Syncytial virus (RSV) Vaccine
2.	Insulin Icodec for Type 2 Diabetes
3.	Tezepelumab for severe uncontrolled asthma
TechScan Reports	
1.	Evinacumab in Patients with refractory hypercholesterolemia
2.	Scrotal Elevation Support System
3.	TTP 399

TechScan Reports

4. VECTRACK- Artificial Intelligence for vector surveillance system
5. Solid organ Preservation (Liver) – OCS
6. Montelukast to reduce the risk of Dengue Shock Syndrome in dengue patients
7. Self-Initiated Prone Progression Crawler (SIPPC) for infants with cerebral palsy/ Down's syndrome or severe developmental delays
8. Stem Cell Educator Therapy
9. Efglenatide for cardiovascular and renal outcomes in Type 2 Diabetes
10. Abrocitinib for atopic dermatitis
11. Pembrolizumab for adjuvant therapy for post-nephrectomy in renal cell carcinoma.

Source: MaHTAS, MOH

ESTABLISHMENT OF CRISIS PREPAREDNESS AND RESPONSE CENTRE (CPRC) HOSPITAL SERVICES

The CPRC Hospital Services is a component of the National CPRC. Formalised on 15 March 2020, the CPRC Hospital Services is responsible for ensuring hospital service preparedness is at an optimal level. The key goal is striking a balance between care for the COVID-19 patients, service continuity and lively hood during the pandemic.

The CPRC Hospital Services comprises of 16 units that includes Facility, Medical Equipment & Supplies, Data Management, Laboratory Management, Occupational Health and Safety, Health Workforce Mobilisation and Deployment, Strategic and Risk Communication, Donation Coordination, Private Health Facilities, Health Technology Assessment, Patient Safety, Infection Prevention and Control, Forensic Management, Mortality Committee, Digital Technology, CPRC Coordinator and Secretariat. The team is led by the Director of the Medical Development Division.

CPRC Hospital Services also plays a role in the preparation of clinical management guidelines for COVID-19 patients as well as others related to hospital services. The centre also conducts analysis on hospital, laboratory and clinical readiness on a daily basis, including public holidays and weekends. This information is important in helping the National CPRC organise strategies and make evidence-based decisions more objectively and comprehensively.

Series of presentations have been made on ICU admissions, daily new cases in hospitals for category 3 to 5 and vaccination status. This data acts as the indicator for Malaysia's National Recovery Plan (NRP) chaired by the Prime Minister under National Security Council (NSC) to determine further steps for Movement Control Order (MCO) for the country.

EMPLOYED STRATEGIES

In tactfully planning out strategies, the CPRC was careful to ensure a comprehensive approach was utilised. In each step, the team which comprises Public Health Physicians and Specialist Healthcare Administrators used evidence-based medicine to make informed decisions. This ensured that all facets of healthcare were addressed to improve patient outcomes while reducing mortality. Besides hospitals, the COVID-19 Quarantine and Treatment Centre (PKRC) was set up to cater category 1, 2 and 3 of COVID-19 patients.

Public-private partnerships are also being carried out where private hospitals are also involved in treating COVID-19 cases. Collaboration efforts with other agencies such as Army Hospital, MOSTI as well as Public and Private Universities in which the partnership and cooperation amiably corroborated the expansion of COVID-19 laboratory testing across the country.

The establishment of a steady collaboration with the Royal Malaysian Air Force (RMAF) in transporting laboratory reagents, consumables, equipment and human resources making the expansion of COVID-19 diagnostic services a smooth process with the development of coordinated mercy flight services.

Collaboration with various NGOs has also been established to help increase treatment capacity for COVID-19 patients such as Malaysia Medical Relief Society (MERCY), Imam Response and Relief Team (IMARET), Malaysia Relief Agency (MRA), St John Ambulance Malaysia, Red Crescent Association (PBSM), Buddhist Tzu Chi Foundation, Creador Foundation, Malaysia Humanitarian Coordination and Action Hub (MATCH) and other NGOs. The aim of facility preparedness includes ensuring availability of appropriate infrastructure to screen, diagnose and treat COVID-19 cases including the critical ones which encompasses providing adequate hospital beds, intensive care unit (ICU) beds, screening facilities, diagnostic laboratory, medical equipment and supply. CPRC Hospital Services established three separate working groups responsible for infrastructure, laboratory and medical equipment & supply.

CPRC - HOSPITAL SYSTEM

CPRC Hospital System is an online reporting tool, acting as a centralised data collection platform, with the ability to output an interactive dashboard for ease of use. This IT platform facilitates data collection, monitoring and analysis, including utilisation of hospital beds, ICU beds, ventilators, and specific hospital reconstitution index across the whole country. At present, the system has five (5) main components i.e. hospital capacity, laboratories capacity, clinical data, interactive dashboard, reports and statistics. During this pandemic, CPRC Hospital Services was also challenged with the arduous task of optimising the MOH workforce that included volunteer management and deployment.

With the sudden rise of cases, mobilisation of staff between public healthcare facilities as well as rehiring recently retired nurses (as well nurses contracted for service) were implemented. The Strategic and Risk Communication Unit plays a key role in ensuring the right information is disseminated well. In addition, social media platforms such as Twitter, Facebook and Instagram were actively utilised to share information.

Apart from ensuring our facilities are well equipped and ready, guidelines and SOPs are key in ensuring containment of the virus. Throughout the pandemic, the Medical Programme including Medical Development Division developed, revised, adapted, and disseminated policies, guidelines, trainings, and other COVID-19 related information across all levels of the healthcare facilities to be used in the hospital settings. Infection Prevention and Control (IPC) training was also conducted nationwide with collaborative efforts with various agencies and sectors, including WHO, APHM, MMA, University and the Armed Forces hospitals.

CULTIVATING EVIDENCE-BASED PRACTICES

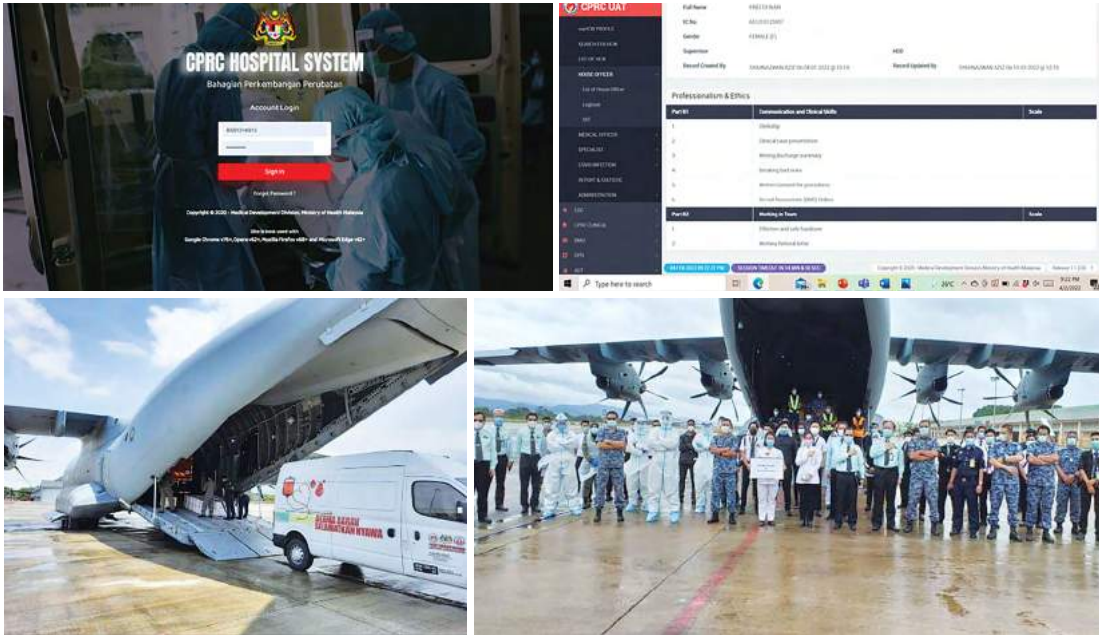
Relying on guidelines issued by international organizations such as WHO and the United States Centres for Disease Control and Prevention (US CDC), they provide evidence-based reviews of current practices as well as new innovations and tools related to the management of COVID-19. These evidence-based reviews and reports serve as inputs for the development of national standard operating procedures and guidelines, as well as the dissemination of accurate information. To stay relevant, MaHTAS also actively networks with the International Health Technology network which includes the International Network of Agencies for Health Technology Assessment (INAHTA), Health Technology Assessment International (HTAi), HTAsiaLink, International Society for Pharmacoeconomics and Outcomes Research (ISPOR), Guidelines International Network (GIN), and EuroScan International Network.

Image 5.2
CPRC Hospital System in Monitoring COVID-19 Pandemic.



Source: Medical Development Division, MOH

Image 5.3
Collaboration and Mobilisation



Source: Medical Development Division, MOH

Image 5.4
Human resources and facilities preparedness



Source: Medical Development Division, MOH

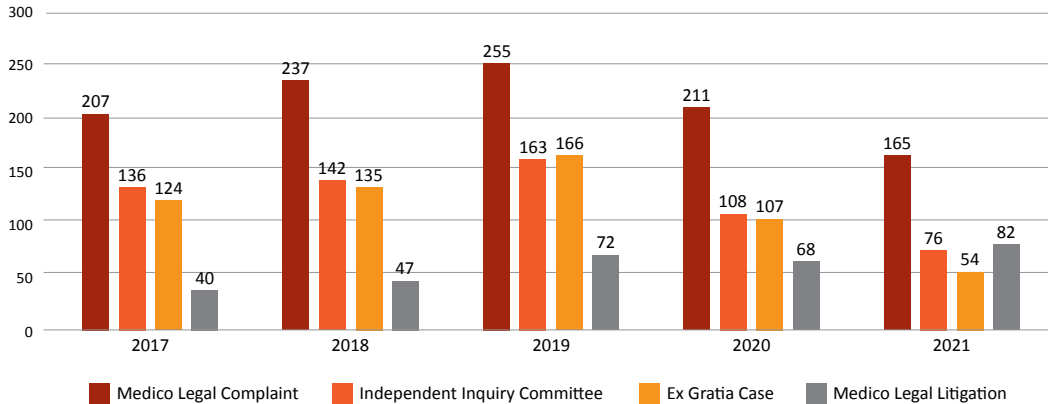
MEDICAL PRACTICE DIVISION (MPD)

MEDICO-LEGAL SECTION (CML)

The main function of CML is to manage medico legal cases involving healthcare facilities under the purview of the MOH. CML is divided into four (4) sectors which are Medical Malpractice, Medical Jurisprudence, Policies, Operations & Standards and Surveillance & Information. Duties of CML include processing medico legal complaints, resolving compensation claims by way of

ex gratia payment, engagement with the Attorney General's Chambers (AGC) in medico legal litigation cases against MOH, organising programmes consolidating competency in medico legal issues and performing monitoring and surveillance duties.

Figure 5.3
Medico Legal Statistics for the Year 2017 to 2021



Source: Medico Legal Section, MOH

MANAGEMENT OF MEDICO LEGAL COMPLAINTS

Medico legal complaints are investigated by the facilities involved and reported to CML. In the event the complaint remains unresolved or a claim for damages is made, an External Inquiry Committee is established to further investigate. In the year 2021, CML registered 165 medico legal complaints in total. 54 new cases were presented in the Ex Gratia Meeting, of which 35 new cases (64.81 per cent) were considered for ex gratia payment. The Key Performance Indicator (KPI) of Percentage of Resolved Medico Legal Cases with Compensation Claims in MOH Healthcare Facilities was selected as one of the KPIs for the Director-General of Health, Deputy Director-General of Health and Director of Medical Practice Division for the year 2021. In the year 2021, 51.85 per cent of cases were successfully resolved in the ex gratia meetings within 365 days of the complaint.

MEDICO LEGAL LITIGATION

CML and AGC combine efforts to manage medico legal litigation cases against MOH healthcare facilities. CML contributes with technical input and plays an advisory role in management of medico legal litigation, coordinates the preparation of documents for out-of-court settlements, identifying witnesses in the case and appointment of Expert Witnesses to appear in court. In the year 2021, 82 medico legal litigation cases were filed against MOH and its healthcare facilities.

DAMAGES AWARDED

Table 5.12 shows the amount of compensation paid for both ex-gratia and litigation from the year 2017 to 2021. In 2021, the total payment is RM30,456,754.70.

Table 5.12
Damages Awarded for Medico Legal Cases for the Year 2017 to 2021

Year	Ex Gratia	Litigation	Total (RM)
	Amount (RM)	Amount (RM)	Amount (RM)
2021	2,740,822.43	27,715,932.27	30,456,754.70
2020	3,909,087.89	14,427,784.37	18,336,872.26
2019	4,471,603.29	18,449,560.91	22,921,164.20
2018	5,050,145.58	13,322,967.61	18,373,113.19
2017	2,540,876.90	13,404,713.88	15,945,590.78

Source: Medico Legal Section, MOH

SURVEILLANCE

The CML is responsible for monitoring the healthcare facilities and the state health departments in establishing the recommendations of the External Inquiry Committees. In 2021, CML held a Technical Meeting on Management of Medico Legal Cases with the state medico legal coordinators followed by a Medico Legal Case Monitoring Meeting with the Kuala Lumpur and Putrajaya Health Department.

MEDICO-LEGAL COMPETENCY ADVANCEMENT

Table 5.13
Training and Courses Conducted by CML for the Year 2021

Training/Courses	Date	Participants
Reinforcement Course in Management of Medico Legal Complaints	5 to 7 April 2021	30
Litigation Cases Management Guideline Workshop	7 to 9 April 2021	22

Source: Medico Legal Section, MOH

Image 5.5
Training and Courses Conducted by CML for the Year 2021



Reinforcement Course in Management of Medico Legal Complaints
(Tenera Hotel, Bangi)



Litigation Cases Management Guideline Workshop
(Movenpick Hotel, Sepang)

Source: Medico Legal Section, MOH

PUBLICATIONS

Garis Panduan Pengendalian Mesyuarat Jawatankuasa Penyiasatan Dalaman/Bebas/Kes Saman Sepanjang Tempoh Pandemik COVID-19 was enforced in early 2021 to ensure policies and new norms are in line with public health safety requirements at the height of the COVID-19 pandemic.

Buku Pandangan Perundangan Perubatan Isu-Isu Medico Legal Edisi 2021 was published and distributed in early 2022 as part of the continuous efforts to keep abreast with laws and policies in the management of medico-legal cases.

PRIVATE MEDICAL PRACTICE CONTROL SECTION (CKAPS)

CKAPS functions to implement and enforce the Private Healthcare Facilities and Services Act 1998 [Act 586]. The regulation and control of private healthcare facilities and services all over Malaysia, under this Act includes registration, approval, licensing, handling of complaints, evaluation of quality, enforcement activities and matters relating to the Private Healthcare Facilities and Services (PHFS). Other than that, CKAPS also implements Mental Health Act 2001 and its Regulations pertaining to psychiatric healthcare facilities and services.

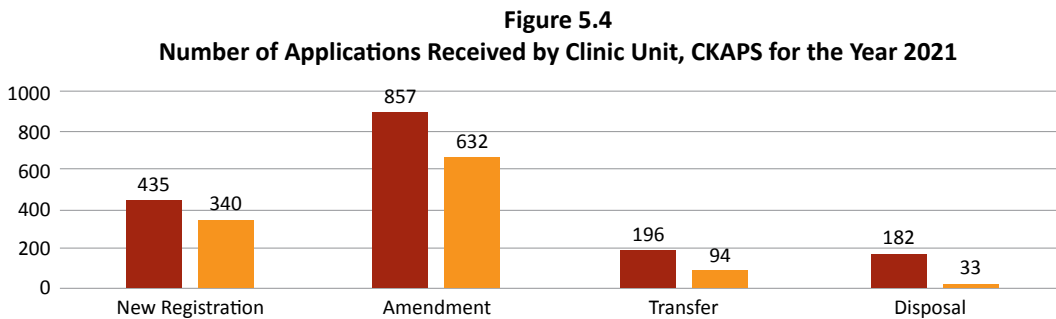
REVENUE COLLECTION FOR 2021

In terms of collection from the processing, issuance and administrative fees, throughout 2021, CKAPS collected a total of RM3,944,915 which is an increase of 35 per cent from 2020.

TECHNICAL AND OPERATIONAL SECTOR

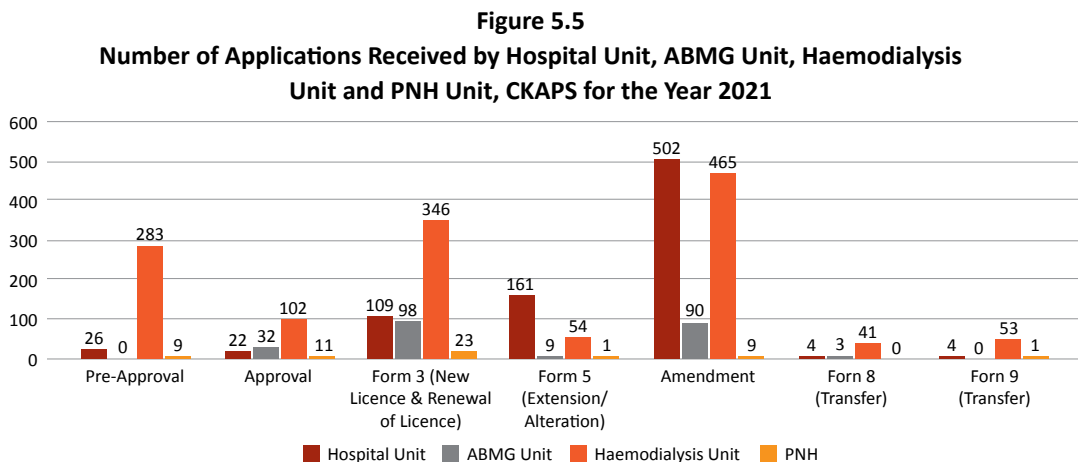
There are five (5) units under this sector, which are the Clinic Unit, Haemodialysis Unit, Hospital Unit, Psychiatric, Nursing Home and Hospice (PNH) Unit and Ambulatory Care Centre, Blood Bank, Maternity Home and Combined (ABMG) Unit.

The number of applications received by the Clinic Unit has increased up to 33 per cent in 2021 compared to 2020 and the statistics is shown in **Figure 5.4**.



Source: Private Medical Practice Control Section, MOH

The numbers of applications received by other units under this sector has generally increased to 175 per cent compared to last year and the statistics is shown in **Figure 5.5**.

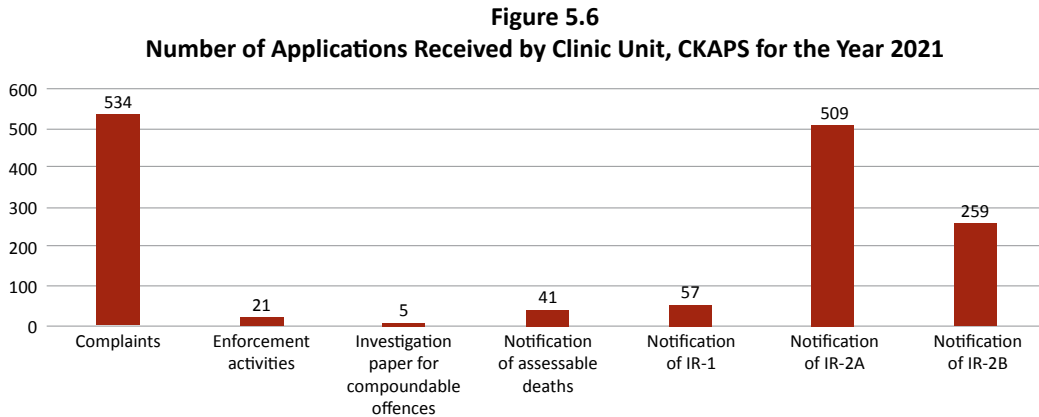


Source: Private Medical Practice Control Section, MOH

Other than the applications listed above, this sector also processes duplicate copy of certificate of registrations (COR), approval or licence, withdrawal of applications as well as application for search on or extracts from the registers. As part of the registration or licensing process, the Units conduct verification visits, pre-licensing visits and issues show cause notice with to suspend or revoke the approval, licence or COR or refusal to renew the Private Healthcare Facilities and Services (PHFS) licence.

SERVICES EVALUATION SECTOR

The Services Evaluation Sector comprises Complaint Unit, Quality Assessment Unit, Enforcement Unit and Prosecution Unit. The statistics for 2021 are shown in **Figure 5.6**.



Source: Private Medical Practice Control Section, MOH

In terms of collection, RM20,000 fines were collected through conviction of court while RM83,000 were collected through compoundable offences in the year of 2021. Other than the activities listed above, this sector also oversees surveillance activities conducted by state level CKAPS.

ASSISTANT MEDICAL OFFICER SERVICES SECTION (CPPPP)

CPPPP is an organization that regulates the registration, development and direction of the Assistant Medical Officer (PPP) profession in Malaysia. Registration of assistant medical officers are regulated under Medical Assistants (Registration) Act 1977 (Act 180). The CPPPP is also responsible for regulating Estate Hospital Assistants under Estate Hospital Assistants (Registration) Act 1965 (Act 435) Since 2015, Health Care Assistant were also placed under the responsibility of Assistant Medical Assistant Section.

REGISTRATION AND ANNUAL REGISTRATION CERTIFICATE (ARC) UNIT

Registration – Quality Objective

85 per cent of applications for Form 3 (Rule 16 (1)) Certificate of Registration as a Medical Assistant with Malaysian Medical Assistant Board will be processed and completed within 45 working days from the date of the Certificate of Registration set by the Secretary of the Medical Assistant Board.

Table 5.14
Registration Performance for the Year 2021

Month	No. of Registration	Compliance	Non-Compliance	%
January	590	590	0	100
February	104	104	0	100
March	18	18	0	100
April	10	10	0	100
May	30	30	0	100
June	1	1	0	100
July	435	435	0	100
August	4	4	0	100
September	33	33	0	100
October	51	51	0	100
November	9	9	0	100
December	2	2	0	100

Source: Assistant Medical Officer Services Section, MOH

Compulsory Placement Programme

The six (6)-month Compulsory Placement Program (PPW) in the Emergency Department is a special programme designed and implemented to all newly appointed Assistant Medical Officers in the Ministry of Health, the program is aimed to strengthen clinical skills, enhancing ability to make decisions, and improving communication effectiveness.

Table 5.15
Compulsory Placement Program (PPW) for the Year 2021

State	Total
Perlis	13
Kedah	67
Pulau Pinang	55
Perak	65
Selangor	95
W.P. Kuala Lumpur	28
W.P. Putrajaya	27
Negeri Sembilan	32
Melaka	32
Johor	58
Kelantan	40
Terengganu	40
Pahang	55
Sabah	117
Sarawak	97
W.P. Labuan	6
JUMLAH	827

Source: Assistant Medical Officer Services Section, MOH

POLICY AND STRATEGIC PLANNING

Human Resource and Academic Qualification of Assistant Medical Officers (AMO)

Table 5.16 shows academic qualifications of AMO.

Table 5.16
Academic Qualification of AMO for the Year 2021

Details	Total
Total numbers of Registered AMO	28,130
Total numbers of AMO (Gov)	18,502
Total numbers of AMO (Private)	5,478
AMO with Post Basic	5,668
AMO with Bachelor Degree	22
AMO with Master Degree	4
AMO with PhD	-
AMO without Post Basic	12,834
Post Basic Graduates per year (Average)	-

Source: Assistant Medical Officer Services Section, MOH

Table 5.17 shows human resource of Healthcare Assistants.

Table 5.17
Human Resource of Healthcare Assistants for the Year 2021

Grade	Total Number of Post	Filled Post	Empty Post
U 16	101	84	17
U 14	1,051	874	177
U 11/14	26,427	24,570	1,857
U12	43	2	41
U3/12	1,091	981	110
Total	28,713	26,511	2,202

Source: Assistant Medical Officer Services Section, MOH

ESTATE HOSPITAL ASSISTANT'S BOARD (LPHE)

Table 5.18 shows human resource of Estate Hospital Assistant's Board (LPHE)

Table 5.18
Human Resource of LPHE for the Year 2021

State	Total Farm	Total Clinic	Estate Hospital Assistant's	Assistant Medical Officer
Perlis	0	0	0	0
Kedah	27	27	0	22
Pulau Pinang	1	1	1	0
Perak	119	67	28	18
Selangor	85	38	0	37
Negeri Sembilan	8	8	6	3
Melaka	65	14	11	0
Johor	130	98	14	98
Pahang	8	8	2	7
Terengganu	21	10	13	8
Kelantan	10	2	5	2
Sarawak	38	40	26	-
Sabah	1,570	240	269	20
Total	2,082	553	375	215

Source: Assistant Medical Officer Services Section, MOH

The direction of the section has been outlined in the Assistant Medical Officer’s (AMO) Development Plan (2016 - 2030) (6P). This long term plan is well supported by five years strategic planning and an Annual Plan of action which spells out various initiatives for the growth and development of AMOs in Malaysia. Among those are, retention of technical expertise AMO’s in their field of specialization. For that purpose, efforts are put to develop a Specialization registry and creation of flexi grades for this group of AMO’s. This is to ensure AMOs are dynamic, knowledgeable and competent in delivering quality services to the community.

MALAYSIAN OPTICAL COUNCIL (MOC)

MOC is responsible for registering optometry practitioners and regulating optometry services and practices in Malaysia. MOC is responsible for evaluating and recognising Optometry and Opticianry Programmes conducted by Higher Education Providers (HEPs) in Malaysia. The practice of optometry has been recognised as an essential service by the Malaysian National Security Council (MKN) during the implementation of the Movement Control Order 2.0 (MCO) due to pandemic COVID-19. In line with that, MOC is also involved in the development of SOPs for the optometry practices under the health sector. The SOPs are constantly updated according to the current situation of the nation.

REGISTRATION SECTOR AND ANNUAL PRACTICING CERTIFICATE (APC) FOR OPTOMETRY PRACTITIONERS

MOC Evaluation Committee is responsible for the registration of new practitioners and issuance of APC for registered practitioners. A total of five (5) meetings were held involving evaluation of applications for registration. **Figure 5.7** shows the number of optometry practitioners registered with the MOC in 2021. **Figure 5.8** shows the Statistic of APC Renewal from 2017 to 2021. MOC Meeting No. 1/2021 has agreed to conduct Professional Qualifying Assessment (PQA) for optician, in order to register opticianry diploma graduates whose qualification is not listed in the First Schedule of the Optical Act 1991. The PQA will be conducted by *Pertubuhan Akademi Optometri Malaysia (PAOM)*.

Figure 5.7
Total Number of Optometry Practitioners in 2021

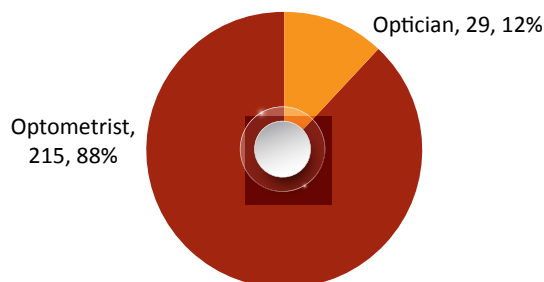
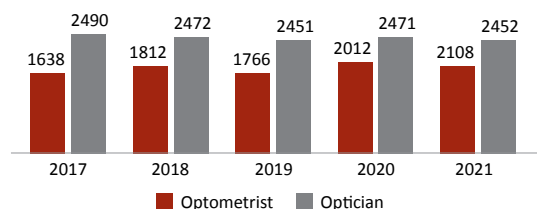


Figure 5.8
Statistic of APC Renewal By Year (2017 - 2021)



Source: Malaysian Optical Council, MOH

ACCREDITATION AND ADMINISTRATION SECTOR

The MOC Joint Technical Committee (JTC) meeting was held two (2) times during 2021. Audit for programme monitoring evaluation during 2021 has been carried out virtually (MQAVA) using the Zoom platform managed by Malaysian Qualifications Agency (MQA). Due to pandemic COVID-19, only one (1) full accreditation monitoring evaluation of the programme was conducted in the year 2021. The accreditation sector has successfully developed standard programme documents and guidelines for the accreditation of optometry/opticianry programs 2.0 based on Code of Practice for Programme Accreditation (COPPA) 2.0 and Malaysian Qualifications Framework (MQF) 2.0. MOC has acquired approval from MQA as the centre for Accreditation of Prior Experiential Learning for Credit Award [APEL (C)] to Registered Opticians for admission to the Optometry (Accelerated) programme. APEL (C) effective date started from 1 June 2021 to 31 May 2026. A preliminary briefing for the pre-evaluation of APEL (C) to 22 candidates was held on 5 October 2021.

ETHICS AND ACTS SECTOR

This sector is responsible for drafting the Optometry Bill and amendments of the Optical Act 1991 and the Optical Regulations 1994. The draft of the Optometry Bill is still under revision by the Medical Legislation Department. The Regulatory Impact Statement (RIS) for Regulatory Impact Analysis (RIA) has been forwarded to the Malaysian Productivity Corporation (MPC) for second revision.

A total of 22 complaints were received during 2021. The highest number of complaints, which is 10 cases, were related to the absence of optometrist or optician with license to prescribe and dispense contact lenses at the optical premises. There are also cases involving online sales of optical appliances. Therefore, a guideline has been issued and distributed to all agencies involved. A total of eight (8) complained cases have been resolved. Three (3) guidelines have been issued to ensure all optometry practices comply with current Acts and codes of practice:

- i. Guidelines for the Sale of Optical Devices and Contact Lenses Online;
- ii. Optometry Community Services Guidelines (organised by Non-Governmental Organisations [NGOs] and Private Optometry Practitioners); and
- iii. Guidelines for Mobile Optometry Service.

Optical Surveillance Audit scheduled for the year 2021 has been postponed next year in adherence to MCO and SOPs imposed by the National Security Council or *Majlis Keselamatan Negara* (MKN). Optical premises were not permitted to operate in the early phase of MCO. Subsequently, under the National Recovery Plan (NRP) optometry services has been categorised as essential service in the Health Sector allowing optometry premises to be operated conforming to the SOPs provided. The sector is also responsible in preparing and revising the SOPs.

COMPETENCY SECTOR

The Contact Lens Examination (Theory and Practical) for Registered Opticians under Section 30 (5) of the Optical Act 1991 scheduled for 2021 has been postponed to 2022 to comply with the SOPs set by MKN and MOH.

All optometry practitioners are advised to register in MyCPD system. Optometry practitioners who registered in MyCPD system have increased to 44.1 per cent representing 1,647 from the private sector and 364 from the public sector. A total of 137 applications for CPD points were received from the CPD programme provider, eight (8) applications were made manually and 129 applications made through the system. Most of the CPD programmes were conducted online.

ALLIED HEALTH SCIENCES DIVISION (AHSD)

AHSD is responsible for the governance and professional development of Allied Health Professionals (AHPs) within the MOH from clinical, laboratory and public health services. AHSD develops and implements strategies, policies, standard practices and recommendations related to allied health service delivery and development in MOH. AHSD currently governing 28 professions comprises more than 27,000 allied health professionals working in MOH. The AHSD has played a key role in ensuring that allied health professionals in primary, secondary, and tertiary care provide safe, reliable, accessible, and high-quality value-added care.

AMENDMENT TO THE ALLIED HEALTH PROFESSIONS ACT 2016 [ACT 774], SECOND SCHEDULE

To facilitate the effective implementation of the Allied Health Professions Act 2016 [Act 774], the Council has agreed to revise Act 774's Second Schedule and defer the registration process for practitioners. Act 774's Second Schedule has been approved by The Minister of Health, Malaysia on 7 December 2021. The amendment to the Second Schedule is expected to be gazetted in the first quarter of 2022. This amendment aims to facilitate the evaluation of the Allied Health Professions' suitability for regulatory oversight under Act 774 and to ensure that the profession used nomenclature is consistent with international standards (Image 5.6).

Image 5.6

Presentation Session of the Proposed Amendments to the Second Schedule, Allied Health Professions Act to the Deputy Director General of Health (Medical), on 4 October 2021.



Source: Malaysian Allied Health Professions Council, MOH

ACT 774: REGULATORY

AHSD has organised a Workshop on Preparation of Guidelines on Enforcement Activities and Compounding of Offenses of the Allied Health Professions Act 2016 on 6 September and 14 October 2021. AHSD also has conducted several educational enforcements of Act 774 by visiting premises that provide allied health services (**Image 5.7**). In the year 2021, seven (7) complaints were received, and were investigated and given educational enforcement to create awareness to practitioners and their workers on the Act 774, especially Part VI (Offences) and Part VII (Enforcement) of the Act.

Three (3) guidelines on the implementation of the enforcement have been reviewed:

- i. Guidelines for Handling Complaints of Offenses under Act 774;
- ii. Guidelines for Periodic Inspection Visits; and
- iii. Guidelines for Conducting Intelligence.

Image 5.7

Regular Visits and Educational Enforcement on the ACT 774



Source: Allied Health Sciences Division, MOH

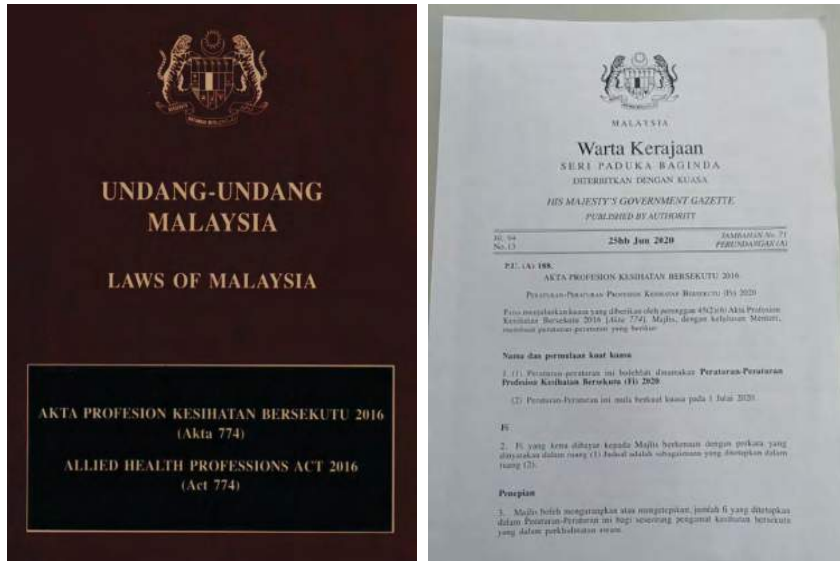
INTEGRATION WITH MALAYSIAN HEALTH CARE PRACTITIONERS' SYSTEM

MOH has currently developed the Malaysian Health Practitioners' System (MHPS) with approval from the MOH's ICT Technical Committee No. 3/2020. MHPS is an application that will support online applications for practitioner registration, Annual Practising Certificate (APC), Temporary Practice Certificate (TPC), and other applications involving 29 types of professions under the supervision of the Malaysian Dental Council (MDC), MOC the Malaysian Board of Dental Therapists (MBDT), including Malaysian Council of Allied Health Professions (MAHPC).

PUBLICATION OF ALLIED HEALTH PROFESSIONS ACT, 2016 [ACT 774] AND THE ALLIED HEALTH PROFESSIONS (FEES) REGULATIONS 2020

The Allied Health Professions Act 2016 [Act 774] & the Allied Health Professions (Fees) Regulations 2020 were printed and made available for references on the website (<https://alliedhealth.moh.gov.my/>).

Image 5.8
Printed copies of the Allied Health Professions Act, 2016 [Act 774] and the Allied Health Professions (Fees) Regulations 2020.



Source: Allied Health Sciences Division, MOH

KPI DEPUTY DIRECTOR-GENERAL OF HEALTH (MEDICAL) MOH, 2021

In 2021, four (4) Allied Health Professions (AHP) indicators were selected as the Deputy Director-General of Health (Medical) KPI, namely Dietetics, Physiotherapy, Food Services, and Medical Social Work. However, the KPIs for food services and medical social work were dropped after a mid-year review due to the COVID-19 pandemic. The KPI achievements for the year 2021 are as shown in **Table 5.19**.

Table 5.19
Achievement of KPI Deputy Director-General of Health (Medical) MOH for Allied Health Professions Services 2021

Services	Numerator	Denominator	Target (%)	Achievement (%)
Dietetic Percentage of in-patients who received at least 75% of the recommended energy requirement within 5 days after initiation of liquid diet	21,386	22,391	90	95.5

PUBLICATION OF RAPID REVIEW REPORT: ALLIED HEALTH PROFESSIONS, MINISTRY OF HEALTH MALAYSIA

AHSD in collaboration with the Allied Health Professions Research Committee has successfully published a Rapid Review Report: Allied Health Professions, MOH with the theme 'Towards New Frontiers in Allied Health Services'. This digital report is a comprehensive study related to the profession, way forward direction and planning to improve the quality of allied health services in the MOH. It is the first rapid review report in Malaysia produced by AHSD. This technical report is distributed in softcopy to the MOH top management, Programme Directors, the State Health Department, and the Allied Health Professions heads. In addition, the report has also been uploaded on the MOH portal the AHSD website for national and international views.

Image 5.10
Rapid Review Report: Allied Health Professions MOH



Source: Allied Health Sciences Division, MOH

WORLD HEALTH ORGANISATION (WHO) BUDGET PROGRAMME

AHSD has successfully conducted two (2) research projects under the provisions of the WHO Programme Budget 2020 to 2021 entitled:

i. Establishing Effective Regulatory Framework for Allied Health Professional in Malaysia

The main objective of this project is to form a regulatory framework for the implementation of the Allied Health Professions Act 2016 [Act 774]. The project was carried out with Dr Anne-Louise Carlton, a WHO-appointed Consultant from Royal Melbourne Institute of Technology (RMIT) Australia. The report is based on a series of consultations with Dr. Anne-Louise Carlton and will be published in 2022.

ii. Developing criteria for a profession to be considered as a Profession of Allied Health (PAH) in Malaysia

This qualitative research project aims to determine the definition, criteria, and scope of work of practitioners who can be categorised as professionals of allied health who perform allied health-related activities in Malaysia. AHSD has sought advice from local university researchers to make the project a success. The project team consists of 17 officers from AHSD and allied health professions with expertise and research interest.

SUBJECT MATTER EXPERT (SME) SERIES 2, 2021

By December 2021, a total of 25 allied health officers were appointed as SME in various fields and deployed in key areas at hospitals, laboratories and institutions in MOH. AHP was

recognised in a specialised area of practice, and it served as a motivator for more professionals to develop skills in advanced allied health fields. Six (6) AHPs were announced on 28 May 2021 as an addition to 19 SME Series 1 (2019). The additional Specialised Field are as follows:

- i. Medical Physic (Nuclear Medicine);
- ii. Nutrition (Public Health Nutrition);
- iii. Nutrition (Maternal, Infant & Young Child); and
- iv. Diagnostic (CT Scan).

COMPETENCY FOR THE NEWLY APPOINTED ALLIED HEALTH PERSONNEL

In year 2021, six (6) Allied Health Professions (namely Physiotherapist, Occupational Therapist, Speech Language Therapist, Optometrist, Diagnostics Radiographer and Radiation Therapist) has reviewed the New Appointed Officer Competency Logbooks and this logbook has been uploaded to the AHSD's website. A total of 230 newly appointed AHP were awarded the Certificate of Competency in 2021.

STANDARD OPERATING PROCEDURES (SOP)

A total of 19 SOPs and Operations Management Planning (PPO) have been refined and finalised for five (5) Allied Health Professions in 2021. The five (5) AHP groups are Psychology Officer (Clinical), Science Officer (Embryology), Science Officer (Physics), Science Officer (Genetic) and Science Officer (Entomology).

ALLIED HEALTH PROFESSIONS STAFFING OUTFIT ENHANCEMENT 2021 & CAREER ADVANCEMENT

Staffing Application Coordination Workshop for Existing Facilities: Outfit Staffing 2021 was held by AHSD from 4 to 15 October 2021 at Grand Pulse Hotel, Putrajaya for 22 professions to revise the relevance of the current outfit of Allied Health Professions in MOH. A completed document: Outfit Staffing 2021 for The Profession of Allied Health in Medical Programme was submitted to the MOH's Human Resources Division on 27 October 2021.

CREDENTIALING FOR ALLIED HEALTH PROFESSIONALS

It is the responsibility of AHSD to conduct credentialing activities for nine (9) AHPs, which includes Diagnostic Radiology, Radiation Therapy, Physiotherapy, Occupational Therapy, Dental Technologist, Optometrist, Dietetics, Speech Language Therapy and Audiologist. The Sub-Specialty Committee (SSC) Meeting and National Credentialing Committee Meeting (NCC) had credentialed a total of 645 AHPs in year 2021, bringing the total number of credentialed AHPs to 8,401 since 2014 to 2021 as in **Table 5.20**.

Table 5.20
Numbers of AHPs Awarded Credentialing

Allied Health Professions	Number of AHPs Credentialed (2021)	Total Credentialed (2014 to 2021)
Physiotherapy	110	1,616
Occupational Therapy	46	1,189
Diagnostic Therapist	78	2,830
Radiation Therapist	14	281
Dental Technologist	33	749
Optometrist	43	491
Dietetic	307	981
Speech-Language Therapist	7	120
Audiologist	7	144
Total	645	8,401

Source: Allied Health Sciences Division, MOH

THE ALLIED HEALTH PROFESSIONALS TRAINING

There were 13 orientation courses conducted for the newly appointed officers thus adding value to the AHP services development. A total of 229 AHPs have been trained in this course. Due to the COVID-19 pandemic, personnel training was done in a smaller group of people. Therefore, during the year 2021, AHSD were able to coordinate 17 courses, which only involved 726 AHPs. A total of RM44,497 were spent for capacity building/training for the year 2021.

STUDENT'S TRAINING AT MOH FACILITIES

A total of 50 Higher Learning Institutions have Memorandum of Agreement (MOA) with the Government of Malaysia (MOH) for the purpose of student training in MOH's facilities. It consists of 11 Public Higher Learning Institutions and 39 private Institutes of Higher Learning. There were 108 total Allied Health Programmes and 460 total MOH facilities approved by the *Jawatankuasa Penggunaan Fasiliti (JKPF)*, MOH. In addition, the 2nd edition of *Garis Panduan Penggunaan Fasiliti KKM Bagi Tujuan Latih Amal Pelajar/Pelatih Pemberi Pendidikan Tinggi (PPT)* was successfully published for the reference in managing student trainees in MOH facilities.

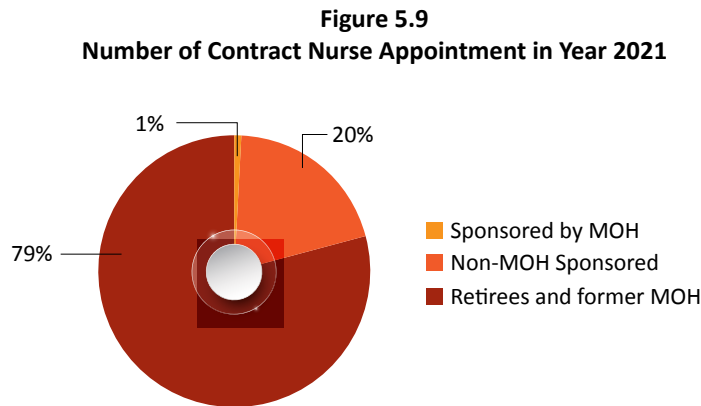
NURSING DIVISION

The Nursing Division leads 131,470 registered nurses and responsible for the Development Planning of the nursing profession to be in line with the aspirations of the MOH and to manage nursing matters constructively and productively in order to maintain quality

standards of nursing services. It consists of two (2) branches; Nursing Policies & Practices and Regulatory. They are further divided into five (5) sectors and a secretariat. These sectors comprise Nursing Practices (Hospital and Public Health), Quality & Training, Registration & Enforcement, Standards & Accreditations, Corporate Management and The Secretariat for Malaysian Nursing Board & Malaysia Midwifery Board.

CONTRACT NURSE APPOINTMENT FOR THE YEAR 2021

There were 4,406 nurses on nursing contract of service in year 2021, of which 897 were MOH-sponsored nurses and 3,455 non-MOH sponsored nurses. Contract extensions were also approved to 54 nurse retirees and former MOH employees. Through the MOH sponsored programme, 1,902 nurses were appointed to permanency from the 4,406 contract nurses.

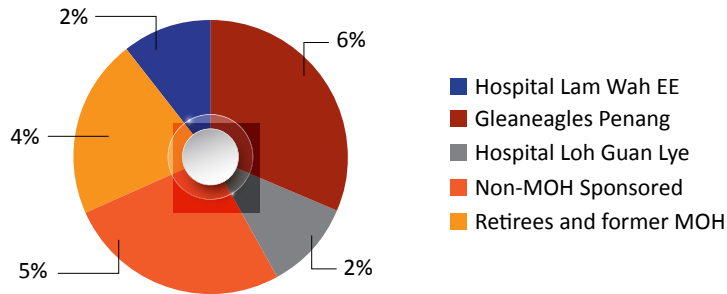


Sources: Nursing Division, MOH

PRIVATE HOSPITAL NURSES VOLUNTEER IN DEALING WITH COVID-19

A total of 1,099 nurses were mobilised across the country to assist in the very limited human resource needs for the purpose of combating COVID-19. This mobilisation involves nurses from various grades involving the State Health Department, Public and Private Universities & institutions. These nurses were mobilised to Malaysia Agro Exposition Park (MAEPS), *Hospital Canselor Tuanku Mukhriz Universiti Kebangsaan Malaysia* (UKM), *Hospital Pengajar Universiti Putra Malaysia* (HPUPM), Vaccination Centre or *Pusat Pemberian Vaksin* (PPPV) and COVID-19 Assessment Centre (CAC). In addition, 19 nurses from 5 private hospitals have also worked as volunteers at Kepala Batas Hospital in Penang.

Figure 5.10
Total Number of Private Hospital Nurse Volunteers for the Year 2021



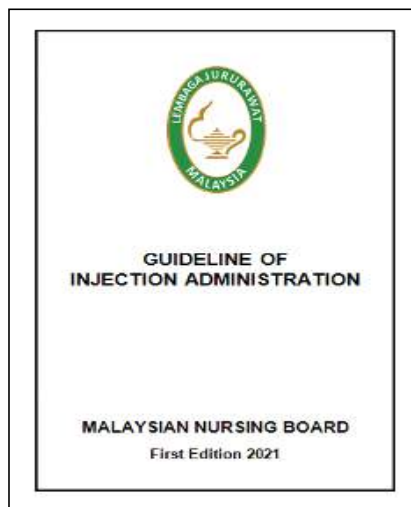
Sources: Nursing Division, MOH

PUBLICATION

GUIDELINE OF INJECTION ADMINISTRATION 1ST EDITION 2021

This guideline is designed to train nurses in understanding the concept, principle and practice of injection administration. The emphasis is in providing essential skills required at work. This guideline of injection administration applies to all registered nurses and student nurses. The general objective is to equip the nurses with required principles and skills in injection administration. The specific objectives are to facilitate nurses in implementing safe injection practices, educate nurses on the roles and responsibilities in practicing safe injection administration and to prevent medication error and sentinel events. This guideline can be downloaded from the Nursing Division website.

Image 5.11
Guideline of Injection Administration



Sources: Nursing Division, MOH

CURRICULUM ASSESSMENT UNIT

This unit is responsible for handling and managing the application process for evaluation of nursing programmes and resources from the Training Institute of the MOH, Public and Private Institution for accreditation. Following the MCO, the Curriculum Assessment Unit has issued *Panduan Pengendalian Program Basik, Pos Basik dan Diploma Lanjutan Kejururawatan Pasca Perintah Kawalan Pergerakan Pandemik COVID-19* which touches on the use of facilities, clinical placement, tutorial classes, handling training in skill lab, examination management of the Malaysian Nurses Board (LJM), Malaysian Midwifery Board (LBM) and the movement of instructors, clinical instructors, students and trainees during the COVID-19 Pandemic to the Basic Programme, Post Basic and Advanced Diploma in Nursing on the 14 June 2021. The new norm is recommended to all MOH students and distributed to all Higher Education Institutions (IPT) in Malaysia. A total of 39 accreditation assessment visits were conducted using the full Malaysia Qualification Accreditation Visual Audit (MQAVA) method and six (6) hybrid methods during the pandemic period.

EXAMINATION OF LEMBAGA JURURAWAT MALAYSIA & LEMBAGA BIDAN MALAYSIA

Examination Unit of the LJM and LBM, MOH is responsible for conducting seven (7) examinations a year for four (4) Nursing Programmes namely Bachelor of Nursing, Diploma in Nursing, Promotion by Appointment (PSL), Advanced Diploma in Midwifery Part One and Assistant Nurse Certificate. All nurses must pass the LJM and LBM Examinations as stipulated in the Nurses Act 1950 and the Midwives Act 1966 to practice as a qualified registered nurse.

The examination sessions for the Bachelor of Nursing/Diploma in Nursing/Promotion by Appointment (PSL) programme were held on 16 February, 16 March, 21 April, 16 June and 12 October 2021. Part One of the Advanced Diploma in Midwifery was held on 26 October 2021. The exam for the Assistant Nurse Certificate will be held on 10 November 2021. **Table 5.21** displays the results of the examination sessions held in 2021.

Table 5.21
Examination Results of Nursing Programs Conducted by Malaysia's Nursing and Midwifery Boards for the Year 2021

Programme	Total Candidates	Results (%)	
Bachelor/ Diploma/ Promotion by Appointment (PSL),	4,434	99.5	0.5
Advanced Diploma in Midwifery Part One	491	99.6	0.4
Assistant Nurse	71	83.1	16.9
Total	4,996	99.3	0.7

Source: Nursing Division, MOH

REGISTRATION AND APC UNIT

A total of 4666 nurses were registered with the Malaysia Nursing Board consisting of 4,416 Registered Nurses, 59 Assistant Nurses, 132 Public Health Nurses and 59 Mental Health Nurses. Meanwhile 489 midwives part one were registered with Malaysia Midwifery Board.

MOH FACILITY UTILISATION MANAGEMENT UNIT FOR HIGHER EDUCATION INSTITUTE

Throughout the year 2021, the MOH Nursing Facility Utilisation Management Unit conducted compliance monitoring on the use of MOH facilities for student placement and training. This monitoring is carried out by the State Coordinator of student placement who has been appointed at the State Health Department. It is based on compliance with MOH Facility Use Guidelines and Standard Criteria for Approval/Accreditation of Nursing Programme 2018. The findings and monitoring reports are presented by teleconference in a discussion session with the Chief State Nurse Supervisor, State Coordinator, Chief Hospital Nurse Supervisor, Head Health Nurse Supervisor. Physical monitoring could not be carried out due to the COVID-19 pandemic.

The review and refinement of the Guidelines for the Use of Facilities of the Ministry of Health Malaysia for the Training for Students/Trainees of Higher Education Providers Second Edition 2021 was completed and launched by Deputy Director General of Health (Medical), effective 9 August 2021. This guideline can be downloaded from the MOH website.

NURSING PRACTICE UNIT (MEDICAL AND PUBLIC HEALTH)

This unit is responsible for conducting 48 monitoring and supervisory visits to ensure that nursing care practices are practiced in a correct and safe manner to all patients and nursing staff while in the field. A total of 15 supervision and monitoring activities were done via video conference (VC) while a total of 21 facilities visits including hospitals and Public Health were done physically. Following the COVID-19 pandemic, the Practice Unit places great emphasis on SOPs, guidelines and MOH policies while conducting field monitoring and supervision.

Image 5.12

Monitoring and Supervisory Activities for the Year 2021



Sources: Nursing Division, MOH

THE 32nd & 33rd ASEAN JOINT COORDINATING COMMITTEE OF NURSING (AJCCN)

The 32nd and 33rd AJCCN meetings were held through video conference in which nine (9) ASEAN countries attended this summit, and members of the meeting shared regarding Continuous Practice Development and Nursing Curriculum and Learning Outcomes.

The 32nd meeting was on the 14 June 2021 and was attended by Director of Nursing (DON) and Head of Curriculum Assessment Unit. Meanwhile for the 33rd meeting was on the 11 November 2021 and were attended DON, Deputy Director of Nursing, Head of International Relations Unit and Temporary Practicing Certificate (TPC) and relevant participants.

Image 5.13

The Nursing Division Represented Malaysia in The AJCCN Video Conference



Sources: Nursing Division, MOH

TRADITIONAL AND COMPLEMENTARY MEDICINE DIVISION (T&CMD)

T&CMD is becoming an essential component in our healthcare system that will improve the level of health and quality of life of Malaysians in concern with modern medicine. Therefore, the establishment of the T&CMD, MOH is to make sure T&CMD is of high quality and safe to use by the consumers.

INTERNATIONAL CONTRIBUTIONS

T&CM is working closely with the WHO Member States and ASEAN Countries to develop and strengthen T&CM. Among the contributions are:

i. **Member State Consultation on The Draft of The Regional Framework For Strengthening Traditional Medicine (TM) System in The Western Pacific Region**

T&CMD have participated in several workshops organised by the WHO Regional Office to prepare the new Regional Strategy for TM in March and June 2021. This Regional Strategy addresses the challenges that still exist, including strengthening information systems for informed policy decisions and the role of TM in advancing Universal Health Coverage (UHC).

Malaysia represented by the Minister of Health and agreed to adopt the draft of Regional Framework for Harnessing Traditional and Complementary Medicine for Achieving Health and Well-being in the Western Pacific during the 72nd World Health Organization Regional Committee Meeting for the Western Pacific (72nd RCM) in Himeji, Japan on 25 October 2021

Image 5.14

Member State Consultation on the Draft Regional Framework for Strengthening Traditional Medicine System in the Western Pacific Region Workshop



Source: Traditional and Complementary Medicine Division, MOH

ii. **Development of The International Classification of Diseases (ICD)-11 Traditional Medicine Chapter Module 2 (TM2) and WHO Standard Terminology Documents for Ayurveda, Siddha, and Unani Systems of Medicine**

Following the International Conference on Standardisation of Diagnosis and Terminologies in Ayurveda, Unani, Siddha 2020, WHO initiated the ICD-11 TM2 module development

focusing on creating a set of diagnostic categories derived from Ayurveda and related diagnostic systems like Siddha and Unani.

Malaysia has been identified as one of the priority countries engaged by WHO on situation analysis since February 2021. The objectives are to examine and collect existing knowledge and resources, assess user needs, evaluate medical documentation and coding practice, and take into account advances in technologies and knowledge. Malaysia also participated in the work initiated by WHO to develop Standard Terminologies documents of Ayurveda, Siddha, and Unani systems of medicine.

Image 5.15
WHO ICD11 TM2 Technical Meeting on 29 to 30 September 2021



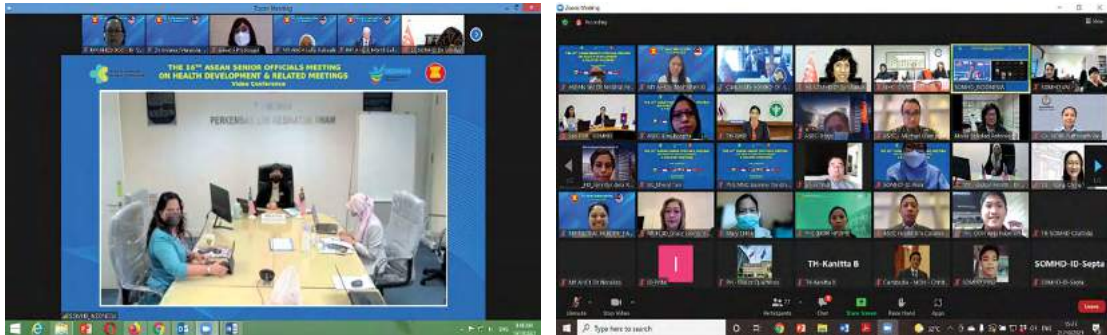
Source: Traditional and Complementary Medicine Division, MOH

iii. Collaboration with ASEAN in The Field of Traditional Medicine

T&CMD is one of the MOH representatives who attend meetings at the ASEAN level. Among the meetings attended in 2021 were: (i) Senior Officials Meeting on Health Development (SOMHD) Planning Meeting for the ASEAN Post-2015 Health Development Agenda (APHDA) Work Programme 2021-2025, 21 September 2021; and (ii) 16th ASEAN SOMHD and Related Meetings, 18 - 22 October 2021. These meetings involved ASEAN member states (AMS) for the purpose of information updates, discussion on critical issues as well as ratification of concept notes and agreements in various agendas relevant to cooperation and development of the ASEAN health sector, including T&CM.

In addition, as one of the initiatives under the ASEAN Health Cluster 3, a survey to identify common training needs on T&CM among AMS was conducted and reported by the T&CMD in March 2021 to the AMS representatives and the ASEAN Secretariat. The survey's outcomes will be referred for training course planning among AMS and the development of the ASEAN Health Cluster 3 Work Programme for 2021 – 2025.

Image 5.16
Collaboration with ASEAN in the Field of Traditional Medicine



SOMHD Planning Meeting for the ASEAN Post-2015 Health Development Agenda (APHDA) Work Programme 2021-2025

16th ASEAN SOMHD and Related Meetings

Source: Traditional and Complementary Medicine Division, MOH

ENFORCEMENT OF T&CM ACT 2016 [ACT 775]

The enforcement of Act 775 entered Phase 2 effective 1 March 2021. This date is also the date of coming into operation of the T&CM Regulations 2021. Phase 2 focuses on the registration of T&CM practitioners in recognised practice areas with the T&CM Council. This phase is a transitional period and T&CM practitioners in recognised practice areas are advised to register with the T&CM Council. The transitional period is from 1 March 2021 to 29 February 2024 [subsection 1 (3), T&CM Regulations 2021]. In this phase, the sections of Act 775 related to the registration of T&CM practitioners in recognized practice areas and disciplinary proceedings have come into operation, involving the enforcement of sections 2, 18 and 19, subsections 22 (1), (2), (3), (4), (6), (10) and (11) and sections 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 and 62.

REGISTRATION OF T&CM PRACTITIONERS

In line with the implementation of Phase 2 of the T&CM Act 2016 [Act 775] enforcement beginning 1 March 2021, any person who intends to practice T&CM in any recognised practice

area shall register with the T&CM Council. There are seven (7) recognised practice areas as follows:

- i. Traditional Malay Medicine;
- ii. Traditional Chinese Medicine;
- iii. Traditional Indian Medicine;
- iv. Homeopathy;
- v. Chiropractic;
- vi. Osteopathy;
- vii. Islamic Medical Practice.

STATISTICS OF PRACTITIONERS REGISTERED WITH THE T&CM COUNCIL

From 15 March to 31 December 2021, 4,038 applications for registration of T&CM practitioners with the T&CM Council was received by the Traditional and Complementary Medicine Council Section (T&CMCS). 3,992 applications were from local T&CM practitioners and 46 from foreign T&CM practitioners. Of these numbers, 2,206 local T&CM practitioners and 45 foreign T&CM practitioners had their applications approved by the T&CM Council. The breakdown of the successful applications according to Recognised Practice Areas are as shown in **Table 5.22**.

Table 5.22
Total Number of Local Practitioners Registered with the T&CM Council
from 15 March to 31 December 2021

Recognised Practice Area	Number of Registered Practitioners
Traditional Malay Medicine	174
Traditional Chinese Medicine	1,385
Traditional Indian Medicine	17
Homeopathy	77
Chiropractic	93
Osteopathy	1
Islamic Medical Practice	459
Total	2,206

Source: Traditional and Complementary Medicine Division, MOH

Table 5.23
Total Number of Foreign Practitioners Registered with the T&CM Council from
15 March to 31 December 2021

Recognised Practice Area	Number of Registered Practitioners
Traditional Chinese Medicine	27
Traditional Indian Medicine	8
Homeopathy	4
Chiropractic	4
Osteopathy	2
Total	45

Source: Traditional and Complementary Medicine Division, MOH

PUBLICATION OF THE CODE OF PROFESSIONAL CONDUCT FOR T&CM PRACTITIONERS

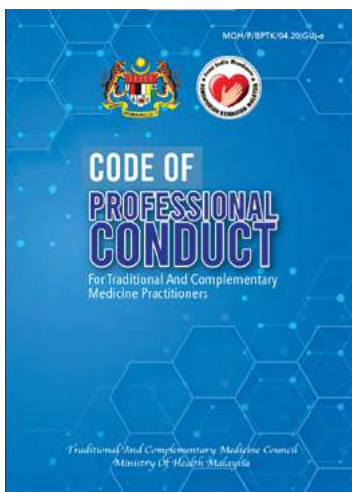
The Code of Professional Conduct for T&CM Practitioners was published in September 2021 (Malay and English versions). The development of this Code involved the collaboration of relevant stakeholders in ensuring that a comprehensive code is produced. This Code incorporates mandatory practice standards in Governance and Practice Codes, which replaces the existing Code of Ethics and Code of Practice for Traditional and Complementary Medicine Practitioners. The objective of this code is to provide guidelines to T&CM practitioners for them to comply and ensure that professional standards are maintained when carrying out their responsibilities so as not to impair their reputation as a practitioner. This code has been uploaded to the official T&CM website for the reference of all T&CM practitioners.

DEVELOPMENT OF GUIDELINE FOR EVALUATION OF T&CM PRACTICES IN MALAYSIA

A guideline has been developed to evaluate the T&CM practices in Malaysia to be a recognised practice area. The primary objective of this guideline is to ensure that each T&CM practice proposed to be recognised is evaluated to determine its quality, safety, added value, and supported by evidence. This guideline, which incorporates the mechanism and criteria for evaluation of T&CM practices, is intended to serve as a reference for healthcare authorities and policymakers to evaluate T&CM practices in Malaysia.

Image 5.17

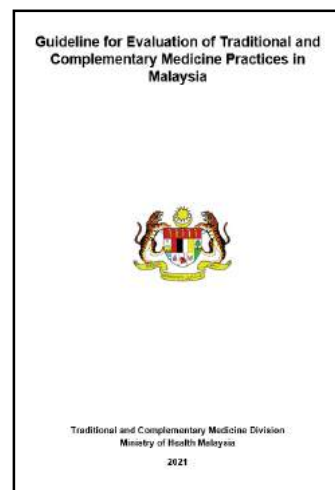
Code of Professional Conduct for T&CM Practitioners



Source: Traditional and Complementary Medicine Division, MOH

Image 5.18

Guideline for Evaluation of T&CM Practices in Malaysia



Source: Traditional and Complementary Medicine Division, MOH

DEVELOPMENT OF STANDARD OPERATIONAL PROCEDURE (SOP) DURING MOVEMENT CONTROL ORDER (MCO) AND NATIONAL RECOVERY PLAN (NRP)

On 1 June 2021, Malaysia implemented the second MCO in view of the increasing trend of COVID-19 cases as well as the emergence of new, more aggressive variants. The announcement was made by the Prime Minister who decided to implement a full closure of the economic and social sectors. However, T&CM services have been listed as essential services and were allowed to operate starting on 6 July 2021.

In line with the implementation of MCO and NRP, the Division has developed SOPs for the Health Sector for T&CM services and has been uploaded on the National Security Council (NSC) website. These SOPs provide guidelines that must be followed by practitioners to provide quality and safe services to prevent the transmission of COVID-19 infection while receiving treatment.

Image 5.19
SOP during MCO and NRP

Merangkumi		Waktu Beroperasi	Normal	Waktu Kehadiran Pelanggan	Normal	Kapasiti Pekerja	100%															
<ul style="list-style-type: none"> • Fasiliti dan Perkhidmatan KKM • Kemudahan dan Perkhidmatan Jagaan Kesihatan Swasta (KPJKS) berdaftar / berlesen bawah Akta 586 • Kedai Farmasi • Pusat Fisioterapi / Rehabilitasi • Perkhidmatan Optometri • Makmal Perubatan • Perkhidmatan Perubatan Tradisional & Komplementari (PT&K) di bawah Akta 775 		<p>PELAN PEMULIHAN NEGARA – FASA 1 SOP SEKTOR KESIHATAN</p> <p>Dikemaskini pada 5 Ogos 2021</p> <p>AKTIVITI DAN PROTOKOL</p> <p>Pengendalian Perkhidmatan PT&K (mengikut Fasa Pelan Pemulihan Negara)</p> <table border="1"> <thead> <tr> <th>Fasa</th> <th>Aktiviti Dibenarkan</th> <th>Aktiviti Tidak Dibenarkan</th> </tr> </thead> <tbody> <tr> <td>1</td> <td> <ul style="list-style-type: none"> • Terhadap kepada bidang amalan diiktiraf di bawah Akta 775 dan premis berlesen di bawah Pihak Berkuasa Tempatan • Konsultasi secara bersemuka dengan penjarakan fizikal dibenarkan. Namun, konsultasi atas talian / telekonsultasi adalah digalakkan. • Perkhidmatan akupunktur dan kiropraktik dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. </td> <td> <ul style="list-style-type: none"> • Perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit secara berterusan (seperti urutan) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) </td> </tr> <tr> <td>2</td> <td> <ul style="list-style-type: none"> • Sama seperti di Fasa 1 • Semua perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. </td> <td> <ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) </td> </tr> <tr> <td>3</td> <td> <ul style="list-style-type: none"> • Sama seperti di Fasa 2 • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Semua perkhidmatan PT&K dibenarkan beroperasi, tidak terhad kepada bidang amalan diiktiraf di bawah Akta 775 sahaja. </td> <td> <ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah tidak dibenarkan. • Lawatan ke rumah (<i>home visit</i>) </td> </tr> <tr> <td>4</td> <td> <ul style="list-style-type: none"> • Sama seperti di Fasa 3 • Lawatan ke rumah (<i>home visit</i>) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah dibenarkan </td> <td></td> </tr> </tbody> </table>						Fasa	Aktiviti Dibenarkan	Aktiviti Tidak Dibenarkan	1	<ul style="list-style-type: none"> • Terhadap kepada bidang amalan diiktiraf di bawah Akta 775 dan premis berlesen di bawah Pihak Berkuasa Tempatan • Konsultasi secara bersemuka dengan penjarakan fizikal dibenarkan. Namun, konsultasi atas talian / telekonsultasi adalah digalakkan. • Perkhidmatan akupunktur dan kiropraktik dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. 	<ul style="list-style-type: none"> • Perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit secara berterusan (seperti urutan) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) 	2	<ul style="list-style-type: none"> • Sama seperti di Fasa 1 • Semua perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. 	<ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) 	3	<ul style="list-style-type: none"> • Sama seperti di Fasa 2 • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Semua perkhidmatan PT&K dibenarkan beroperasi, tidak terhad kepada bidang amalan diiktiraf di bawah Akta 775 sahaja. 	<ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah tidak dibenarkan. • Lawatan ke rumah (<i>home visit</i>) 	4	<ul style="list-style-type: none"> • Sama seperti di Fasa 3 • Lawatan ke rumah (<i>home visit</i>) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah dibenarkan 	
Fasa	Aktiviti Dibenarkan	Aktiviti Tidak Dibenarkan																				
1	<ul style="list-style-type: none"> • Terhadap kepada bidang amalan diiktiraf di bawah Akta 775 dan premis berlesen di bawah Pihak Berkuasa Tempatan • Konsultasi secara bersemuka dengan penjarakan fizikal dibenarkan. Namun, konsultasi atas talian / telekonsultasi adalah digalakkan. • Perkhidmatan akupunktur dan kiropraktik dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. 	<ul style="list-style-type: none"> • Perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit secara berterusan (seperti urutan) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) 																				
2	<ul style="list-style-type: none"> • Sama seperti di Fasa 1 • Semua perkhidmatan yang melibatkan sentuhan fizikal secara langsung dengan pesakit dibenarkan. Pemakaian <i>3ply surgical mask</i>, <i>face shield</i>, sarung tangan, dan <i>disposable gown</i> diwajibkan. Semua PPE yang berkenaan perlu ditukar untuk setiap pesakit dan tidak boleh diguna berulang. 	<ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Lawatan ke rumah (<i>home visit</i>) 																				
3	<ul style="list-style-type: none"> • Sama seperti di Fasa 2 • Perkhidmatan berunsur kesejahteraan (<i>wellness</i>) • Semua perkhidmatan PT&K dibenarkan beroperasi, tidak terhad kepada bidang amalan diiktiraf di bawah Akta 775 sahaja. 	<ul style="list-style-type: none"> • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah tidak dibenarkan. • Lawatan ke rumah (<i>home visit</i>) 																				
4	<ul style="list-style-type: none"> • Sama seperti di Fasa 3 • Lawatan ke rumah (<i>home visit</i>) • Perkhidmatan yang merangsang pengeluaran cairan tubuh (contohnya kahak, hingus, darah, lendir dan muntah) adalah dibenarkan 																					
<p>Aktiviti Yang Tidak Dibenarkan</p> <ul style="list-style-type: none"> • Mana-mana aktiviti yang dilarang Kerajaan seperti dinyatakan dalam Peraturan-Peraturan Pencegahan dan Pengawasan Penyakit atau mana-mana arahan rasmi oleh Kerajaan. 																						
<p>Arahan Tetap</p> <ul style="list-style-type: none"> • Peraturan 16 P.U. (A) 293/2021. • Akta 342. • Ordinan Darurat (Pencegahan dan Pengawasan Penyakit Berjangkit) (Pindaan) 2021. • Tertakluk kepada ketetapan yang dikeluarkan oleh MKN dan KKM. • Petugas mesti sentiasa memakai alat perlindungan diri apabila berurusan dengan pelanggan. • Semua pesakit diwajibkan memakai pelitup muka. 																						

Source: Traditional and Complementary Medicine Division, MOH

6 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 (Twelfth Plan). 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 Informatic Center (HIC);
- v. Health Facility Planning (SPFK); and
- vi. eHealth Planning.

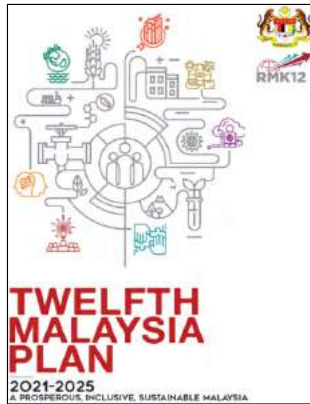
HEALTH PLAN AND POLICY PLANNING SECTION

TWELFTH MALAYSIA PLAN

The Twelfth Malaysia Plan 2021-2025 (Twelfth Plan) aims to address current issues of the country including health and at the same time to restart and rejuvenate Malaysia's socio-economic development for long-term sustainability and prosperity. This plan will enable all Malaysian families to move forward by restructuring the country's economy as the foundation for the well-being of the people. Health is focused on Chapter 4: Improving Defence, Security, Well-being and Unity (**Image 6.1**).

Among the key strategies are improving the delivery of healthcare services by revitalising the healthcare system and greater cooperation in resource mobilisation; strengthening health funding and public awareness, as well as leveraging new technologies. To enlighten the people regarding the way forward in the Twelfth Malaysia Plan, the MOH has launched a series of interviews and webinars using the medium of television and virtual platforms. Apart from the top management of the MOH, the invited panel members were comprised of the private sector, NGOs and academia. In 2021, one (1) television interview (**Image 6.2**) and 2 (two) series of webinars were successfully conducted. (**Image 6.3** and **6.4**).

Image 6.1
Twelfth Malaysia Plan
2021-2025



Source: Economic Planning Unit (EPU)

Image 6.2
Interview Poster: Penyakit Berjangkit dan Penyakit Tidak Berjangkit



Source: TV3

Image 6.3
Webinar Poster: Kesiediaan Dalam Menghadapi Krisis & Bencana



Source: Communication Corporate Unit, MOH

Image 6.4
Webinar Poster: Reformasi Sistem Kesihatan



Source: Communication Corporate Unit, MOH

MINISTRY OF HEALTH STRATEGIC PLAN 2021-2025

The Ministry of Health Strategic Plan 2021-2025 is developed with a comprehensive way forward so that the desired aspirations can be achieved in line with the goals of the Shared Prosperity Vision 2030 as well as the Twelfth Malaysian Plan. The preparation of this strategic plan was very challenging due to the COVID-19 pandemic. It was developed and formulated based on extensive physical engagement sessions, as well as online engagement sessions with all respective Programmes and Divisions under the MOH. To obtain and coordinate feedback from all parties, the Technical Working Groups (TWGs) and External Editorial Groups were established.

There are four (4) outcomes, four (4) strategic thrusts and 12 strategies that have been identified for the MOH Strategic Plan 2021-2025 as shown in the framework in **Figure 6.1**. It is hoped that this strategic plan will be the way forward for the MOH organisation for the next five (5) years to strengthen the existing health system as well as to assist the Heads of Programmes and Activities under the Ministry to implement their respective health plans.

Figure 6.1
MOH Strategic Plan 2021-2025 Framework



Source: MOH Strategic Plan 2021-2025 Document

100 DAYS ASPIRASI KELUARGA MALAYSIA MINISTRY OF HEALTH MALAYSIA

The 100 Days *Aspirasi Keluarga Malaysia* (AKM) was developed and monitored starting from 1 September 2021 coordinated by the Office of the Chief Secretary to the Government under the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) and the Shared Prosperity Delivery Unit (SEPADU). This is to ensure that the planning, implementation, monitoring and improvement of every aspiration of *Keluarga Malaysia* can be achieved with excellence.

To monitor the 100 days AKM, the Planning Division lead the component A, the Performance Appraisal of the Health Minister or known as the Key Performance Indicator (KPI) while the Policy and International Division and KPI Special Unit lead component B which is the Public Perception of the Minister of Health and the MOH. A total of five (5) AKM KPIs were selected with the following achievements in the infographic below.

Image 6.5
The Achievements of the Health Minister’s 100 Days AKM



Source: 100 Days AKM, SEPADU.

AKM KPIs were monitored every two (2) weeks and the progress of the KPIs was reported during the MOH Post Cabinet Meeting. On 15 November 2021, the achievement of these KPIs were uploaded into the MyAspirasi system by the secretariat and following that, the Minister of Health presented the achievements to the Prime Minister during the Report Card Day Session on 23 November 2021. All these KPIs have been achieved and MOH was recognised among the top five (5) ministries with the most excellent record based on the evaluation of two (2) research bodies, namely Ilham Centre and O2 Research.

From 9 to 12 December 2021, the 100 Days AKM Programme was held at the Kuala Lumpur Convention Centre (KLCC) to highlight the successes that have been achieved during the 100 days of the implementation of AKM in the current government. This programme is also strategically a progressive medium for people to appreciate the true meaning of *Keluarga Malaysia* more closely.

Image 6.6
Prime Minister was briefed by MOH members during his visit to the 100 Days of AKM Programme



Source: PDPK Section, Planning Division, MOH

SPECIFIC TRAINING BY WORLD HEALTH ORGANISATION (WHO)

In the year 2021, members of the Planning Division from the Human Resources for Health and the Health Facilities Section undertook training on International Best Practices and Lessons Learnt on Development of Country Health Care Masterplan on 12 & 13 January, 25 & 26 January and 3 & 10 February 2021 which was funded by the WHO. The main purpose of this training is to share views, experiences and exchange ideas between the consultants and members of the Planning Division. Through this training, officers in Planning Division had gained knowledge to develop a tender document or Request for Proposal (RFP) for the Study of Supply Gap and Demand for Health Facilities, Human Resource Equipment for Health in Malaysia. The training was coordinated by Dr. Taketo Tanaka, Health Policy Technical Officer, WHO and was conducted by a WHO consultant, Dr. Tihomir Strizrep via a virtual platform.

The Planning Division as the Secretariat for SDG and UHC in MOH together with WHO had jointly organised UHC Index Calculation Training in November 2021. The training was conducted virtually with experts from WHO Head Quarters (Geneva, Switzerland), WHO Regional Office (Manila, Philippines) and United Nation Population Division (New York, United States). The training was attended by a total of 24 participants from various Divisions within MOH and also representatives from the Department of Statistics Malaysia. The main purpose of this training is to learn the UHC index calculation as per reported by WHO and how to derive the index will help MOH in adjusting the programmes and activities that were needed to improve Malaysia's UHC score.

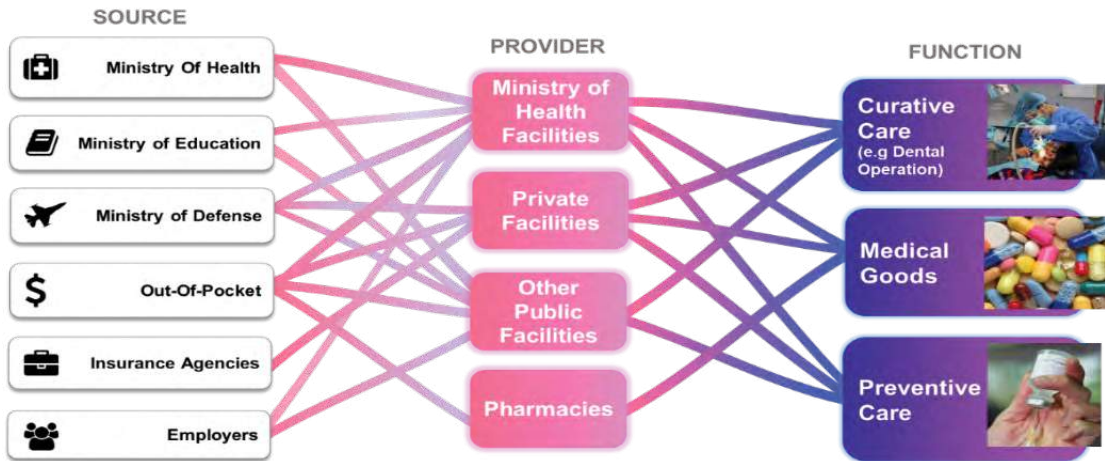
MALAYSIA NATIONAL HEALTH ACCOUNTS (MNHA)

MNHA unit strives to provide policymakers with quality information for the development of evidence-based health policies. The MNHA data provides a wealth of useful macro-level health expenditure information to assist not only policymakers but also various researchers and other stakeholders.

“Who is paying for healthcare? What types of healthcare services or equipment/products are being consumed? and Who are the providers of healthcare?”; these are among the questions that arise when measuring the healthcare system performance of any country. The health expenditure estimates produced by MNHA Section provide answers to these questions (**Figure 6.2**).

MNHA section has been extensively analysing, refining its methodology (**Figure 6.3**) and providing data since the section was institutionalised under the Planning and Development Division of MOH in 2005. Among the macro-level data generated based on national and international frameworks are Total Expenditure on Health (TEH) as a percentage of Gross Domestic Product (GDP), the burden of Out-of-pocket (OOP) expenditure on health, health expenditure at hospitals and various other health expenditure related data. Every year, MNHA publishes a health expenditure report for T-1, in an endeavour to provide a clearer picture of the national health expenditure from the sources to the various providers and finally to the types of services obtained.

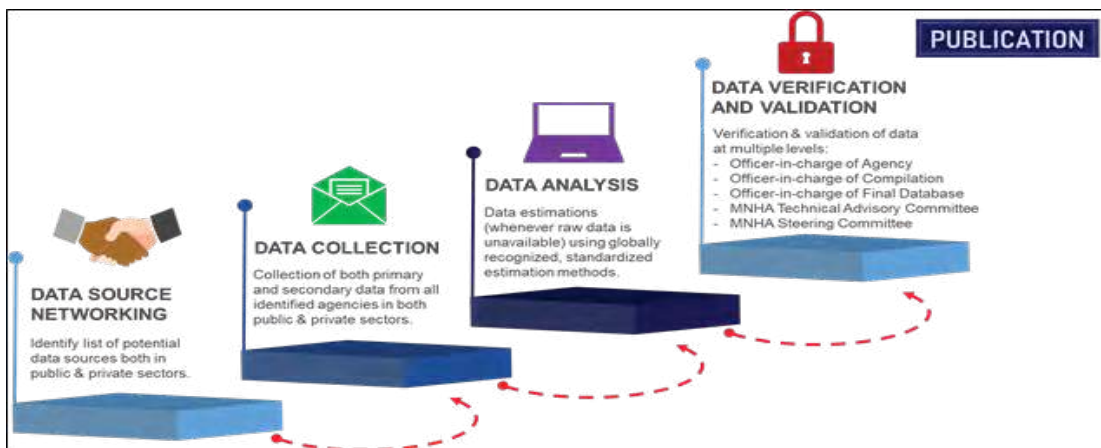
Figure 6.2
The Flow of Health Funds



Source: MNHA Section, Planning Division, MOH

MNHA section emphasises the verification and validation of data and analyses by carrying out this process at several levels (**Figure 6.3**). This 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. Further adding to this, the MNHA Steering Committee comprising of representatives from various public and private agencies, co-chaired by the Director-General of Health, Malaysia and Secretary-General of MOH, annually reviews and endorses the estimates produced. Only after obtaining endorsement from the MNHA Steering Committee, the annual time-series health expenditure data is published and broadly shared both locally and internationally.

Figure 6.3
Methodology of Malaysian Healthcare Expenditure Analysis

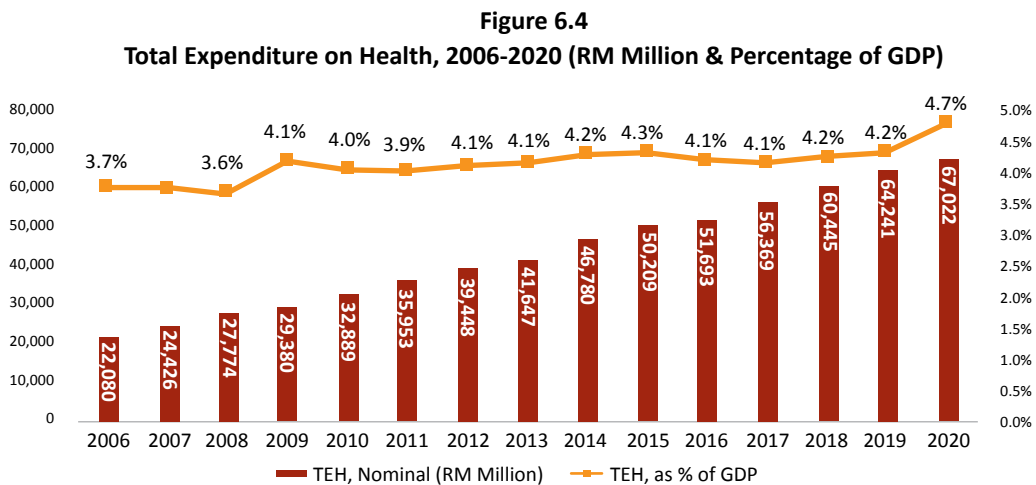


Source: MNHA Section, Planning Division, MOH

NATIONAL HEALTH EXPENDITURE - 2006 TO 2020

Starting from the year 2021, a decision was made for MNHA to publish National Health Expenditure time-series data based on the duration of the three (3) most recent RMK cycles. Thus, the published report in 2021 covered the years for RMK-9, RMK-10 and RMK-11 (2006 to 2020). A good response rate was maintained during this round of data collection via sending friendly reminders to all involved agencies and adjusting deadlines.

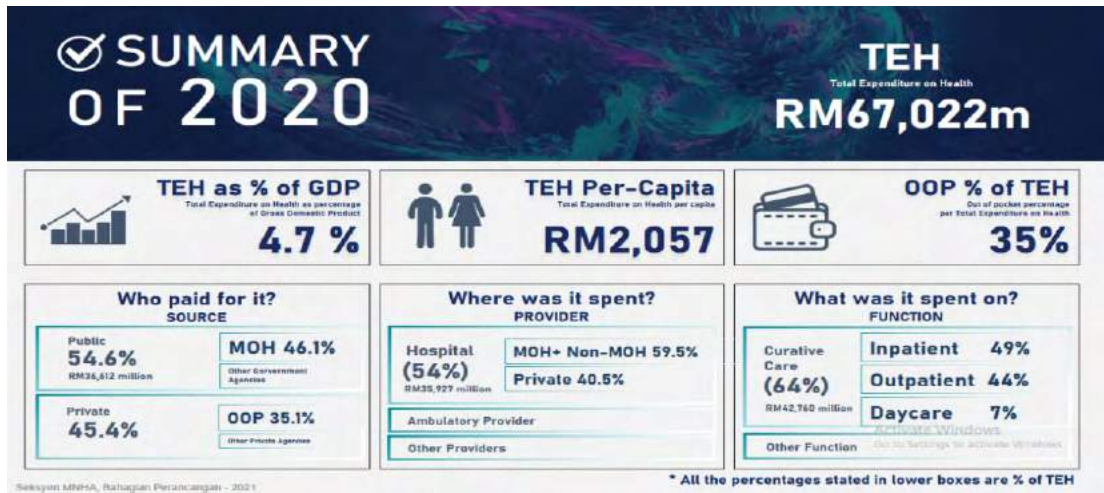
Based on the latest time-series report, TEH in 2020 was RM67,022 million (**Figure 6.4**). This was an increase of 4.3 per cent compared to TEH of RM64,241 million in 2019. In 2020, the TEH as a percentage of Gross Domestic Product (GDP) was 4.7 per cent and per capita, health expenditure was RM2,057. The notable boost in TEH as a percentage of GDP and the increase in per capita health expenditure could be a reflection of the higher priority given to health issues, especially because of increased healthcare needs during the pandemic.



Source: MNHA Section, Planning Division, MOH

Throughout the time series, both the public and private sector spending showed an upward trend with the public sector health spending remaining higher than the private sector. In 2020, the private sources share of TEH was 45.4 per cent and Out-of-pocket (OOP) share was 35.1 per cent of TEH. During the same year, expenditure based on functions of health care showed that services for curative care amounted to RM42,760 million. Among the other functions of healthcare that showed an increase in expenditure compared to 2019 was prevention and public health services with an amount of RM4,996 million in 2020 compared to RM3,779 million spent in the year 2019.

Figure 6.5
Summary of National Expenditure on Health for the Year 2020



Source: MNHA Section, Planning Division, MOH

MNHA COVID-19 HEALTH EXPENDITURE ESTIMATIONS FOR 2020

It is undeniable that globally, the COVID-19 pandemic had significant health and economic impact since early 2020. The pandemic led to a sharp increase in health expenditure across many countries. Hence during the data collection process in 2021, the MNHA section also embarked to collect, analyse and produce COVID-19 health expenditure estimates as a sub-account for the year 2020. This allowed for a more comprehensive reporting of health spending data. Data from multiple sources was gathered to generate this estimation. Among the data included were the special COVID-19 funds that were spent to mobilize resources and accelerate emergency spending, data on COVID-19 donations, data from National Disaster Management Agency (NADMA), data from Malaysian National Security Council (MKN) and expenditure on developing various digital platforms. In light of some limitations, this first round of COVID-19 health-related expenditure could be an underestimation. Nonetheless, careful attention was paid to ensure only data related to health expenditure was included in the final estimations. In 2020, COVID-19 health expenditure was RM2,158 million. MOH as the main source contributed 36.7 per cent of this amount. A sum of RM423 million or 19.6 per cent of the total COVID-19 health expenditure came from various public and private agencies' donations.

MNHA COLLABORATIONS

MNHA's data is used by national agencies, local universities and also used in preparation for top-level management speeches. This section was also involved in international cooperation and collaboration with agencies such as WHO Geneva for World Health Statistics, Global Health

Expenditure Database (GHED) and Health at a Glance (HAG). This involved sharing health expenditure estimates tailored to the requests. MNHA's evidence-based work and contributions are valuable in the development of health policies and as baseline data in health research.

Image 6.7
MNHA Activities



MNHA Steering Committee Meeting 2021
5 November 2021



Internship Course for Master of Dental
Public Health Students
13 to 19 March 2021

Source: MNHA Section, Planning Division, MOH

HEALTH FACILITY PLANNING SECTION (SPFK)

HANDOVER OF PROJECTS IN 2021

In 2021, there were a total of 12 projects, consisting of two (2) hospital upgrading projects, nine (9) health clinics and one (1) health office, which has been built and successfully handed over to end-users for operation. Some of these projects were:

- i. Pharmacy Store for Sultanah Nur Zahirah Hospital, Terengganu;
- ii. Upgrading Project for Sultanah Bahiyah Hospital, Alor Setar, Kedah;
- iii. Health Clinic (Type 3) Rantau Panjang, Kelantan;
- iv. Health Clinic (Type 3) Penampang, KB, Kelantan;
- v. Health Clinic (Type 3) with quarters Ulu Tiram, Johor Bahru;
- vi. Health Clinic (Type 3) with quarters Kg. Kenangan, Muar;
- vii. Health Clinic (Type 3) with quarters Kapar, Selangor;
- viii. Health Clinic (Type 2) Bandar Perda, Pulau Pinang; and
- ix. District Health Office (PKD) Jeli, Kelantan.

PROJECTS APPROVED FOR IMPLEMENTATION IN 2021

A total of 14 projects have been approved for implementation in 2021. The approved projects consist of two (2) new hospitals, seven (7) hospital upgrading projects, four (4)

new and upgrading health clinics and one (1) upgrading health office. Some of these projects are:

- i. Malaysia Institute of Infectious Disease (MIID), Bandar Enstek, Nilai, Negeri Sembilan
- ii. 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. Health Clinic (Type 2) with quarters, Beseri, Perlis (replacement);
- viii. Health Clinic (Type 3) with quarters Parit Raja, Johor (replacement); and
- ix. Health Clinic (Type 3) with quarters Selising, Pasir Puteh, Kelantan (replacement).

DEVELOPMENT OF UPDATED VERSION OF STANDARD DESIGN FOR HEALTH CLINICS TO INCORPORATE INFECTIOUS DISEASE SCOPE

To deliver the best service to the public during this COVID-19 pandemic, MOH has taken a step forward in ensuring its facilities are capable to deal with infectious diseases. Therefore, SPFK has worked closely with other divisions in MOH together with Public Work Department (JKR) to incorporate infectious disease scope into our standards health clinic pre-approved plans (PAP). The revision of designs is available for health clinics ranging from type 6 (KK6) to type 2 (KK2). All newly approved health clinic projects and projects which are yet to be tendered are subjected to this update. The improvement to the PAP plans based on the new norms and requirements is important to create a safer environment and prevent the spreading of infectious diseases among patients and healthcare workers. Whereas for hospital project implementations, requirements for infectious disease scopes have been finalized and are also ready to be used for any applicable project.

DEVELOPMENT OF NATIONAL HEALTH FACILITY MASTER PLAN 2022-2030

In 2016, SPFK has produced a comprehensive need analysis for national health facilities known as The National Hospital Master Plan 2016-2020. Currently, SPFK is in the process of reviewing and updating the need analysis and projection for health facilities in Malaysia. The analysis will be carried out by an appointed consultant to deliver the updated National Health Facility Master Plan 2022 - 2030. This Master Plan plays a vital role to ensure comprehensive planning for the long term development and maintenance of health facilities. The document will also serve as a framework reference for project requests from other stakeholders in the ministry to guide them in the development of new health facilities in the future. It will enable the ministry to have a better facility mapping and improve the health services accessibility.

DEVELOPMENT OF HOSPITAL PLANNING NORMS AND GUIDELINES 2.0

SPFK is also in the process of producing an e-book about Hospital Planning Norms and Guidelines 2.0. This document will be focusing on the implementation criteria required for any healthcare project's development and also will provide information on the feasibility checklist. It is complementary to the previous reference that SPFK has produced to facilitate design development and detailed interaction stages. This e-book shall guide in terms of land requirements, criteria of prioritization such as 3R (repair, replace, restore), integration requirement, connectivity to the existing facility at the site, and others. It will help the stakeholders to prepare the required documents before any submission of a project proposal and at the same time ensure the feasibility and practicality of the projects.

E-HEALTH PLANNING SECTION

ESTABLISHMENT OF ONLINE HEALTHCARE SERVICE REGULATION

Online Healthcare Service (OHS) refers to healthcare service provided to a client or patient intermediated by a specialised digital platform. To date, there are no standards and 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. Therefore, MOH under Planning Division has initiated the establishment of OHS Regulation. This initiative commenced in 2020 with the establishment of a Regulatory Framework for Private OHS in Malaysia.

The main challenge in regulating technology-enabled services such as OHS is the slower pace of regulatory change in comparison to the rapid advancement of technology. Thus, the first activity outlined in the Regulatory Framework is an implementation of the OHS Regulatory Lab to allow the regulatory change in response to technology evolution. The lab is a venue for stakeholder discussion particularly between OHS providers and regulators to co-create standards and the most appropriate regulatory mechanism for OHS.

MOH is leveraging on existing expertise by collaborating with Futurise Sdn. Bhd., a company under the Ministry of Finance (MOF) mandated to lead the National Regulatory Sandbox (NRS) initiative to optimise resources since October 2019. In 2021, MOH together with relevant regulators and Futurise had developed the first version of The Guideline for OHS under the MOH Regulatory Lab, which is the basis for OHS standards and will be further refined through feedback from OHS providers. Hence, in 2022 MOH will officially start accepting the participation of selected OHS providers in the Lab.

Image 6.8
OHS Regulatory Lab Workshop



Source: eHealth, Planning Division, MOH

KICK-OFF WORKSHOP OF HEALTH INFORMATION EXCHANGE (HIE) PROJECT UNDER THE ELECTRONIC MEDICAL RECORDS (EMR) INITIATIVE

Planning Division as the owner of HIE services under the EMR Project in Negeri Sembilan had organized a ‘Kick-Off Workshop’ which was held for two (2) days at Everly Hotel, Putrajaya on the 21 to 22 December 2021. The HIE project aims to support the establishment of Lifetime Health Record through the development of an interoperability platform which enables the health information of a person to be exchanged between digital systems. Thus, a clinical data repository of an individual will be created which focuses on aspects of continuity of care, care coordination, patient engagement and analytics.

A total of 50 participants were present during the workshop consisting of MOH Officers from various Programmes, senior officers from the National Blood Centre, representatives from Negeri Sembilan State Health Department and ICT Central Agency (MAMPU). This workshop is a critical project management activity that involves preparing the team members on expectations, communication, and collaboration for the project. The output of the workshop is consensus

details such as project timeline, project management methodology, success measurement and realistic expectations of the project.

Image 6.9
Kick-Off Workshop of the HIE Project under EMR Initiative



Source: eHealth, Planning Division, MOH

NATIONAL HEALTH FINANCING (NHF) SECTION

COVID-19 CARE PACKAGE

On 19 September 2021, Prime Minister announced that the government will be distributing COVID-19 Care Packages (*Pakej Penjagaan COVID-19, PPC*), which is expected to benefit around 3.6 million Keluarga Malaysia B40 (household recipients of *Bantuan Prihatin Rakyat*). These efforts, among others, were aimed at easing the financial burden of B40 households and helping them to cultivate new norms, while 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 thermometer, as well as leaflets containing health information and user guidelines. The PPC distribution had been carried out by Pos Malaysia starting from 30 November 2021. By 31 December 2021, 144,117 packs of PPC had been successfully distributed nationwide. The remaining packs will be distributed in the year 2022.

Image 6.10
Keluarga Malaysia B40 Receiving Their PPC Packs



Source: NHF, Planning Division, MOH

The PPC had been showcased during the Keluarga Malaysia Aspirations (AKM) event at KLCC from 9 to 12 December 2021 along with other MOH 100-days achievements.

Image 6.11
Poster of PPC at AKM KLCC



Source: NHF, Planning Division, MOH

Image 6.12
YAB Prime Minister Visit MOH Booth at AKM KLCC

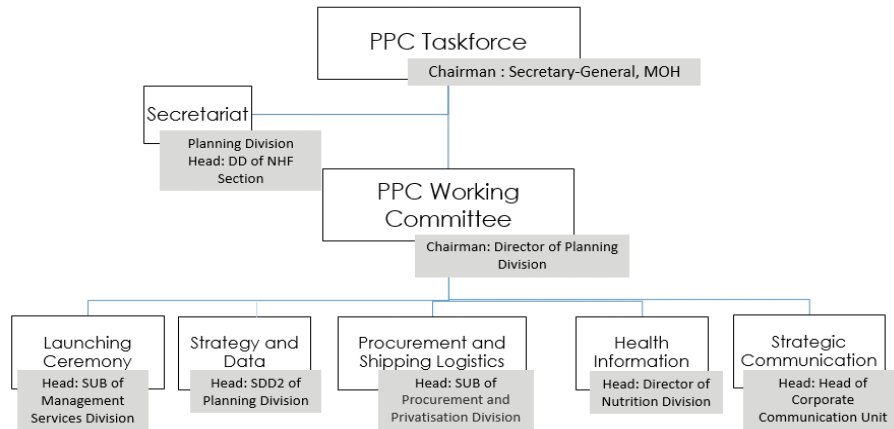


Source: Planning Division, MOH

PPC GOVERNANCE STRUCTURE

The PPC Taskforce was established to ensure the smooth distribution of the PPC following the government' rules and procedures. The PPC Taskforce is chaired by the Secretary General of MOH while the PPC Working Committee is headed by the Director of the Planning Division. The structure was set up to plan and execute PPC delivery strategies, coordinate with external agencies and monitor the overall PPC procurement packaging and delivery process.

Figure 6.6
PPC Governance Structure



Source: NHF, Planning Division, MOH

HEALTH INFORMATICS CENTRE (HIC)

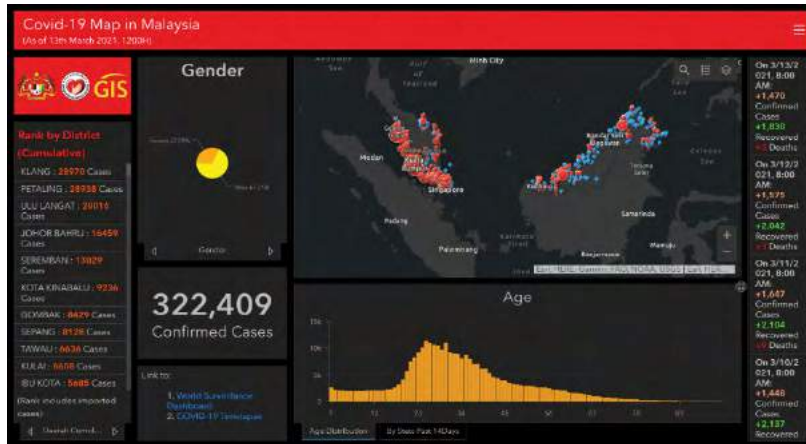
OPERATIONAL DASHBOARD FOR COVID-19 USING GEOGRAPHICAL INFORMATION SYSTEM MALAYSIAN HEALTH DATA WAREHOUSE (GIS-MyHDW)

The Geographical Information System component in the Malaysian Health Data Warehouse (GIS-MyHDW) which is managed by HIC has been utilised to visualise information and key health data for operational purposes, surveillance and research. The GIS-MyHDW enabled users to upload, perform geospatial analyses and visualize health data more effectively.

Throughout the year 2021, GIS data such as the distribution of positive cases and the cluster of COVID-19 from the Disease Control Division and facilities utilisation data from the Medical Development Division have been analysed using GIS-MyHDW through the development of a feature map and operational dashboard (**Figure 6.7**). These analyses assist in public health intervention activities planning and effective human resources mobilisation.

Continuous training and exposure to geospatial analyses have been given to other divisions in the MOH and state epidemiology officers to improve knowledge and skills so that they can benefit from geospatial analysis in their respective divisions. The GIS-MyHDW has also been used by the Dental Development Division and National Cancer Institute (NCI) for spatial analysis of their health data for surveillance and epidemiology study. The use of GIS MyHDW is planned to be expanded in the Health Supply and Demand Study by Economy Planning Unit, Prime Minister's Office which aims to strengthen the planning strategy of the national health system in the future.

Figure 6.7
Operational Dashboard COVID-19 Malaysia



Source: GIS-MyHDW

THE INTERNATIONAL CLASSIFICATION OF DISEASES 11TH VERSION (ICD-11) VIRTUAL TRAINING

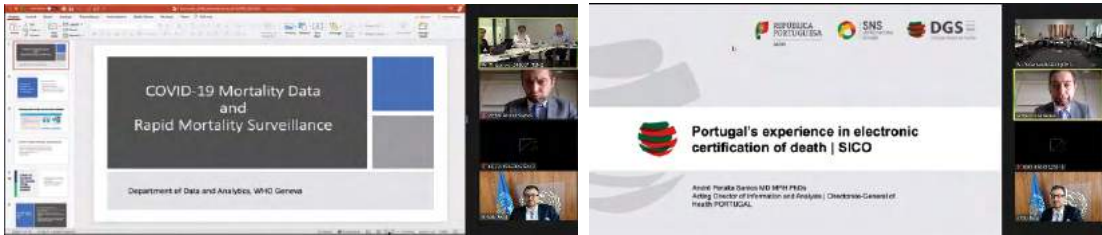
The ICD-11 element was introduced for the transition from the ICD-10 to the ICD-11 in Malaysia. The objective of the training was to train the newly appointed Assistant Medical Record Officers (AMRO) and the Medical Record Officers (MRO) appointees on the ICD. A healthy exchange of opinions and views from the attendees nationwide helped to improve the attendees understanding of ICD. This session was also joined by the existing officers in service from more than 50 facilities nationwide to enhance and reinforce their understanding of ICD coding. Trainers include the MOH Expert coders, officers from the Medical Development Division and senior AMRO from MOH facilities. The participants provided good feedback and they have a better understanding of ICD-10 and ICD-11. Recommendations raised by the attendees were identified and discussed to make this implementation exercise a success in the future.

WHO-FAMILY OF INTERNATIONAL CLASSIFICATIONS (FIC) ANNUAL NETWORK MEETING 2021

The WHO-FIC Network is a network of WHO Collaborating Centres, NGOs, and selected experts established in 1970 to support WHO's work on international classifications. The principal role of the WHO-FIC Network is to promote the implementation, use, maintenance and updating of the WHO reference health classifications.

In 2021, WHO-FIC Annual Network Meeting was held virtually from 18 to 22 October 2021. This 5-day meeting consisted of specialised groups. In these sessions, members would give relevant updates, and the way forward will be decided accordingly. Malaysia was invited to speak on *Unleashing the power of innovation in health information in Malaysia* and was presented by The Senior Deputy Director II, from MOH Planning Division (**Image 6.13**).

Image 6.13
WHO-FIC Network Meeting 2021



Source: HIC, Planning Division MOH

WHO ICD-11 TRADITIONAL MEDICINE CHAPTER MODULE 2 TECHNICAL MEETING

This first WHO ICD-11 Traditional Medicine Chapter Module 2 Technical Meeting held from 29 to 30 September 2021 served to discuss the country situation on documenting and reporting traditional medicine encounters, the use cases and the value proposition of the ICD-11 TM2 module and work on the Alpha draft development.

The meeting included official representatives from eight (8) ICD-11 TM2 stakeholder countries and WHO staff from Headquarters, Regional Offices and Country Offices. Malaysia was represented by representatives from the Planning Division and the Traditional and Complementary Division from the MOH. Presentations and inputs were given on sessions looking into the current documentation and reporting of traditional medicine encounter to use cases and value proposition.

The primary outcomes of the meeting included identification and formulation of suitable use-cases, overall development principles for Module 2, including WHO-FIC terminology requirements, the content model for identification and categorisation of diagnostic entities representing a union set of Ayurveda and related TM diagnostic systems like Unani and Siddha and development of Alpha draft High-level structure (**Images 6.14**).

Image 6.14
WHO ICD-11 TM2 Technical Meeting



Source: HIC, Planning Division MOH

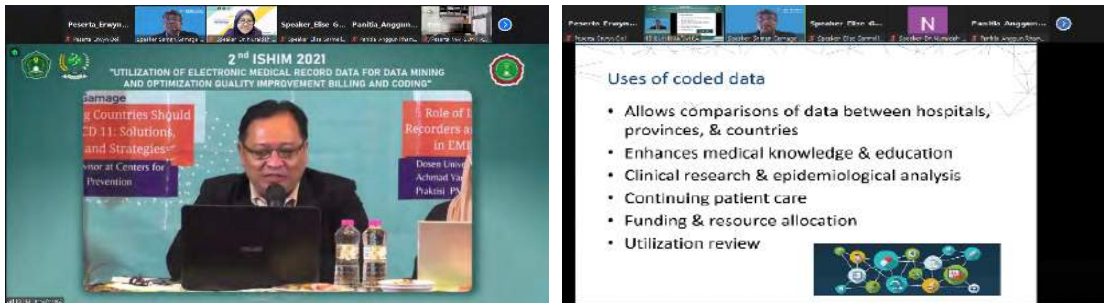
KEYNOTE SESSION ON THE 2ND INTERNATIONAL SEMINAR OF MEDICAL RECORD AND HEALTH INFORMATION (ISHIM) BY UNIVERSITAS JENDERAL ACHMAD YANI, YOGYAKARTA

The 2nd ISHIM webinar for 2021 was held by the Medical Record and Health Information study programme Faculty of Science, University of Jenderal Achmad Yani Yogyakarta, Indonesia,

themed Utilisation of Electronic Medical Record Data for Data Mining and Optimization Quality Improvement Billing and Coding.

The webinar aims to bring worldwide intellectual academics, researchers, and professionals to disseminate innovation in health, science, and technology. The Deputy Director of HIC, Planning Division, MOH, was invited as a keynote speaker titled Experience in Implementing ICD-11 in Malaysia (**Image 6.15**).

Image 6.15
2nd ISHIM Webinar 2021



Source: HIC, Planning Division MOH

ENGINEERING SERVICES DIVISION (ESD)

ESD MOH plays a major role in building the health engineering sector as well as the health facility construction industry in the country.

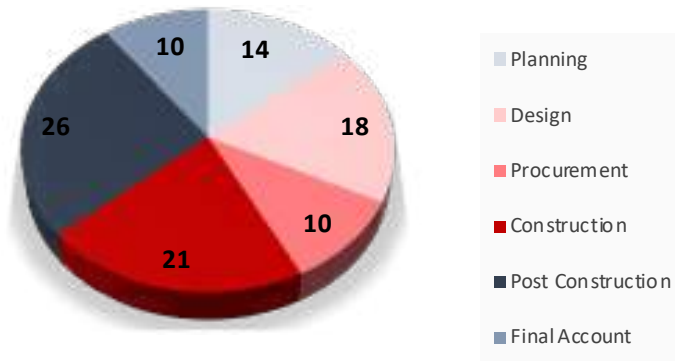
ESD comprises:

- i. Service Branch (Project Implementation Sector, Hospital Support Services Sector, Clinic Operation Sector and Sustainability Programme Sector);
- ii. Regulatory Branch (Water and Sanitation Engineering Sector, Environmental Health Risk Sector and Waste and Hygiene Sector);
- iii. Planning Branch (Engineering Development & Immovable Asset Management Sector and Technical & Corporate Sector); and
- iv. Biomedical Sector.

PROJECT IMPLEMENTATION SECTOR (SIP)

In 2021, SIP has implemented 99 projects under the RMK-11 and RMK-12. 14 projects were in the planning stage, 18 projects in the design stage, 10 projects in the procurement stage, 21 projects under construction Phase, 26 projects under post construction and 10 projects in final account. A total of nine (9) projects worth RM10,415,830.30 have received the Certificate of Practical Completion (CPC) in 2021 which has benefited the local residents. **Figure 6.8** shows the breakdown of projects managed by SIP.

Figure 6.8
Total Projects Managed in 2021



Source: Engineering Services Division, MOH

Image 6.16
Project Implemented and Completed in 2021



Upgrading Block A and B Hospital Taiping, Perak (Number of beds: 208)

Medical Gas System, Hospital Hulu Terengganu, Terengganu

Medical Gas System, Kompleks Rawatan Harian (ACC), Hospital Sultanah Nur Zahirah, Kuala Terengganu

Source: Engineering Services Division, MOH

This sector working closely together through the three (3) main engineering scopes Civil & Structural, Mechanical and Electrical to complete the Proposed Construction of Medical Gas System Facilities and upgrading of eight (8) COVID-19 patient wards with 136 amount of beds at the National Leprosy Control Center (PKKN), Hospital Sungai Buloh on 11 October 2021 (Image 6.17).

Image 6.17
Construction of Medical Gas System Facilities at PKKN, Hospital Sungai Buloh



Source: Engineering Services Division, MOH

This sector leads and participates in the Task Force Medical Gas (Oxygen) Team established by ESD to monitor oxygen supply facilities at COVID-19 Quarantine and Treatment Centers (PKRC) throughout the country. The Task Force Team was involved in the installation of micro filling oxygen plant, bulk tank supply and construction of vacuum insulated evaporator (VIE) oxygen tank which will benefit users, especially COVID-19 patients and provided direct and continuous facilities to PKRC in improving the quality of health services (**Image 6.18**).

Image 6.18
Task Force Medical Gas (Oxygen) Team



Procurement of Supplementary Medical Oxygen Cylinders

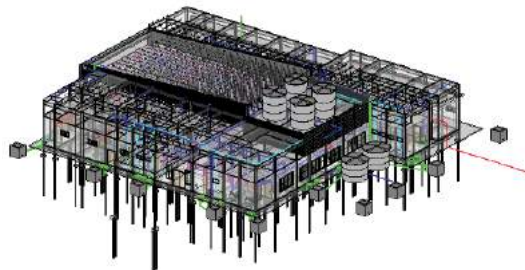
Installation of Micro Filling Oxygen Plant at PKRC, MAEPS

Construction of VIE Oxygen Tank Installation

Source: Engineering Services Division, MOH

Other than that, the Task Force Team was also involved in the ventilation system of health facilities and Government Agencies that require technical advisory services under the Task Force Ventilation and Indoor Air Quality (IAQ) such as the Parliament Building and subsequently involved in providing input in the preparation of ventilation system guidelines, SOP for Quarantine Center together with other Government Agencies such as NADMA and UTeM Holdings Sdn. Bhd.

Image 6.19
3D Model of Hospital Pekan Haemodialysis Project using BIM technology



Source: Engineering Services Division, MOH

In accordance with the desire to digitalise the public services, the Sector has embarked on a move by exploring new technologies to manage the Government projects. Accordingly, a study on the effectiveness of the use of Building Information Modelling (BIM) was conducted to identify the best project implementation method based on the actual project site involving various fields of engineering. This technology is expected to help increase the efficiency of project management and the Sector initiatives in achieving sustainable development (**Image 6.19**).

This Sector has also released two (2) books entitled *Buku Prosedur Pengurusan Projek Bangunan Dan Infrastruktur Fasiliti Kesihatan* and *Jurnal Pengurus Projek* launched by Secretary General of MOH on 26 November 2021 (**Image 6.20**). The objective of the books is to describe the work procedures for project implementation involving the planning phase, construction and post-construction as well as the supervision of physical projects in health facilities. The books also serve as a guide to the Project Manager in managing the construction project and upgrading MOH health facilities to enable them to be executed in an orderly and integrated ethic to deliver the best health services that can be provided to the people.

Image 6.20
Book Launching Ceremony



Source: Engineering Services Division, MOH

HOSPITAL SUPPORT SERVICES SECTOR

This sector is responsible for the monitoring and supervision of privatised Hospital Support Services (HSS) through five (5) concessionaires and six (6) outsourced non-concessionaires contracts in ensuring compliance with requirements. The scope of the services are:



Facility Management Services (FMS)

Coordination of services in ensuring hospitals/ institutions were operated properly and safely.



Facility Engineering Management Services (FEMS)

Operate and maintain all installed plants and systems, maintenance of non-biomedical assets, pest control activities and ground maintenance.



Biomedical Engineering Management Services (BEMS)
 Medical equipment handling and maintenance services are intended to ensure that equipment is available, safe, and capable to use at any point of time.



Healthcare Waste Management Services (HWMS)
 Collection, storage, transportation, treatment and disposal of Healthcare Waste produced by the Contract Hospital to a site licensed by the Department of Environment.



Cleansing Services (CLS)
 Provide cleansing services in medical, specialised, and general areas by using proper and effective procedures.

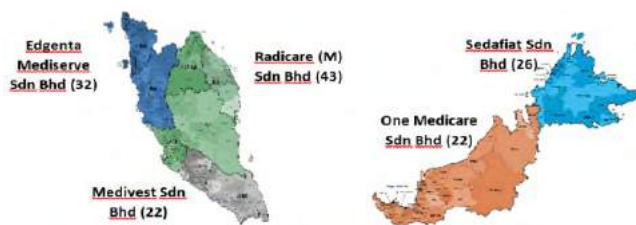


Linen and Laundry Services (LLS)
 Delivery of adequate clean linen to the Contract Hospital, removal of soiled linen and laundry services.

Source: Engineering Services Division, MOH

In the year 2021, the number of contract hospitals and institutions involved with the HSS Contract is 146 amounting to RM1.92 billion a year. **Figure 6.9** shows the current contract. **Table 6.1** shows the increased number of assets involved in the HSS Contract between 2020 to 2021.

Figure 6.9
Number of Hospital /Institutions by Concession Companies



Source: Engineering Services Division, MOH

Table 6.1
Number of Assets for HSS 2020 to 2021

Item	2020	2021
Number of Hospital / Institutions	145	146
Floor Areas (m ²)	20,905,892	20,653,610
FEMS Assets	625,414	601,468

Source: Engineering Services Division, MOH

HSS PROJECT MONITORING COMMITTEE (PMC)

The HSS PMC meeting chaired by the Director-General of Health Malaysia is a platform to discuss policy matters, HSS issues and the evaluation of the company's performance in the implementation of the services provided. This performance assessment will drive the company in providing better services. **Table 6.2** shows the Star Rating of company valuation performance (CPA) concessions for 2021.

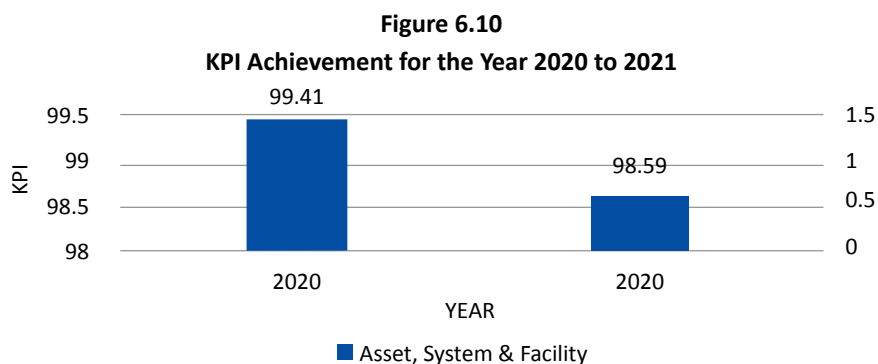
Table 6.2
Star Rating of CPA concessions

Concessionaires Company	Star Rating
Edgenta Mediserve S dn. Bhd.	★★★★
Radicare Malaysia Sdn. Bhd.	★★★★
Medinvest Sdn. Bhd.	★★★★
Sedafiat Sdn. Bhd.	★★★★★
One Medicare Sdn. Bhd.	★★★★

Source: Engineering Services Division, MOH

KEY PERFORMANCE INDICATOR (KPI)

A KPI which is the uptime of equipment, systems and facilities for Facility Engineering Management Services (FEMS) is set to meet the target of at least 93 per cent. The uptime of equipment, systems and facilities for FEMS recorded for the year 2021 is 98.59 per cent which exceeds the KPI target which is 93 per cent. **Figure 6.10** shows the achievement of the KPI from 2020 to 2021.



Source: Engineering Services Division, MOH

HSS AT NON-CONCESSION FACILITIES

In the year 2021, a total of eight (8) HSS tenders were offered by open tender for the implementation of HSS at eight (8) MOH facilities that are not under the HSS privatisation programme. The facilities are Hospital Rehabilitasi Cheras, National Cancer Institute, Hospital Shah Alam, Hospital Rompin, Makmal Kesihatan Awam Kota Bharu, National Institute of Health, Hospital Rembau and Hospital Orang Asli Gombak. Contractors appointed for the implementation of HSS at non-concession facilities are Sinar Jernih Sdn Bhd, Sinar Teknik Urus Harta Sdn. Bhd, Ambang Wira Sdn Bhd, Adwaa Resources Enterprise and Radicare (M) Sdn. Bhd.

SUPPORT SERVICES AT QUARANTINE STATION (QS) & COVID-19 QUARANTINE AND TREATMENT CENTRE (PKRC)

The year 2021 has been a challenging year for the world, especially Malaysia when it was hit by the COVID-19 pandemic with an average daily infection of 10,000 cases per day. SKPSH is responsible for monitoring the implementation of support services not only in hospitals but also at quarantine stations and PKRC opened throughout the country. Throughout 2021, support services were implemented at 600 QS & PKRC involving Cleaning Services (General Cleaning & Cleaning Terminals), Clinical Waste Management Services and Linen and Laundry Services. **Image 6.21** shows support services in QS and PKRC.

YEAR

Image 6.21
Support Services at QS and PKRC



Source: Engineering Services Division, MOH

FIELD HYBRID INTENSIVE CARE UNIT (FHICU)

ESD has implemented 15 projects which supplied 10 beds for FHICU at Hospital Tengku Ampuan Rahimah Klang, Hospital Kepala Batas, Hospital Melaka, Hospital Selangor, Hospital Tuanku Jaafar Seremban, Hospital Sultanah Aminah Johor Bahru, Hospital Sibul, Hospital Tawau, Hospital Sultan Abdul Halim, Hospital Kepala Batas (Additional), Hospital Sultanah Nur Zahirah Kuala Terengganu, Hospital Bintulu, Hospital Sarikei, Hospital Sultanah Bahiyah Alor Setar and Hospital Raja Perempuan Zainab II based on the application submitted by the respective State Health Department. The concept of FHICU is an alternative to propose upgrading the

regular wards to ICU Isolation wards to accommodate the increase in COVID-19 patients who need treatment in the ICU. All the above FHylCU projects were implemented by emergency procurement by appointing Edgenta Healthtronics Sdn. Bhd. as the contractor based on the company experience and capability to complete the project within a short period. **Image 6.22** shows the FHylCU project at the MOH Facility.

Image 6.22
FHylCU Project at the MOH Facility



Construction of FHylCU

FHylCU Interior

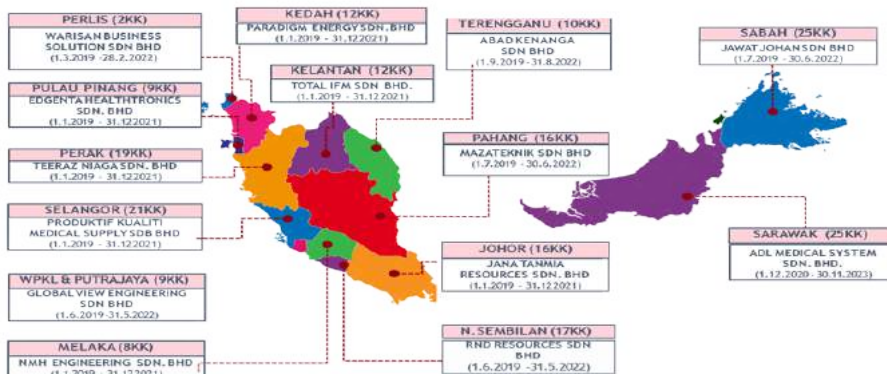
FHylCU Exterior

Source: Engineering Services Division, MOH

CLINIC OPERATION SECTOR

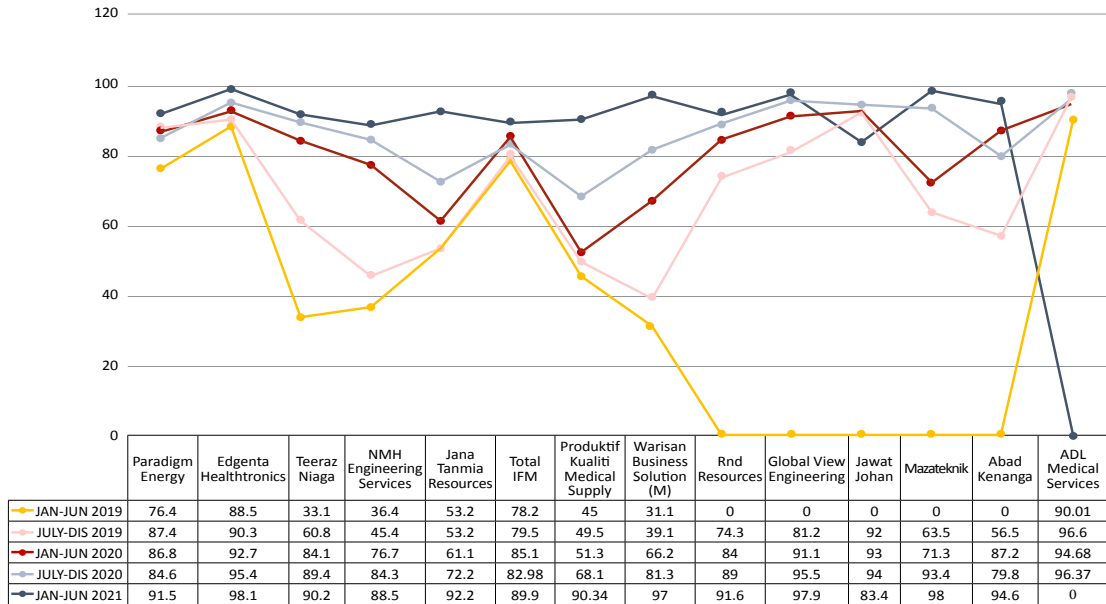
Clinical Support Services Unit (PSK) has the role of monitoring and regulating the implementation of the Technical Support Services Programme in 201 selected health clinics throughout the country with an annual cost of RM137 million involving four (4) services namely Facility Engineering Maintenance Services (FEMS), Biomedical Engineering Maintenance Services (BEMS) (Sarawak Only), Cleansing Services (CLS) and Clinical Waste Management (**Figure 6.11**). The main activities involve the work of Planned Preventive Maintenance (PPM) and Corrective Maintenance (CM) by the contractor. The contractor's performance is determined through CPA performance six (6) monthly as shown in **Figure 6.12**.

Figure 6.11
Basic information on PSK contracts by State



Source: Engineering Services Division, MOH

Figure 6.12
CPA by Contractor for the Year 2019 to 2021

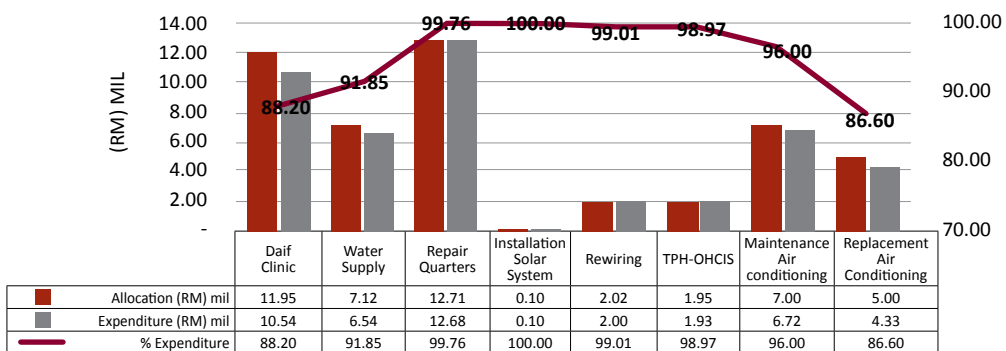


Source: Engineering Services Division, MOH

CLINIC FACILITIES ENGINEERING UNIT

UKFK coordinates and monitors the repair and upgrading of buildings, engineering and infrastructure systems as well as quarters in MOH health facilities. These activities were carried out nationwide for RM49.24 million to ensure the safety and functionality of the health clinic at a good level as the clinic has aged and ensures better health services to the public. In addition, a total of RM13.84 million was allocated for the repair of 1,129 units of obsolete staff quarters. The breakdown of the allocation and performance of expenditure for 2021 is shown in **Figure 6.13**.

Figure 6.13
Breakdown of Allocation and Percentage Expenditure for Repair and Upgrading works of MOH Health Facilities in 2021



Source: Engineering Services Division, MOH

The scope of work involved is as follows **(Image 6.23)**:

- i. Buildings - Building repairs and upgrades including structures and roofs as well as ceilings, walls, floors, sewer systems and water supply systems;
- ii. Infrastructure - Repair of drainage systems, roads and fences;
- iii. Electrical Engineering System - Upgrading of electricity supply, re-wiring, power system, lightning repellence system, telephone system and Queue Management System (QMS); and
- iv. Mechanical Engineering System - Repair and upgrade of fire prevention system and air conditioning system.

Image 6.23
Repair and Upgrading Works Building, Engineering Systems and
Infra MOH Health Facilities in 2021



Source: Engineering Services Division, MOH

SUSTAINABILITY PROGRAMME SECTOR (SPL)

GLOBAL RECOGNITION OF GREEN HOSPITAL

MOH has implemented various activities in its healthcare facilities to become sustainable and environmentally friendly since 2015 and these efforts had been recognised internationally. In 2021, MOH was honoured as the recipient of the LEED USGBC Regional Leadership Award Winner for the Southeast Asia region during the USGBC Live Virtual Conference session on 10 June 2021. The award was received virtually by the Minister of Health in presence of the Secretary-General and Director of ESD, MOH. Hospital Jasin, Melaka and Hospital Putrajaya were also awarded a Platinum rating under the international certification of Leadership in Energy and Environmental Design (LEED) which meets the KPI target for 2021. Hospital Jasin has become the first government building in Malaysia and the first hospital in the world to receive this highest certification under the Existing Building Operation and Maintenance version four (4) category (**Image 6.24**).

Image 6.24
Global Recognition to MOH



Source: Engineering Services Division, MOH

ASEAN AND NATIONAL ENERGY AWARDS

Numerous MOH hospitals had been awarded at the regional and national levels due to excellence in the implementation of the energy management programme. In 2021, four (4) MOH hospitals were selected as winners for various categories in Asean Energy Award (AEA) and National Energy Award (NEA).

Table 6.3
The Recognition in ASEAN and National Energy Award for MOH Hospitals

Categories	Hospital/Award	
Energy Management (Small and Medium Building)	Hospital Yan, Kedah AEA: 1 st Runner-Up NEA: Winner	
Energy Management (Small and Medium Building)	Hospital Tanjung Karang, Selangor AEA: Winner NEA: Runner-Up	
Energy Management (Large Building)	Hospital Segamat, Johor NEA: Runner-Up	
Special Awards (Energy Performance Contracting – EPC)	Hospital Tuanku Ampuan Najihah, Kuala Pilah, Negeri Sembilan NEA: Runner-Up	

Source: Engineering Services Division, MOH

ENERGY SAVING

MOH had successfully met its 2021 energy savings KPIs with saving of more than 75,000kWh. As of December 2021, MOH managed to achieve a cumulative 500 GigaWatt-Hours (GWh) of energy saving which is equivalent to utility cost savings of RM210 million compared to the baselines of 2015 and 2016 as well as a reduction in carbon emissions exceeding 360 thousand tonnes. Besides, 103 hospitals and institutions have scored 2-star and 3-star ratings in the Energy Management Gold Standard (EMGS) certification under the ASEAN Energy Management Scheme (AEMAS) (**Image 6.25**).

Image 6.25
Numbers of AEMAS Certified Hospital



Source: Engineering Services Division, MOH

HIGH IMPACT ENERGY PROJECTS

MOH was also successful in implementing high-impact energy projects, either through conventional methods or Energy Performance Contracting (EPC). These projects involved the replacement of chiller, LED lighting and installation of the solar thermal hot water system utilising green technologies to continuously reduce energy consumption. Until 2021, ESD has implemented a total of 32 energy projects through EPC and 18 energy projects through collaboration with Kementerian Tenaga dan Sumber Asli - (KeTSA) (**Image 6.26**).

Image 6.26
High Impact Energy Projects Implemented by MOH



Green Chiller,
Hospital Setiu

Solar Thermal Hot Water System,
Hospital Ampang

Green Chiller, Hospital
Tengku Ampuan Rahimah,
Klang

Source: Engineering Services Division, MOH

BIOMEDICAL SECTOR

The Biomedical Sector’s role is to manage and supervise the BEMS at MOH healthcare facilities within the Hospital Support Service (HSS) Concession Agreement, Medical Equipment Enhancement Tenure (MEET) Programme for clinics and other contracts (non-concession and PFI). **Table 6.4** provides the summary of BEMS.

Table 6.4
Summary of BEMS

	HSS Concession	Non-Concession	MEET Programme
No. of Facilities	146 Hospitals/Institutions	7 Hospitals/Institutions	3,045 Clinics
No. of BEMS Asset	198,032	7,197	140,367

Source: Engineering Services Division, MOH

The MEET contract was signed by Quantum Medical Solutions Sdn Bhd on 17 April 2014 for 13 years with scopes as the following:

- i. Perform comprehensive maintenance of biomedical equipment at 2,038 Health Clinics and 1,007 Dental Clinics involved (Selangor, Malacca, Negeri Sembilan, Johor, Perak, Penang, Sabah, Sarawak, WP Kuala Lumpur & Putrajaya, WP Labuan and ILKMM Georgetown);
- ii. Supply new biomedical equipment categorised as Gap equipment; and
- iii. Perform construction and renovation work (CW) for the supply of equipment involved.

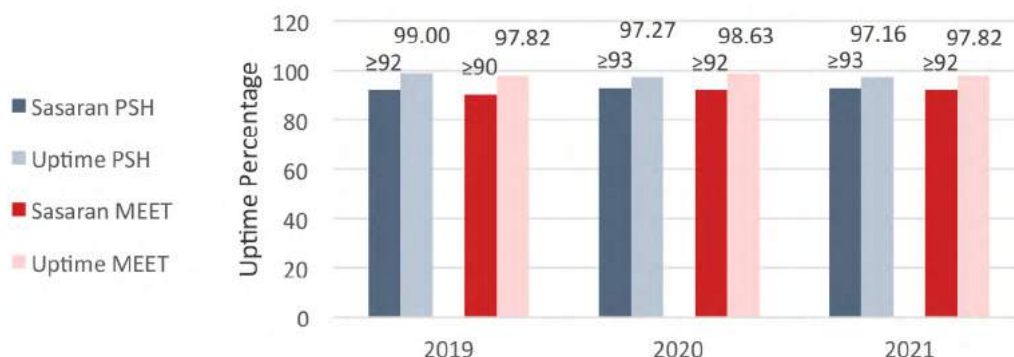
KPI monitored for BEMS is the uptime percentage of biomedical equipment. The achievement for the year 2021 is shown in **Table 6.5** and the achievement from the year 2019 to 2021 is shown in **Figure 6.14**.

Table 6.5
KPI Uptime Achievement for the Year 2021

Indicator	No. of Equipment		Achievement %	Target %
	Monitored	Achieved uptime		
Uptime for total BEMS equipment for HSS Concession Agreement	136,360	132,632	97.27	≥ 93.0
Uptime for total biomedical equipment for MEET contract	79,611	78,522	98.63	≥ 92.0

Source: Engineering Services Division, MOH

Figure 6.14
KPI Uptime Achievement for the Year 2019 to 2021



Source: Engineering Services Division, MOH

Biomedical Sector conducts monitoring activities such as technical audits (**Image 6.27**), company's performance assessment, Project Monitoring Committee and coordination/operations committee meetings to ensure the KPI Uptime target is achieved.

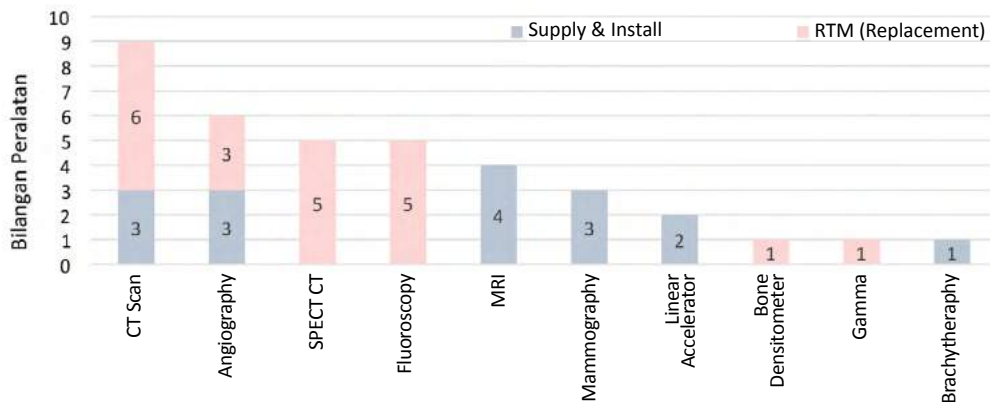
Image 6.27
Technical Audit and Project Monitoring Committee



Source: Engineering Services Division, MOH

Biomedical Sector is also involved in the supply and replacement of medical equipment in MOH facilities through a method such as Supply & Install and Replacement Through Maintenance (RTM) Programme. Activities carried out by this sector involve the preparation of technical specifications as well as monitoring and coordinating the implementation of site work. A summary of biomedical equipment projects implemented in 2021 is shown in **Figure 6.15**.

Figure 6.15
Biomedical Equipment Projects in 2021



Source: Engineering Services Division, MOH

RTM Programme is an innovative Public-Private Partnership (PPP) Programme introduced as an alternative in the management of medical equipment that has exceeded its lifespan and is still being used in hospitals/institutions. Through this programme, the overall cost of procuring the medical equipment is borne by the concessionaire and the Government is not burdened with the cost of capital expenditure.

Image 6.28
Supply and Installation of Biomedical Equipment in 2021



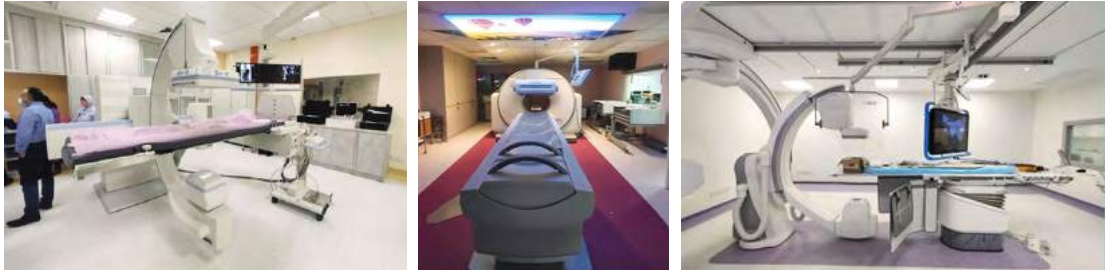
Linear Accelerator in Hospital Kuala Lumpur

MRI in Hospital Serdang

Angiography in Hospital Queen Elizabeth II

Source: Engineering Services Division, MOH

Image 6.29
RTM Programme in 2021



Fluoroscopy in Hospital Sultan Abdul Halim

SPECT CT in Hospital Sultanah Aminah

Angiography in Pusat Jantung Sarawak

Source: Engineering Services Division, MOH

Biomedical Sector is responsible for preparing MOH guidelines, providing technology and technical advice, and executing incident and forensic investigations related to biomedical engineering. In 2021, Biomedical Sector has collaborated with the Department of Standards Malaysia to develop MS2739:2021 Code of Practice - Requirements for installation, testing and commissioning and acceptance of medical devices and Prosthetic and orthotic devices - Code of practice. Biomedical Sector is also a member of the International Organisation for Standardisation (ISO) Working Group to develop an international standard for Medical Device - Good Engineering Maintenance Management.

NATIONAL BIOMEDICAL ENGINEERING CONFERENCE (NBEC) 2021

The 1st National Biomedical Engineering Conference 2021 (NBEC 2021) was held from 9 to 10 November 2021 anchored on the theme Advanced Technology for Modern Healthcare. NBEC

acts as a good platform for knowledge sharing and networking in biomedical engineering research and innovation. This will equip MOH to solve current and future challenges pertaining to biomedical engineering as well as improve the healthcare system.

Image 6.30
National Biomedical Engineering Conference 2021 (NBEC 2021)



Source: Engineering Services Division, MOH

REGULATORY BRANCH

WATER AND SANITATION ENGINEERING SECTOR

NATIONAL DRINKING WATER QUALITY SURVEILLANCE PROGRAMME (KMAM)

ESD is involved in several committees to address water issues, namely through the Water Sector Transformation Study 2040 and the National Water Council as a measure to transform the water sector starting with the Twelfth Malaysia Plan, 2021-2025 (Twelfth Plan). The Drinking Water Quality Act will also be introduced in the Twelfth Plan to regulate the quality and safety of drinking water in the country.

KMAM carry out monitoring and control measures which involve taking water samples from 509 water treatment plants and 576 water supply networks nationwide. A total of 189,472 water samples were taken for testing which included physical, microbiological, chemical, heavy metals and pesticide parameters in 2021. In addition, ESD has implemented the KMAM Quality Assurance Programme (QAP) to comply with all QAP indicators, namely E-Coli and Residual Chlorine, E-Coli, Turbidity, Residual Chlorine and Aluminium.

Recently, there have been frequent incidents of river pollution that have resulted in the closure of water treatment plants. Some areas have their water supply temporarily suspended so that the effects of the pollution can be addressed immediately. KMAM serves to monitor and initiate control measures to ensure the quality of treated water is safe to drink. Water sampling is also carried out especially at temporary evacuation centres during disasters such as floods to ensure that the water supply is safe to drink as shown in **Image 6.31**.

Image 6.31
Water Sampling at Temporary Evacuation Centres during Floods



Source: Engineering Services Division, MOH

WATER POLLUTION UNIT

The UPA plans, implements and monitors activities related to water pollution to ensure water quality in public locations/facilities that are visited by the public for recreation are always safe to use and health risks to the public can be reduced. Its activities are monitoring the water quality of swimming pools, monitoring the water quality of natural recreational water attractions (fresh water and marine water) and tourist centre sanitation monitoring. The achievements of the implementation of the UPA Programme for the year 2021 are shown in **Table 6.6**. The unit also carried out a cleanliness Programme or star rating for public toilets in MOH health facilities.

Table 6.6
Achievements of the Implementation of the UPA Programme for the year 2021

Activities	Achievements
Monitored public swimming pools	41
Monitored natural recreational water attraction (fresh water)	27
Monitored natural recreational water attraction (marine water)	20
Monitored the sanitation of the tourist centre which gets Grade A (total number of tourist centres monitored: 242)	109

Source: Engineering Services Division, MOH

SCIENTIFIC UNIT

In general, Scientific Unit is involved in tasks related to scientific elements for Programmes under the Water and Sanitation Engineering (WSE) Sector. This includes conducting routine or one-off studies in supporting the Programmes. In 2021, the Scientific Unit conducted a study to determine the value limit of the Total Dissolved Solids (TDS) parameter to review the suitability of existing standards used for marine water.

RURAL ENVIRONMENTAL SANITATION PROGRAMME / BEKALAN AIR DAN KEBERSIHAN ALAM SEKELILING (BAKAS)

The main objective of BAKAS implemented by the MOH is to prevent and control the incidence of waterborne and faecal infectious diseases among the rural population including *Orang Asli* by improving the cleanliness of the environment and the quality of water supply through basic facilities of clean water supply and proper sanitation system.

The implementation plan of BAKAS focuses on two main goals which are to achieve one hundred per cent national coverage for sanitation facilities and clean water supply in rural areas and to maintain the existing facilities so that the residents can use the facilities continuously.

In 2021, a total of 759 water supply systems have been built to supply clean water to 2,844 houses benefiting 13,011 residents. As for sanitation facilities, a total of 956 houses have been provided with sanitary toilets, 1,061 houses have been provided with solid waste management systems and 418 houses have been provided with wastewater disposal systems to be supplied to 11,648 residents. Among them, an Alternative Water Supply Project Gravity Feed System (GFS) in Kampung Jerek Senduk was upgraded, whereas the existing GFS was built in 2011. There are several water supply problems faced by residents such as distribution pipes and filters often clogged with fine sand, sediment and leaves, requiring frequent maintenance work.

Apart from that, there are also two (2) treated water supply projects in *Orang Asli* village in the state of Kelantan that uses an ultra-filter type of water treatment device. **Image 6.32** shows the implementation of several BAKAS projects and programmes in 2021.

Image 6.32
Implementation of BAKAS Project and Programme for the Year 2021



JAKOA Project of Ultrafiltration



GFS Project (SG. Kapar, Kampar, Perak)



Working visit by Secretary General MOH GFS project at to Kampung Jerek Senduk, Gua Musang, Kelantan

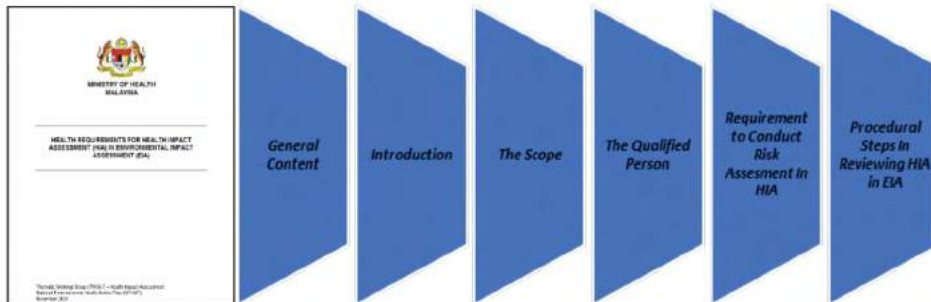
Source: Engineering Services Division, MOH

ENVIRONMENT HEALTH RISK SECTOR

NATIONAL ENVIRONMENTAL HEALTH ACTION PLAN (NEHAP)

ESD as the Secretariat for the NEHAP is responsible to monitor NEHAP Action Plans by 11 Thematic Working Group (TWG) as the strategies on how to improve national environmental health issues and problems. In 2021, the NEHAP Malaysia Steering Committee Meeting chaired by the Director-General of MOH was held on 7 April 2021 and 20 October 2021. While the NEHAP Malaysia Technical Committee Meeting was chaired by the Director of ESD, MOH was held on 18 March 2021 and 16 August 2021. NEHAP Malaysia through TWG 7: Health Impact Assessment has developed the Health Requirement for Health Impact Assessment (HIA) In Environmental Impact Assessment (EIA) document (**Figure 6.16**).

Figure 6.16
Content Health Requirement for Health Impact Assessment (HIA)



Source: Engineering Services Division, MOH

NEHAP Malaysia 2021 Conference was held virtually on 22 September 2021 with a themed COVID-19: Environmental Health Preparedness and Response officiated by the Director-General of Health. Four (4) oral presentations by the Disease Control Division and ESD from MOH, Pharmaniaga Berhad and National Hydraulic Research Institute of Malaysia (NAHRIM) were presented and five (5) virtual posters from the private sector (**Image 6.33**).

Image 6.33
NEHAP Conference 2021



Source: Engineering Services Division, MOH

ENVIRONMENTAL HEALTH PROTECTION UNIT / PERLINDUNG KESIHATAN ALAM SEKITAR (PEKA)

Throughout 2021, PEKA activities focused on developing of Environmental Health Risk Inventory (EHRI) System Module 3 – GIS and preparing the policy paper on Environmental Health Risk Assessment. PEKA’s achievements in 2021 are as shown in **Figure 6.17**.

Figure 6.17
Achievements of PEKA in 2021

Eight (8) series of Technical Meetings and Discussions on development of EHRI System Module 3 - GIS and upgrading of the system were conducted.

One (1) document of 'Manual Pengguna Aplikasi Sistem EHRI Modul 3 - GIS' was published.

Four (4) sessions of briefing on EHRI Module 1 - 3 were conducted.

One (1) policy paper title 'Tahap Risiko Kesihatan Alam Sekitar Lembangan Sungai Semenyih' was published.



Source: Engineering Services Division, MOH

43 Environmental Impact Assessment (EIA) Reports were received by PEKA for technical reviews to fulfil the requirements of the Environmental Quality (Prescribed Activities) EIA Order 2015 and submitted to the Department of Environment (DOE) for approval.

AIR QUALITY UNIT OR UNIT KUALITI UDARA (UKU)

Indoor Air Quality (IAQ) surveillance and monitoring activities at 18 premises of the MOH have been implemented since 2014 to ensure that the premises comply with the Industry Code of Practice Indoor Air Quality (ICOP IAQ, 2010) under the Department of Safety and Occupational Health (DOSH), Malaysia. In 2021, IAQ monitoring and surveillance activities have been implemented in five (5) HQ MOH premises and one (1) Selangor State Health Department premise. The implementation of the IAQ in 2021 is as in **Image 6.35**.

Image 6.34
IAQ Monitoring and Surveillance Activities in MOH Premises



Source: Engineering Services Division, MOH

The UKU has also been mobilised with other Sectors directly as the IAQ & Ventilation Task Force (TFIV) at the ESD level, especially in the preparation of guidelines, inspections and assessments related to IAQ and ventilation in the Government premises such as the Parliament Building, Malawati Stadium CAC, PKRC MAEPS 2.0, PKRC Tampin, HTAR Field Hospital, Penang Field Hospital and other healthcare facilities. Some of the main guidelines produced by UKU with TFIV are shown in **Figure 6.18**.

Figure 6.18
UKU Performance with TFIV for the Year 2021

Guidance to Building Owners and Building Managements on Ventilation and Indoor Air Quality (IAQ) for Healthcare Facilities Setting During COVID-19 Pandemic
Guidelines on Ventilation in the Healthcare Setting to Reduce the Transmission of Respiratory Pathogens (Annex 52)
Standard Operating Procedure (SOP) of Reopening of Parliament After Detection of COVID-19 Cases in Parliament
Guidance On Indoor Air Cleaners Specifications For Healthcare Facilities During Pandemic COVID-19.

Source: Engineering Services Division, MOH

The assessment of IAQ and ventilation in the healthcare facilities by TFIV in 2021 are shown in **Image 6.35**.

Image 6.35

IAQ and Ventilation Assessment Activities in Healthcare Facilities by TFIV



Source: Engineering Services Division, MOH

UKU together with TFIV is also responsible for providing advice and technical evaluation reviews related to the technology of air cleaning products (air cleaners) to the stakeholders in the MOH.

WASTE AND HYGIENE SECTOR

TASK FORCE COVID-19

The rising trend of the COVID-19 pandemic that plagued Malaysia is mirrored by an increase in the number of clinical waste services up to 300 per cent that is available at quarantine stations, and this is causing a backlog at Hospitals, Quarantine Station and several Clinical Waste Treatment Plans. A special team was established for the Clinical Waste Management Study at COVID-19 Integrated Quarantine and Treatment Center 2.0, which included the Waste and Hygiene [Sisa & Hygiene (SH)]. Based on the results of the study, a Standard Operating Procedure (SOP) for General Waste Management at COVID-19 Pandemic Quarantine Stations has been developed and is being used as a guide to launch COVID-19 general waste management. *Ketua Pengarah Kesihatan* (KPK) Circular Letter and SOP for General Waste Management as shown in **Image 6.36**.

Image 6.36

KPK Circular Letter and Standard Operating Procedures for General Waste Management



Source: Engineering Services Division, MOH

This sector is involved in the ESD COVID-19 Technical Task Force for the Clinical Waste cluster led by the Deputy Director of the SH Sector and comprised of several officers who are directly involved in clinical waste management. To provide advisory services, this task force assists in resolving problems related to clinical waste management within the Department of Health and also involves the HSS Concession Company. Among the activities that have been carried out throughout 2021 are Clinical Waste Management Meetings with HSS Concession Companies, ESD COVID-19 Engineering Task Force Committee Reporting, consultation meetings with stakeholders and working visits to clinical waste treatment and disposal facilities.

Image 6.37
Site Visit to Incinerator Project Site and Clinical Waste Disposal Plant Concerning COVID-19



Telok Panglima Garang
 (25 June 2021)

Bluevalley, Cameron Highland
 (22 July 2021)

Bukit Rambai, Melaka
 (23 September 2021)

Telok Kalong, Kemaman
 (12 October 2021)
 LIC Gebeng, Kuantan

Source: Engineering Services Division, MOH

Image 6.38
Meetings and Site Visits Related to Clinical Waste Management Issues Concerning COVID-19



Source: Engineering Services Division, MOH

WATER, SANITATION AND HYGIENE (WASH) PROGRAMME

WASH is one of the sub-Programmes that help formulate the long-term strategies for developing the national Strategic Plan for WASH in healthcare facilities. It is in accordance with Malaysia's commitment to the 72nd World Health Assembly Resolution approving the WASH Resolution on 28 May 2019 in healthcare facilities. There are five (5) provisions under WASH Programme namely Water, Sanitation, Hygiene, Healthcare Waste Management and Environmental Cleaning. In 2021, WASH Basic Information Acquisition activities focus on Hospitals and Institutions. A pilot session with State Health Department was carried out online with several facilities visited to observe WASH management, particularly in Johor and Kuala Lumpur. **Image 6.39** shows WASH management practices visit at healthcare facilities.

Image 6.39
WASH Activity Monitoring Visit at Healthcare Facilities



MKA Johor Bahru

KP Tangkak

IPR, KL



KK Mengkibol, Kluang

KD Paya Redan, Pagoh

Source: Engineering Services Division, MOH

In 2021, a summary of the WASH Basic Information Acquisition was 100 per cent (146 healthcare facilities under MOH) is shown in **Table 6.7**.

Table 6.7
WASH Service Level Report Summary

WASH Service Level	Water	Sanitation	Hygiene	Waste Management	Environmental Cleaning
Basic Service	146	141	142	146	146
	100%	100%	100%	100%	100%
Limited Service	0	5	4	0	0
	0%	3.4%	2.7%	0%	0%
No Service	0	0	0	0	0
	0%	0%	0%	0%	0%
Total Facility	146	146	146	146	146
	100%	100%	100%	100%	100%

Source: Engineering Services Division, MOH

PLANNING BRANCH

TECHNICAL AND CORPORATE SECTOR

TECHNICAL AND ENGINEERING TECHNOLOGY UNIT (UTTK)

UTTK provides technical advice and support related to engineering technologies and project management under the Public-Private Partnership (PPP)/Private Finance Initiative (PFI) Programme. The Proposed Development of Cyberjaya Hospital 288 Beds (Design & Build) was completed and officially handed over to the MOH on 15 June 2021 (**Image 6.41**). Other PPP/ PFI technical contracts being managed by the sector are Hospital Tunku Azizah, NIH and Hospital Umum Sarawak.

Image 6.40
Main Block of Cyberjaya Hospital (9 storeys) and CT Scanner Machine



Source: Engineering Services Division, MOH

UTTK is also involved in the technicalities of ambulances procurement via a central tender process, leasing and outsourcing. In 2021, a few leasing procurement contracts with private ambulance service providers have been implemented to cater for the short-term need during

pandemic COVID-19. A long-term procurement contract for 590 ambulances under the Twelfth Malaysia Plan (RMK-12) and outsourcing of 170 ambulances are in progress (**Image 6.41**).

Image 6.41

Handing Over Ceremony of Ambulances via Leasing during COVID-19 Pandemic



Source: Engineering Services Division, MOH

PRIVATE HEALTHCARE UNIT (UPKS)

UPKS provides technical expertise to CKAPS in reviewing engineering drawings and technical inspections on private healthcare facilities in compliance with Private Healthcare Facilities Services Act 1998 (Act 586) and its regulations.

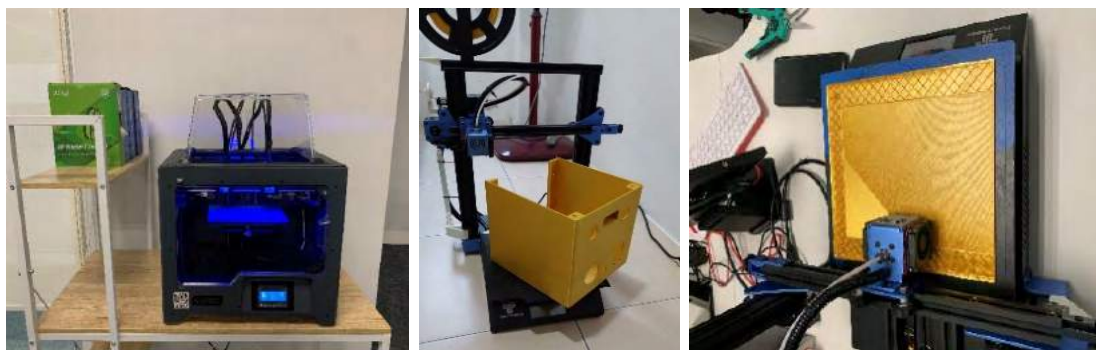
In 2021, a total of 324 engineering drawings were received from private health facilities and reviewed for the purpose of new licenses, expansions and renovations. UPKS has also prepared a technical guidance *Panduan Pencegahan Dan Pengawasan Penyakit COVID-19 Di Fasilitas Kesehatan Swasta Melalui Pengurusan Sisa Penjagaan Kesehatan, Perkhidmatan Pembersihan Serta Perkhidmatan Linen Dan Pendobian* and received 53 additional drawings from private healthcare facilities to cater treatment of COVID-19 patients. A total of 40 technical inspections were implemented in healthcare facilities were undertaken in 2021. The total number of technical inspections has shown a decrease as compared to previous years due to restrictions under MCO.

ENGINEERING DEVELOPMENT & IMMOVABLE ASSET MANAGEMENT SECTOR

ENGINEERING RESEARCH UNIT (ERU)

The ERU coordinates and implements research activities within the ESD. Established in 2021, this unit is involved in the implementation of initiatives related to drone and robotics technology in healthcare settings within the MOH under the Emerging Technology Cluster in National Council of Digital Economy and Fourth Industrial Revolution (MED4IRN). In 2021, a research project on the Application of 3D Printing in Ventilator Development During Ventilator Shortage Situation has started as well as the start-up of Engineering Research Laboratory development (**Image 6.42**).

Image 6.42
Ventilator-Related Research Project and Engineering Research Laboratory



Source: Engineering Services Division, MOH

IMMOVABLE ASSET MANAGEMENT UNIT (UPATA)

UPATA's role is to assist Secretary-General in carrying out all immovable asset management responsibilities (asset life cycle) in MOH in accordance with the *Pekeliling Am Bil.2 Tahun 2012: Tatacara Pengurusan Aset Tak Alih Kerajaan*.

Below are the activities were held in 2021:

Table 6.8
UPATA Activities for the Year 2021

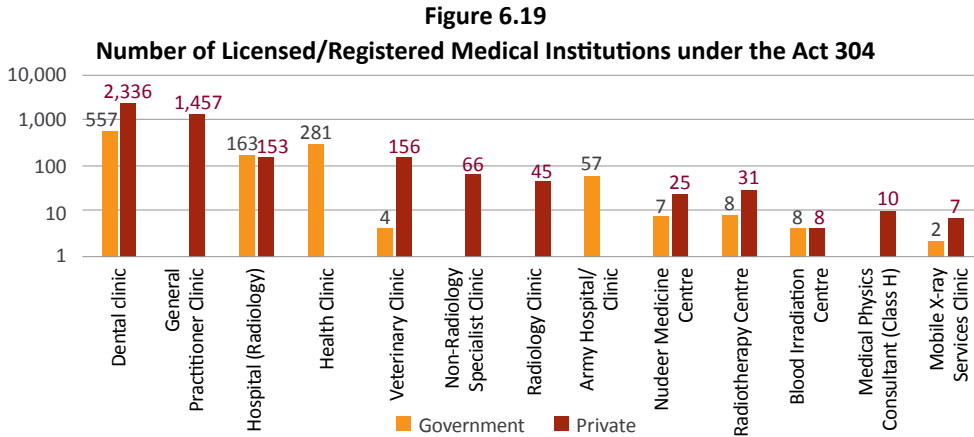
Activities	Number of Activities
Registration of <i>Daftar Premis Aset</i> (DPA)	9 DPA
Condition Assessment Reporting	118 Reports
Disposal Reporting	104 Reports
Loss/Write-Off Reporting	10 Reports

Source: Engineering Services Division, MOH

MEDICAL RADIATION SURVEILLANCE DIVISION (MRSD)

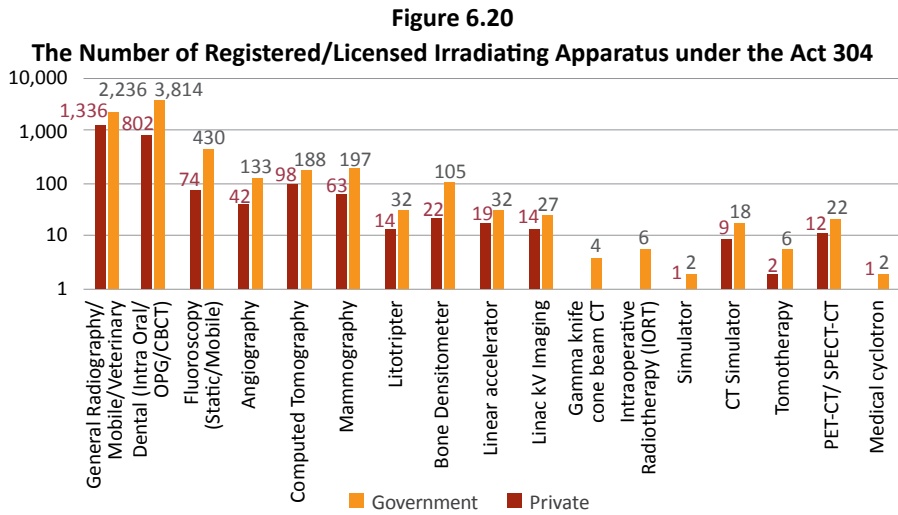
LICENSING UNDER THE ATOMIC ENERGY LICENSING ACT (ACT 304)

A total of 1,528 licenses were issued to private medical institutions in 2021. These include 373 new licenses and 1,155 renewals of the licenses. Overall, 5,373 public and private medical institutions have irradiating apparatus as shown in **Figure 6.19**. It consists of 1,083 public medical institutions and 4,290 private medical institutions respectively.



Source: Medical Radiation Surveillance Division, MOH

Meanwhile, there were a total of 9,763 registered or licensed irradiating apparatus in both government and private medical institutions. The number of irradiating apparatus by type of modality is shown in **Figure 6.20**. Besides irradiating apparatus, a total of 1,589 radioactive sources consist of 1,415 sealed sources and 174 unsealed sources were registered or licensed in public and private medical institutions as shown in **Table 6.9**.



Source: Medical Radiation Surveillance Division, MOH

Table 6.9
The Number of Registered/Licensed Radioactive Sources under The Act 304

Type of Radioactive Source	Services	No. of Sources		Total
		Government	Private	
Sealed sources	Radiotherapy	25	834	859
	Nuclear Medicine	231	310	541
	Blood irradiator	11	4	15
Unsealed sources	Nuclear Medicine	59	115	174
Total		326	1,263	1,589

Source: MRSD, MOH

MONITORING & ENFORCEMENT ACTIVITIES UNDER THE ACT 304

In 2021, a total of 1,237 medical institutions were inspected, comprising 346 government medical institutions while the other 891 are private institutions. It was found that 89.98 per cent of the medical institutions complied with the regulatory requirements while the remaining 10.02 per cent did not comply at the time of inspection. The results are shown in **Table 6.10**. Follow-up actions were taken to ensure all medical institutions adhered to the regulatory requirements under Act 304.

Table 6.10
The Number of Inspections Performed In the Year 2021

Category	No. of Inspection	Status of Compliances	
		Comply	Not Comply
GOVERNMENT: Compliance with Registration Requirements	346	308	38
PRIVATE: Compliances with the Licensing requirements	891	805	86
Total	1,237	1,113	124
Compliance %		89.98	10.02

Source: Medical Radiation Surveillance Division, MOH

In addition to the inspection works, a total of 11 medical physics consultancy companies that performed quality control tests for private medical institutions were audited. It is found that all the tests were performed accordingly to the test protocols as approved. In addition to the above activities, a summary of enforcement and prosecution activities in 2021 is shown in **Table 6.11**.

Table 6.11
Enforcement and Prosecution Activities in the Year 2021

Activities	Total
Issuance of Notice under the Atomic Energy Licensing Act 1984 (Act 304)	
• License Renewal Notice	1,347
• License Renewal Reminder	101
Number of Raids under the Act 304	2
Number of Radiation Dose Complaints Exceeding Prescribed Dose Limits	3
Number of Complaints of Violation of Act 304	32
Investigation visit	21
Number of Investigation Papers opened for prosecution purposes under the Act 304	3
Number of cases of suspension of licenses under the Act 304	1
The number of premises prohibited from use, ie prohibition stickers, were pasted during the inspection visit	19
X-ray Radiograph Audit Report 2021	
• Numbers of premises audited	194
• Satisfactory/ comply	134
• Non-compliance	60

Source: Medical Radiation Surveillance Division, MOH

MEDICAL PHYSICS SERVICES (TECHNICAL SERVICE ACTIVITIES AND CODES & STANDARDS)

In 2021, a total of 125 technical advice on ionising radiation (IR) and non-ionising radiation (NIR) activities were provided to the Ministry of Health's hospitals and clinics. The details are listed in **Table 6.12**.

Table 6.12
Technical Advice on IR and Non-Ionising Radiation (NIR)

Type Of Activities	Total
Preparation and evaluation of IR modality specifications and related facilities	6
Site visits, technical advice & testing & commissioning (T&C) -	64
<ul style="list-style-type: none"> • T&C visit, TSA • Project progress/site visit • Shielding verification on the thickness 	
Inspection of government facilities to confirm QC certificate of irradiation apparatus	20
Radiation safety technical plan/drawing & protection review for new government clinic/hospital projects/verification on irradiating apparatus QC report	16
Verification of the level of security control of the use of radioactive materials under Category 1	1
Technical advice on non-ionising radiation (NIR)	18
<ul style="list-style-type: none"> • Provision of MRI equipment specifications • Assessment of MRI equipment specifications • MRI security plan review • Testing, T&C sessions, MRI room reviews and telecommunications • Briefing / NIR dialogue 	
TOTAL	125

Source: Medical Radiation Surveillance Division, MOH

During the year 2021, several documents and studies related to radiation safety have been prepared/conducted as follows:

Documents

- i. Draft Atomic Energy Licensing (Medical, Dental and Veterinary Usage of Radiation) Regulations 202X under the Atomic Energy Licensing Act (Act 304) For Medical Purposes;
- ii. Radiation Protection Officer (Medical) Certification Guidelines Circular; and
- iii. Criteria for Recognition of Training Centre for Radiation Protection Officer (Medical) Certification Programme approved by MOH.

Information Dissemination Materials

- i. The Principle of Radiation Protection;
- ii. Occupational Exposure for Radiation Worker;
- iii. Irradiating Apparatus for Medical Purposes; and
- iv. Magnetic Resonance Imaging (MRI).

Research

- i. Measurement of Verification of Lead Shield Requirements on the Wall (Behind Chest Stand) of the X-Ray Room; and
- ii. MRI Safety Survey with UPM.

INTER-AGENCY TECHNICAL COOPERATION & TRAINING DEVELOPMENT

The MRSD is always at the forefront in ensuring the level of use of radiation apparatus and radioactive materials 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 6.13**.

Table 6.13
Inter-Agency Cooperation Activities for the Year 2021

No.	Activities	Notes
1.	Regional cooperation with international agencies for the medical and health sectors	a) Country Programme Framework (CPF) 2022-2027 b) Virtual Discussion Regarding Office of Radiological Security (ORS), USA initiatives for MOH (20 Mei 2021)
2.	National level inter-agency cooperation for the medical and health sectors	a) Coordination Meeting and Implementation of Activities Under Act 304 No. 2/2020 (19 January 2021), No. 2/2021 (9 December 2021) b) Supply of Information in MyAtom Mobile Application developed by the Atomic Energy Licensing Board (LPTA) c) Proposal Information Meeting and List of Collaborative Research Projects between MOH and Malaysian Nuclear Agency (10 June 2021)
3.	Project Management	Development of 'Comprehensive Medical Radiation Information System (COMRAD)' Replacement System - Development of 'National Blueprint for Regulatory Authority on Radiological Information System - (NBRAIS)
4.	Development of a nuclear security programme	a) Meeting of the Working Committee for the Development of Security Culture Programme at the MOH Level No. 1/2021 (9 November 2021) b) Meeting of the Working Committee for the Development of Physical Protection Programme at the MOH Level No. 1/2021 (9 November 2021) c) Working Committee Meeting for Site Security Plan Programme Development at MOH Level No. 1/2021 (9 November 2021) d) Steering Committee Meeting for the Development of the Nuclear Security Programme at the MOH Level No. 1/2021 (10 November 2021)
5.	Coordination Meeting: development of the BKRP's strategic plan	a) Engagement Series 1: Development of the Document (3 August 2021) b) Engagement Series 2: Development of the Document (11 August 2021) c) Engagement Series 3: Development of the Document (18 August 2021)

Source: Medical Radiation Surveillance Division, MOH

In addition, the aspect of human capital development is one of the important agendas in MRSD, MOH. Thus, the following is a summary of activities for the development of training 2021 as shown in **Table 6.14**:

Table 6.14
Training Development Activities for the Year 2021

No.	Activities	Total
1.	Number of continuous medical education (CME) approvals under the Act 304	155
2.	Number of Dissemination of Information through CME sessions under the Act 304	150
3.	Total Hours of information dissemination by BKRPs officers through the CME programme	176
4.	Number of personnel trained	548
5.	Number of Training Programmes Organised/Attendance of Generic & Functional Courses for BKRPs Officers	34
6.	Engagement Session Programme and Document Briefing 'Guidelines for Application for Registration of Radiation Facilities for Diagnostic Radiology Services in Government Medical Facilities' and 'Guidelines for Application for License for Radiation Facilities in Radiology Services in Private Medical Facilities Including University Medical Facilities'	
	• Number of Sessions Engaged	3
	• Total attendance of Licensees (Private) & Responsible Persons (OYB) (Government)	430

Source: Medical Radiation Surveillance Division, MOH

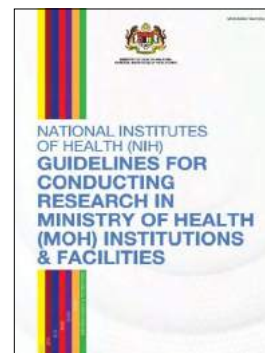
NATIONAL INSTITUTES OF HEALTH (NIH)

The NIH is responsible for conducting health research, training and health-related consultations to support stakeholders' needs in the MOH to improve the quality of life of Malaysians. NIH aims to develop health research policies and guidelines, manage research projects and set health research priority areas. In 2021, NIH updated the Guidelines for Conducting Research in MOH Institutions and Facilities (3rd edition) and it will be launched as the Circular Letter of the Director-General of Health in 2022.

INSTITUTE FOR MEDICAL RESEARCH (IMR)

The IMR has eight (8) centres which are the Infectious Diseases Research Centre (IDRC), Allergy and Immunology Research Centre (AIRC), Cancer Research Centre (CaRC), Environmental Health Research Centre (EHRC), Herbal Medicine Research Centre (HMRC), Nutrition, Metabolism

Image 6.43
Guidelines for Conducting Research in MOH & Facilities (3rd Edition)



Source: National Institute of Health, MOH

and Cardiovascular Research Centre (NMCRC), Specialised Diagnostic Centre (SDC) and Special Resource Centre (SRC). The institute conducts biomedical research, specialised diagnostic tests, consultation, training and technology transfer activities.

COVID-19 VACCINE RESEARCH

The coronavirus outbreak in Wuhan, China, at the end of 2019 led to a pandemic and global health emergency in 2020. This prompted a race for vaccine development in many countries including Malaysia. As the main biomedical research facility under the MOH, IMR initiated two (2) COVID-19 vaccine development projects for inactivated virus and mRNA vaccines. The inactivated virus vaccine project is a collaboration between ministries, involving the Veterinary Research Institute (VRI) of the Ministry of Agriculture and Food Industries and Universiti Putra Malaysia (UPM) of the Ministry of Higher Education. The mRNA vaccine project is also ongoing and fully conducted by researchers from IMR. Coverage of IMR vaccine development projects was aired on a special episode entitled *Di Sebalik Tabir Penawar Maut* on the Majalah 3 television programme on 22 March 2021.

Image 6.44

Shooting the Special Episode on Vaccine Development for Majalah 3 Television Show



Source: Institute of Medical Research, NIH

Image 6.45

IMR Vaccine Development for Majalah 3 Television Show



Source: Institute of Medical Research, NIH

On 1 November 2021, at the launch of the Malaysia Genome and Vaccine Institute (MGVI) and National Vaccine Development Roadmap (NVDR), which was officiated by the Prime Minister, representatives from NIH, including principal investigators of both projects were invited to present on vaccine development. Dr. Rozainanee Mohd Zain gave a presentation on the inactivated virus vaccine, while Dr. Masita Arip on the mRNA vaccine. Both vaccine development

projects were included in the NVDR national plan to develop capability and capacity-building for Malaysia to become a sustainable vaccine-producing country.

Image 6.46
Vaccine Development Presentation
By NIH Representatives



Source: Institute of Medical Research, NIH

Image 6.47
NIH team with the Minister
of Health



COVID-19 GENOMIC SURVEILLANCE

COVID-19 genomic surveillance using the next-generation sequencing technique (NGS) was conducted to characterise the full genome of the SARS-CoV-2 virus, the causative agent of COVID-19. The growing concern over the rapidly mutating SARS-CoV-2 virus triggers an urgent need to characterise circulating variants and monitor genomic changes. The Virology Unit has been successful in optimising the NGS technique which allows genome sequencing to be conducted in-house and directly from clinical specimens.

In 2021, IMR continued the identification of variants of concern, namely the Alpha variant in January, the Beta variant in March, the Delta variant in May and the Omicron variant in December. In September 2021, IMR joined forces with UKM Medical Molecular Biology Institute (UMBI-UKM), Malaysia Genome and Vaccine Institute (MGVI), UM Tropical Infectious Diseases Research & Education Centre (UM-TIDREC), University Malaya Medical Centre (UMMC), UNIMAS and UiTM Sungai Buloh to become a consortium to conduct COVID-19 genomic surveillance in the country. To date, the consortium submitted 9,200 full genome sequences of SARS-CoV-2 to the GISAID database, of which 22 per cent was carried out by IMR. IMR has contributed nearly 2,000 full genome sequences of SARS-CoV-2 with a current capacity of 384 samples sequenced monthly.

The COVID-19 genomic surveillance activity is of profound importance to the scientific community and the nation. Information on the evolution of the SARS-CoV-2 virus genome and the discovery of new variants which are reported weekly to MOH is a source of reference for COVID-19 public health strategies and policies. In addition, monitoring of the SARS-CoV-2 variants is essential to evaluate the effectiveness of current COVID-19 vaccines and diagnostic tests over time. Significant genomic changes can reduce the specificity of detection by diagnostic tests, especially when the spike gene is used as the target.

Image 6.48

Genomic Sequencing Lab at The Virology



Source: Institute of Medical Research, NIH

Image 6.49

MOH Visits at The Genomic Sequencing Facility



Image 6.50

NexSeq500 (Illumina) Sequencer (Left) & MinION (Nanopore) Sequencing Devices (Right)



Source: Institute of Medical Research, NIH

RESEARCHER-INDUSTRY SCIENTIFIC EXCHANGE (RISE): A PLATFORM FOR RESEARCH COLLABORATION BETWEEN IMR AND INDUSTRIES

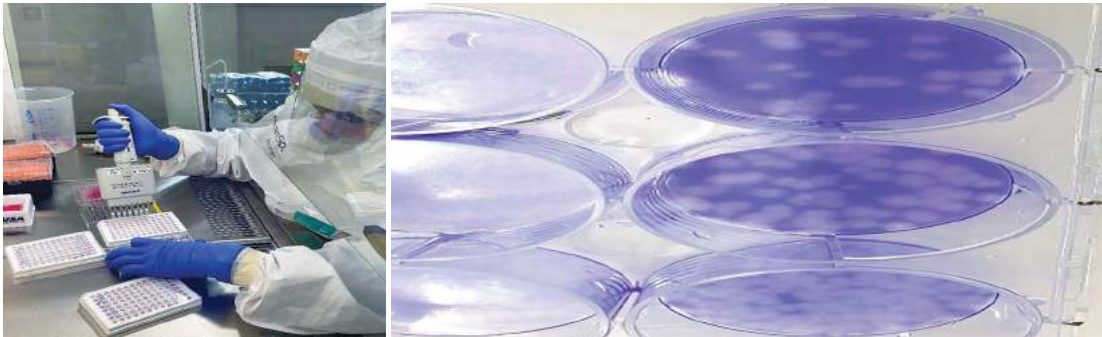
RISE is a platform initiated by the Ministry of Science, Technology and Innovation (MOSTI) to connect expert service providers in government facilities with organisations and industries. This sharing of expertise aims to increase innovation and productivity as well as capacity-building for both parties through research, consultation, technology transfer and training.

The first IMR collaboration project between the Herbal Medicine Research Centre (HMRC) and Medika Natura Sdn Bhd was entitled **In Vitro Evaluation of Antiviral Activity of SKF7** (Standardised Extract Kacip Fatimah) and AGS-1™ (Standardised Extract Hempedu Bumi) Against the Severe Acute Respiratory Syndrome Coronavirus 2 (Sars-Cov-2) in Coronavirus Disease (COVID-19)” began in November 2020 and completed in April 2021 with the involvement of five (5) experts. In 2021, another three (3) collaboration projects commenced under the RISE platform and will continue until 2022. To date, a total of 19 experts from IMR have been involved

with RISE research collaboration projects. The current projects which are in collaboration with the Cancer Research Centre at IMR are **Circulating Tumour Cells for the Prognosis of Breast Cancer** with My Cytohealth Sdn Bhd, **The Effect of Prolonged Preservation on Umbilical Cord-Derived MSCs Viability and Functionality under GMP Environment** with My Cytohealth Sdn Bhd and **Preclinical Biodistribution Study of Stem Cells/Biodistribution Study by Intravenous Infusion Route in Mice** with Prima Nexus Sdn Bhd.

Image 6.51

Biomedical Collaboration Research Between IMR and Industries



Source: Institute of Medical Research, NIH

IDEM PROJECT: AN OPERATIONAL RESEARCH PROJECT IN INTEGRATED VECTOR CONTROL MANAGEMENT (IVM) FOR DENGUE CONTROL

The Intervention for Dengue Epidemiology in Malaysia (iDEM) project is one of the collaboration projects between IMR, NIH and several local and international agencies to address new approaches to controlling outbreaks of dengue and other vector-borne diseases. Other agencies involved in this collaboration are the London School of Hygiene & Tropical Medicine and Innovative Vector Control Consortium in the United Kingdom, Hospices of Lyon and Bayer SAS in France and In2Care™ in the Netherlands. The project began in November 2019 and is expected to be completed in December 2022. The main objective is to evaluate the effectiveness of the Integrated Vector Control Management (IVM) using an additional combination of two (2) new preventive methods known as Outdoor Residual Spray (ORS) and Auto-Dissemination Devices (ADDs) in reducing *Aedes* mosquito populations and dengue cases in 140 high-rise residential areas in the Federal Territories of Kuala Lumpur and Putrajaya. It was challenging to carry out project activities during the COVID-19 pandemic as many precautionary measures were required to ensure the health and safety of all those involved. Preliminary analysis shows that the addition of the two (2) new methods was able to reduce mosquito populations. This offers researchers and policymakers new concepts which may improve the control of vector-borne diseases, especially dengue.

Image 6.52
Revisiting and Updating Information Regarding the iDEM Project to the Building Management and Local Community Leaders



Source: Institute of Medical Research, NIH

Image 6.53
Residual Spraying and Quality Assurance Activities



Source: Institute of Medical Research, NIH

Image 6.54
Monitoring and Servicing of Auto-Dissemination Devices



Source: Institute of Medical Research, NIH

Image 6.55
Distribution of Ovitraps to Determine Aedes Mosquito Population



Source: Institute of Medical Research, NIH

INSTITUTE FOR PUBLIC HEALTH (IPH)

POST-VACCINATION COVID-19 IMMUNITY AND DISEASE SURVEILLANCE IN MALAYSIA (IMSURE)

In 2021, the IPH conducted an observational study employing a cohort design to determine the humoral or antibody response against SARS-CoV-2 following vaccination. This surveillance also expected outcomes such as cell response and the occurrence of COVID-19 and adverse effects. It plans to follow up with selected recipients of different COVID-19 vaccines from different age groups for up to two years at frequent intervals. Since its beginning in June 2021, more than 2,600 vaccine recipients have agreed to participate in IMSURE. For inclusiveness, recipients of different vaccines were recruited from multiple vaccination centres.

In collaboration with IMR, multiple serology tests were performed to investigate vaccine recipients' immunity response. Dedicated research officers and MySTEP personnel conducted the tests. IMSURE has successfully followed-up recipients until six months.

Preliminary findings were presented to the CPRC, MOH and shared with various stakeholders. The findings were used to initiate evidence-based policymaking regarding the COVID-19 immunisation programme for the Malaysian population. Study findings will continue to be disseminated to stakeholders and scientific communities from time to time.

Image 6.56
IMSURE Activities



IMSURE Poster



IMSURE Data Collection



Director-General of Health visited the IMSURE data collection at Langkawi

A visit from Deputy Director-General during IMSURE data collection at Langkawi



The IMSURE principal investigator and Director of IKU, explained about IMSURE to the Deputy Secretary-General of Management MOH during his visit to IMSURE data collection at NIH

Source: Institute for Public Health, NIH

THE 22nd NIH SCIENTIFIC CONFERENCE

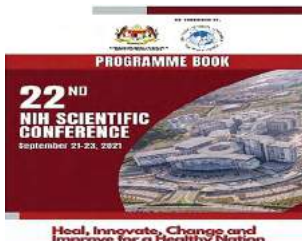
IPH organised the 22nd NIH Scientific Conference as one of the events under the NIH Research Month 2021. The conference was held from 21 to 23 September 2021 via a virtual platform. The conference was co-organised with the Asia-Pacific Academic Consortium for Public Health (APACPH-KL). The theme for the conference was Heal, Innovate, Change and Improve for a Healthy Nation reflected the importance of innovation through research.

The conference aimed to provide a platform for delegates to enhance knowledge and skills while fostering a network for collaboration within various agencies in Malaysia. The conference focused on current health issues related to public health, clinical, biomedical, and other related issues faced by developed and developing countries during the COVID-19 pandemic.

The conference was officiated by the Director-General of Health Malaysia and attended by 1,500 delegates from various agencies and professions. The 3-day conference comprised two (2) plenary sessions, two (2) round table discussions, six (6) symposium sessions, and free paper presentations. International and local experts from various backgrounds were invited as speakers to share their knowledge and experience. A total of 452 abstracts were submitted for free paper presentations, consisting of 88 oral and 364 e-Poster presentations. Submitted abstracts were published in the September 2021 supplement issue of the Journal of Health Management.

Image 6.57

22nd NIH Scientific Conference Activities



Programme book for the 22nd NIH Scientific Conference



Virtual Conference Lobby



Keynote address “Being the Agents of Change” by the Director-General of Health Malaysia



Conference launch



Plenary session

Source: Institute for Public Health, NIH

INSTITUTE FOR CLINICAL RESEARCH (ICR)

IVERMECTIN TRIAL STUDY

Ivermectin Treatment Efficacy in COVID-19 High-Risk Patients I-TECH Study was conducted in mid-2021 to evaluate the efficacy of Ivermectin in preventing COVID-19 disease progression. To ensure scientific generalisation of the Malaysian population, the study was conducted throughout the country involving 13 states and 18 study sites. CRCs were involved in the process of quality assurance (in accordance with Malaysian Good Clinical Practice), site establishment and monitoring. PKRC MAEPS 2.0 were added as study sites to meet the needs of the number of patients for the study. Subsequently, the Centre for Clinical Trial (CCT) coordinated an Ivermectin media briefing presented by the Director-General of Health. I-TECH findings were shared on various platforms to create awareness among professionals and the public.

Image 6.58

CCT Staff with Specialist and Medical Officers at MAEPS



Source: Institute for Clinical Research, NIH

Image 6.59

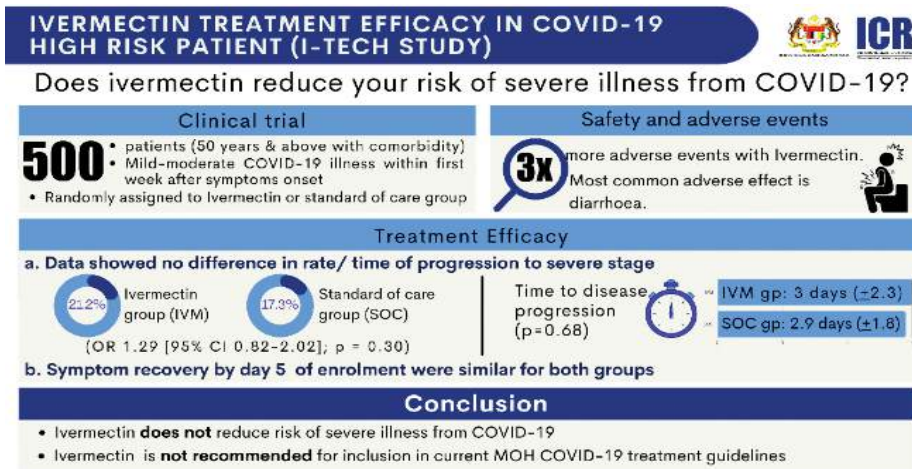
The Independent Audit Team from ICR at the Selected Study Site



Source: Institute for Clinical Research, NIH

Image 6.60

I-TECH Research Poster



Source: Institute for Clinical Research, NIH

Image 6.61
Engagement With Professionals for Dissemination of Research Findings I-TECH



Source: College of Physicians Malaysia

REAL-WORLD EVALUATION OF COVID-19 VACCINES UNDER THE MALAYSIA NATIONAL COVID-19 IMMUNISATION PROGRAMME (RECoVaM)

The Real-World Evaluation of COVID-19 Vaccines under the RECoVaM was clinical research to evaluate the effectiveness of COVID-19 vaccination against infections. Effects on symptoms, rate of ICU admission and mortality were monitored. The RECoVaM team consisted of researchers from the Centre for Clinical Outcomes Research (CCoRe), ICR in collaboration with the COVID-19 Immunisation Task Force (CITF). This study used national COVID-19 surveillance data from the CPRC and the CITF.

To date, access to additional data such as the Public Health Laboratory Information System (SIMKA) and the detection of close and casual contacts in public areas (MySJ Trace via the MySejahtera Check-ins application) has also been obtained. The results of the study show that:

- i. Among COVID-19 patients, a complete vaccine dose could reduce the risk of admission to the intensive care unit (ICU) by 83 per cent and the risk of death by 88 per cent;
- ii. Among COVID-19 patients, a complete dose of AstraZeneca can reduce the risk of admission to the ICU by 91 to 99 per cent and the risk of death by 92 to 98 per cent;
- iii. Among COVID-19 patients, a complete dose of Pfizer can reduce the risk of admission to the ICU by 91 to 94 per cent and the risk of death by 92 to 94 per cent; and
- iv. Among COVID-19 patients, a complete dose of Sinovac can reduce the risk of admission to the ICU by 75 to 79 per cent and the risk of death by 83 to 85 per cent.

The results of the study were presented at the MOH COVID-19 Technical Executive Committee Meeting on 14 July 2021 and displayed by the Vaccine Supply Access Assurance Special Committee COVID-19 on 23 November 2021.

Image 6.62
Presentation in the COVID-19 MOH COVID-19 Technical Executive Committee Meeting



Source: Institute for Clinical Research, NIH

Image 6.63
Display of the results of the RECoVAM study by the COVID-19 Vaccine Supply Access Assurance Special Committee



Source: Institute for Clinical Research, NIH

PHASE III CLINICAL STUDY FOR CoronaVac VACCINE

Malaysia was selected as a study location for the Phase III Clinical Study of CoronaVac Vaccine for children. The study was conducted globally including in Chile, the Philippines and South Africa. The main objective of the study was to evaluate the efficacy, immunogenicity and safety of two doses of CoronaVac vaccine against symptomatic COVID-19 cases (RT-PCR confirmed) in children and adolescents aged 6 months to 17 years (for Malaysia the study will be conducted on children aged 3 to 11 years). The study was led by a Paediatrician Consultant from Sibuh Hospital,

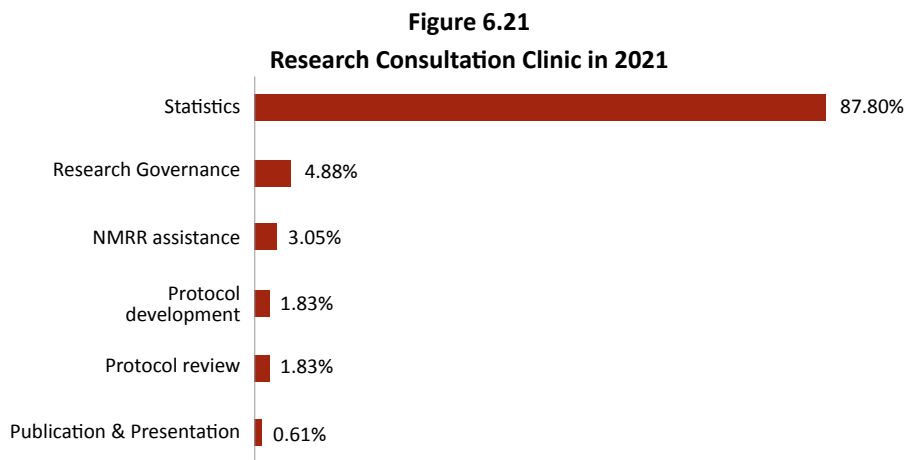
Dr. Toh Teck Hock in collaboration with ICR and CRM. This SINO-VAC PRO-nCOV-3002 study is a Placebo-Controlled, Double-Blinded and Randomised Clinical Trial, approved by the ethics committee of the Medical Research Ethics Committee (MREC), MOH, University Malaya Medical Centre and UiTM. Beginning on 4 November 2021, there are 10 study locations consisting of eight (8) health facilities under MOH, University Medical Centre Malaya and UiTM. A total of 2,000 children have been recruited for the study with permission from their parents/guardians.

COLLABORATION WITH THE INSTITUTE OF MEDICAL BIOLOGY CHINESE ACADEMY OF MEDICAL SCIENCES (IMBCAMS)

Malaysia has embarked on its first COVID-19 vaccine trial. It is a collaboration between ICR and eight (8) hospitals - Ampang Hospital, Sarawak General Hospital, Sungai Buloh Hospital, Penang Hospital, Seberang Jaya Hospital, Taiping Hospital, Sultanah Bahiyah Hospital, and Raja Permaisuri Bainun Hospital. The trial is a Phase III clinical trial on a vaccine that was developed by the Institute of Medical Biology Chinese Academy of Medical Sciences (IMBCAMS) in Beijing. The vaccine's Phase I and Phase II clinical trials showed good results, eliciting an adequate antibody response. This study aims to further investigate the safety and efficacy of the vaccine in Malaysia's diverse population. There are approximately 3,000 participants in the trial.

RESEARCH CONSULTATION

Research Consultation Clinics (RCC) continued in 2021 despite the COVID-19 pandemic. Consultations were conducted virtually. Consultations were mostly related to statistics. Other topics were research governance, protocol development, statistics, protocol review, National Medical Research Register (NMRR) assistance, publication, presentation and abstract/report writing. Clients were among MOH staff from various institutions including hospitals, health clinics and State Health Departments.



Source: Institute for Clinical Research, NIH

INTRODUCTION TO INVESTIGATOR-INITIATED TRIAL (IIT) WORKSHOP

From 27 to 30 September 2021, CCT, CRM and Infront Consulting Sdn. Bhd. organised a workshop entitled, Introduction to Investigator Initiated Trial (IIT). It aimed to train specialists, medical officers, pharmacists, research officers and research nurses at MOH to conduct quality clinical research following Malaysian Good Clinical Practice (GCP) and standard regulations. CCT invited 18 speakers including Mr. Yau Yit Huan from CRM, Dr. Asyraf Syahmi Bin Mohd Noor from MREC, MOH and Prof. Dr. Goh Bak Leong from CRC Serdang Hospital. A total of 68 participants joined this workshop virtually and received access to video recordings and slide presentations for a month. Workshop topics included Creating & Management Budget for IIT, Role of Independent Safety Data Monitoring Committee/Board and Investigator Role in the Overall Management of Trials.

COLLABORATION FOR GUIDELINE ON TRADITIONAL AND COMPLEMENTARY MEDICINE (T&CM) RESEARCH IN MALAYSIA FOR DESIGN, CONDUCT, EVALUATION AND REGULATION

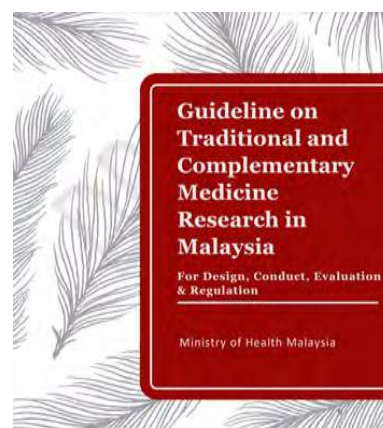
ICR and the T&CM, MOH reviewed the new Guidelines on Traditional and Complementary Medicine (T&CM) Research in Malaysia for Design, Conduct, Evaluation and Regulation through a feedback and discussion session on 7 December 2021. The objective of this collaboration was to guide practitioners, researchers, academics and authorities who wish to conduct research related to T&CM.

GOOD CLINICAL PRACTICE (GCP)

On 15 September 2021, the management of GCP was taken over by ICR from the National Pharmaceutical Regulatory Agency (NPRA). However, all matters concerning the application, organisation, and production of GCP certificates remained under the National Committee for Clinical Research (NCCR)

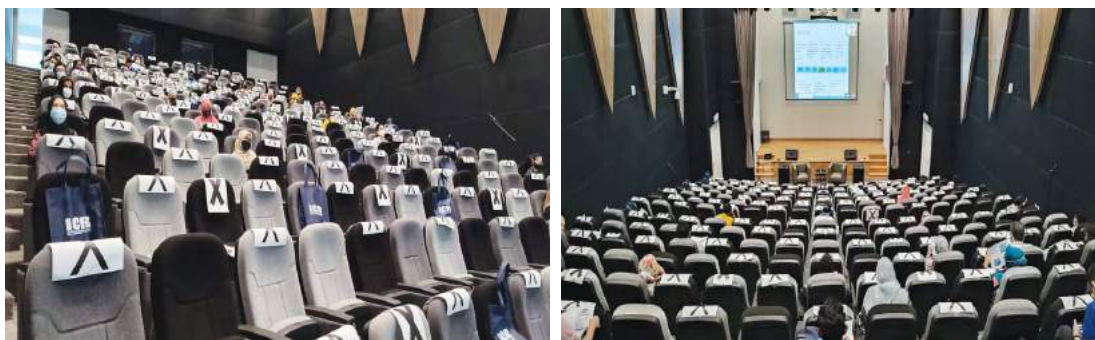
Secretary, who is also the Head of Evaluation & Safety of Investigational New Product Section, NPRA). Three (3) officers from ICR have been appointed as GCP secretariat for the management of GCP, led by the Head of the Centre for Coordination of Research Network (CCRN) and ICR Director. ICR tasks included new applications for GCP, assessments for GCP certifications and the preparation of GCP attestation letters. A GCP workshop for clinical research was conducted from 13 to 15 October 2021. It was attended by 34 participants, whereby 18 (53 per cent) participants passed the examination and were awarded the GCP certificate.

Image 6.64
Guideline on Traditional and Complementary Medicine Research in Malaysia



Source: Institute for Clinical Research, NIH

Image 6.65
The Good Clinical Practice Workshop 2021



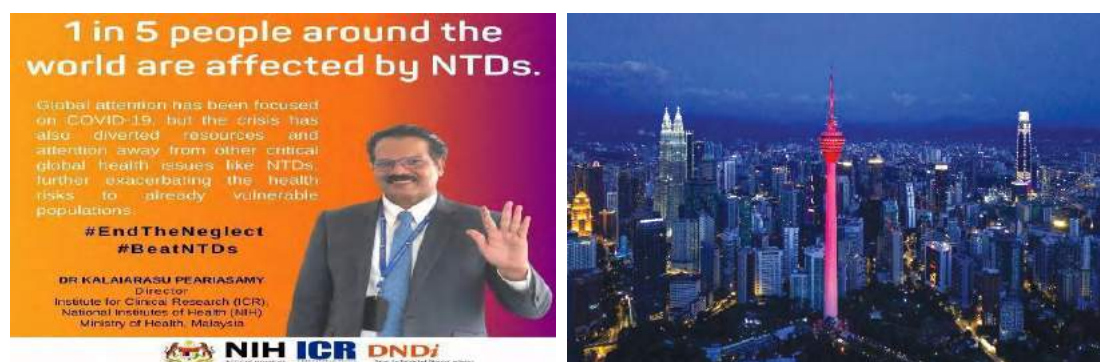
Source: Institute for Clinical Research, NIH

WORLD NEGLECTED TROPICAL DISEASE (NTD) DAY 2021

NTD Day 2021 took place on 30 January 2021. The main purpose of this campaign is to encourage the commitment of the global community to control NTDs which have caused the suffering of 1.7 million people worldwide from 149 countries including Malaysia. According to the WHO, there are 20 diseases defined as NTDs that require direction and planning from all parties to formulate a strategic plan to control, prevent and eliminate. The World NTD Day 2021 campaign for Malaysia focused on two (2) NTDs, namely Dengue and Rabies as listed by the WHO in *A Road Map for NTDs 2021 to 2030*.

In 2021, Malaysia and Thailand were selected to participate along with 27 countries around the world for the “Light Up” NTD campaign. This campaign received media coverage in the country and abroad. During this campaign, Kuala Lumpur Tower along with 64 iconic buildings, landmarks and stadiums around the world were lit up with an overflow of orange and purple colours in conjunction with the campaign.

Image 6.66
1 in 5 Challenge Poster and Light Up Campaign During NTD 2021 Day



Source: Institute for Clinical Research, NIH

14TH NATIONAL CONFERENCE FOR CLINICAL RESEARCH (NCCR)

The 14th NCCR, annually organised by ICR, was held virtually from 18 to 20 August 2021. The theme for this year was Niche to Norm, featuring precision medicine, clinical trials and digital health. The conference was officiated by the Director-General of Health who also unveiled the new NCCR logo. The CCRN and Centre for Clinical Epidemiology (CCE) coordinated a series of symposiums and plenaries with 15 local and international speakers, respectively. The conference received an encouraging response with 740 participants with 179 presentations.

The Dr. Wu Lien-Teh Research Awards: Young Investigator and Research Poster Awards were presented to outstanding scientists in recognition of their contributions to society. The winner of Dr. Wu Lien-Teh's Young Investigators Award was Chan Huan Keat with a study entitled *Midterm Outcome Evaluation of Government-Led Endeavours to Eliminate Hepatitis C (HCV) as a Public Health Threat by 2030 in Malaysia*. The winner of Dr. Wu Lien-Teh's Research Poster Award was Dr. Kurubaran Ganasegaran with his study entitled *What Malaysians Tweeted about COVID-19? An Exploratory Study*.

Image 6.67

Launching of 14TH National Conference for Clinical Research by the Director-General of Health, Malaysia



Source: Institute for Clinical Research, NIH

Image 6.68
14th National Conference for Clinical Research



Source: Institute for Clinical Research, NIH

NATIONAL HEALTHY RESEARCH VOLUNTEER REGISTER (NHRVR)

NHRVR is an online platform to monitor the safety of healthy volunteers who participate in clinical trials in Malaysia. It is intended to ensure the overall integrity of clinical trials by avoiding over-volunteering in trials over a certain period of time. Three (3) capacity-building exercises were conducted by CCT for CRC staff and those involved in managing bioavailability and bioequivalence studies among healthy volunteers. The launch of the register on 2 July 2021, co-organised by CCT, CCRN

Image 6.69
NHRVR Launch Poster



Source: Institute for Clinical Research, NIH

and Corporate Communication Unit, MOH, was officiated by the Director-General of Health. In the near future, MOH plans to strengthen collaboration with higher education institutions and private sectors using this platform.

INSTITUTE FOR HEALTH MANAGEMENT (IHM)

TALENT GROOMING PROGRAMME (TGP) RESTRUCTURING AND IMPROVEMENT PLAN

IHM conducted a qualitative study related to issues, challenges and improvements for TGP entitled Exploring the Issues and Challenges in Completion of Talent Grooming Programme: A Qualitative Study. The summary of the study in the form of qualitative themes was illustrated in **Figure 6.22**.

Figure 6.22
Summary of Qualitative Themes of Challenges and Issues in TGP



Source: Institute of Health Management, NIH

On 25 May and 8 July 2021, TGP Restructuring and Improvement Workshops, involving alumni and TGP Panel members were conducted to discuss strategies for improvement. The TGP Restructuring and Improvement Plan will be implemented in 2022, as illustrated in **Table 6.15**. TGP will continue to evolve according to current needs and take advantage of the use of technology, namely MyTGP in the management of TGP Talents.

Table 6.15
TGP Structures and Processes involved in the TGP Restructuring and Improvement Plan

Overall Structure	Selection	Training	Assessment	Supervision
1. Governance Structure	1. Applicant Criteria	1. Competency Domains	1. Assessment Criteria	1. Supervision Selection
2. Programme Duration	2. Application Ranking System	2. Training Modules	2. Assessment Component & Weightage	2. Supervision Roles
3. Exit Policy	3. Selection Process	3. Training Pedagogy	3. Assessment Tools	3. Supervision Tools
4. Programme Intake	4. Selection Panel Meeting & Talent Intake	4. Training Evaluation	4. Assessment Results	

Source: Institute of Health Management, NIH

IMPLEMENTATION OF GEMBA ACTIVITIES TO IMPROVE THE FLOW IN MANAGEMENT OF COVID-19 PATIENTS IN THE KLANG VALLEY

IHM, as a trainer of Lean Healthcare, was called to implement Gemba to improve COVID-19 patient management flow in the Klang Valley. This includes patient management flow at the CAC, hospitals as well as the PKRC. The flow in management of COVID-19 patients in the Klang

Valley is rather unique; coordination is carried out through the Regional Bed Management Unit where patients from CACs in the Klang Valley will be referred to PKRC MAEPS.

The implementation procedure includes two (2) phases. Phase 1 involves the processes of managing non-emergency patients between the CAC and the Hospital or PKRC. Phase 2 involves the processes of management of emergency patients between the CAC or community and the Hospital/Emergency Department as well as the processes of management of patients in the ward/ICU until discharge. Phase 1 was successfully implemented in four (4) CACs; Petaling District Health Office and Section 19 Shah Alam CAC; Hulu Langat District Health Office and CAC Dewan Kajang Utama; Titiwangsa District Health Office and CAC Stadium Titiwangsa; and Putrajaya District Health Office and CAC Dewan Serbaguna Presint 8. While phase 2 will be extended to 2022.

Image 6.70

Gemba Sessions at Four Selected CACS around the Klang Valley



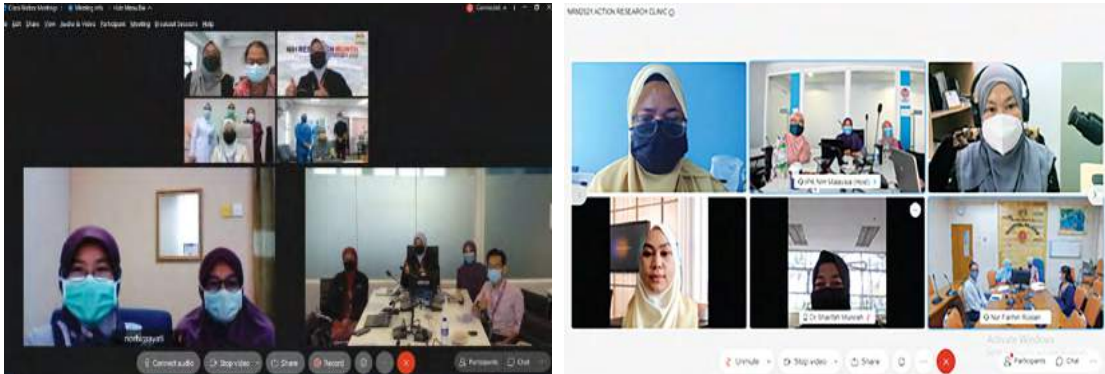
Source: Institute of Health Management, NIH

LEAN HEALTHCARE AND ACTION RESEARCH (AR) CLINICS

Lean Healthcare and AR clinics were held online in conjunction with NIH Research Month 2021. The clinics aim to provide consultation to increase the knowledge of participants as well as help resolve problems and issues that arise during the implementation of the programme at their respective facilities.

The clinics were attended by members from various facilities including the State Health Departments, District Health Offices, Hospitals, Health Clinics and Divisional Programmes from MOH. Participants include members who have basic knowledge and had previously attended training in Lean Healthcare and AR.

Image 6.71
Lean Healthcare and AR Clinic Sessions Via Online



Source: Institute of Health Management, NIH

ADVANCED CLINICAL GOVERNANCE COURSE: PATIENT SAFETY & MEDICOLEGAL

The Medicolegal and Patient Safety course introduces some basic topics on patient safety and medicolegal to improve the quality of healthcare in the face of the current environmental and healthcare challenges. This course introduces the concept of “clinical pathway” which is one of the approaches to monitoring patient safety and reducing medico-legal cases. The course enabled participants to explain the concepts and goals of patient safety, relate patient safety, clinical pathways and quality of healthcare, elaborate on medicolegal in healthcare and formulate patient safety programmes.

Image 6.72
Clinical Governance Training Session: Patient Safety and Medicolegal



Source: Institute of Health Management, NIH

EFFECTIVE LEADERSHIP & MANAGEMENT COURSE FOR HOSPITAL DIRECTORS

The Leadership and Effective Management Course for Hospital Directors is one of the initiatives taken to improve the quality of care and health management in hospitals, in view of current challenges in hospital management. This course introduces several topics on leadership and management related to financial planning, asset and procurement management, human resource management, medicolegal and the quality of hospital services as a whole.

INSTITUTE FOR HEALTH SYSTEMS RESEARCH (IHSR)

ACHIEVEMENTS

In response to the second year of the COVID-19 pandemic, the country has continued its concerted efforts in public health strategies alongside contributions from various parties in the health sector. IHSR has highlighted these efforts in the form of two series of publications, namely *The Chronicles of COVID-19*, which narrates the development of the COVID-19 pandemic in the country, as well as *Malaysia Health Sector Response to COVID-19*, which depicts Malaysia health sector response from the beginning of the pandemic until the current stage of the national immunisation programme. IHSR also developed the *COVID-19 Health Systems Response Dashboard*, a web-based interactive platform which documents Malaysia health systems response to the COVID-19 pandemic by collating information from publicly available sources and research databases independent of the actors responsible for health systems decision-making in a comprehensive manner.

Image 6.75
IHSR COVID-19 Publication



Source: Institute for Health System Research, NIH

IHSR conducts research that focuses on the different health system areas. This year the research conducted explores the area of ambulance services in the country and looked at the Completing Cancer Treatment Incentive (CCTI) under PeKA B40, besides COVID-19 studies on its impact on healthcare services and healthcare workers. Being the WHOCC for Quality Improvement, IHSR produced the National Policy for Quality in Healthcare (NPQH) which serves as a pragmatic

and dynamic document to navigate the nation in working together towards better healthcare quality. IHSR also provides consultancy to develop research capacity among personnel within the institute as well as at multiple state and programme levels within MOH.

At the international level, IHSR continues to collaborate with the London School of Hygiene & Tropical Medicine (LSHTM, United Kingdom) in the area of Health Policy and Systems Research (HPSR) capacity building. The project *Accelerating the Development of Health Policy and Systems Research (HPSR) in the Western Pacific Region (WPR) for Health System Strengthening*, is funded by the National Institute for Health Research, UK (NIHR UK) under the Global HPSR Development Programme as an initiative to build HPSR capacity around the world. This is a collaborative project between IHSR, LSHTM, United Nations University-International Institute for Global Health (UNU-IIGH, Malaysia) and the University of the Philippines Manila (UP Manila), which aims to develop a strategic plan for building HPSR capacity in Malaysia. The research team had conducted a session to disseminate findings and outputs from the project to all relevant stakeholders, including top management and senior policymakers in MOH, health service managers, researchers, academicians, health activists and community leaders. A strategic plan for strengthening HPSR capacity in Malaysia, as well as an HPSR Training Module was presented during the session, which will be used in the implementation of HPSR training activities in Malaysia.

Image 6.74

HPSR Updates and Networking Session



Source: Institute for Health System Research, NIH

A Regional Training Centre (RTC) for Implementation Research (IR) was also established and will be maintained by the Malaysian Global Health Consortium (MGHC), a consortium of partners based in Malaysia. The consortium is comprised of the United Nations University International Institute for Global Health (UNU-IIGH), IHSR, and the Department of Social and Preventive Medicine at the Faculty of Medicine of the University of Malaya (UM). The RTC was officiated in March 2021 by the Deputy Director-General of Health (Research and Technical Support). This RTC will act as a bridge between policymakers, researchers & academia and this is particularly important to promote collaboration.

Image 6.75
Launching of the Regional Training Centre for Implementation Research



Source: Institute for Health System Research, NIH

Following the launching, the first virtual workshop on IR was conducted in October 2021, which was a collaboration with the WHO Collaborating Centre for Implementation Science for Prevention and Control of Non-Communicable Diseases and Baker Heart and Diabetes Institute and LaTrobe University Melbourne, Australia. The workshop was attended by 32 local and five (5) international participants. The participants were researchers, implementers, academicians and policymakers from Malaysia as well as individuals from other countries in the Western Pacific Region intending to stimulate demand for further IR training throughout the region. Among IR projects that are planned is Virtual Clinic Implementation at Public Health Clinics in Malaysia: A Mixed-Method Study and Acceptability of Home-based Delivery of Adopted Village Oral Health Programme (AVOHP) in Negeri Sembilan Oral Health Division (NSOHD).

Image 6.76
Implementation Research Workshop 2021



Source: Institute for Health System Research, NIH

INSTITUTE FOR HEALTH BEHAVIOURAL RESEARCH (IHBR)

RESEARCH RELATED TO COVID-19 AND NON COVID-19 DURING 2021

IHBR has undertaken several studies in 2021, despite the challenging year, IHBR has managed to conduct 33 health behavioural related studies. Psychosocial (2), preventative behaviour (5), vaccine-related (2), health communication (5) and digital technologies in assessing risk

behaviour (1) were all addressed in COVID-19-related studies. IHBR has covered issues such as non-communicable diseases (3), healthy lifestyle components (5), health communication (1), environmental health (1), substance use (1), psychosocial issues (2), advanced care planning (1), predictive behaviour model (1) and marginalised community (1), communicable diseases (1), traditional and complementary medicine (1) in non-COVID related research.

PUBLICATION

Table 6.16 showed the articles that were published in 2021.

Table 6.16
Articles Published in 2021

Article	Journal
E-cigarette in Malaysia: Reasons for Initiating-Electronic Cigarettes Among Hospital and Clinic Patients and Visitors	Science Journal of Public Health Volume 9, 2021
Online Coaching as a Strategy for Health Intervention: A Scoping Review	Asian Journal of Applied Communication
Emerging Themes in Facebook and Twitter before Movement Control Order (MCO) in Malaysia	SEARCH Journal of Media and Communication Research 2021
Occupational sitting time, its determinants and intervention strategies in Malaysian office workers: a mixed-methods study	Health Promotion International, 2021, 1–10 Published by Oxford University Press
Disclosure of Herbal Medicine Usage in Diabetes Management: A Qualitative Study amongst Type 2 Diabetes Mellitus Patients and Health Care Providers in Negeri Sembilan, Malaysia.	Malaysian Journal of Social Sciences and Humanities (MJSSH) Volume 6, Issue 9.
The importance of health information seeking among diabetes patients in Malaysia: A review of the literature	Malaysian Journal of Social Sciences and Humanities (MJSSH) Volume 6, Issue 12.
<i>Pencarian Maklumat Kesihatan Dalam Kalangan Transgender dan Lelaki Homoseksual di Kuala Lumpur dan Kota Kinabalu</i>	International Journal of Social Policy and Society, Vol. 17, 2021 (November -December 2021)
<i>Tahap Kemurungan dalam kalangan jururawat di fasiliti kesihatan Kuala Lumpur</i>	Malaysian Journal of Social Sciences and Humanities e-ISSN- 2504-8562

Source: Institute for Health System Research, NIH

COLLABORATION WITH INTERNATIONAL BODIES

IHBR has taken initiatives to form partnerships with international organisations such as WHO and UNICEF in the areas of research and training. Training on Behavioural Insight workshop is a collaboration between IHBR and WHO that provides participants with a step-by-step process for analysing policy problems, building strategies and developing behaviourally informed interventions. It was attended by health education officers from various states in the country.

Apart from this, IHBR has conducted collaborative research with Universiti Kebangsaan Malaysia (UKM), namely Research on Contributing Factors to Psychological Distress, Coping Strategies and Help-seeking Behaviours among Children Living in *Program Perumahan Rakyat (PPR)* Selangor and Kuala Lumpur during COVID-19 Pandemic. This research funded by UNICEF aims to determine the mental health status of children living in PPR Selangor and Kuala Lumpur during the pandemic. The findings of the study are to aid policymakers in the development of any mental health programme for youngsters.

DEVELOPMENT OF HEALTH BEHAVIOURAL INTERVENTION MODULE

IHBR has received funding to develop a health behavioural intervention module to enable health practitioners to acquire knowledge, develop attitudes and apply health behavioural concepts in planning, implementing and evaluating health education programmes. This module is a collaborative effort between IHBR, UNICEF, UKM, *Persatuan Promosi Kesihatan Malaysia (MAHEO)* and Health Education Division Malaysia.

Image 6.77
Behavioural Insight Workshop



Source: Institute for Health System Research, NIH

Image 6.78
Collaborative Research with UKM and UNICEF



Source: Institute for Health System Research, NIH

Image 6.79
Health Behavioural Intervention Module



Source: Institute for Health System Research, NIH

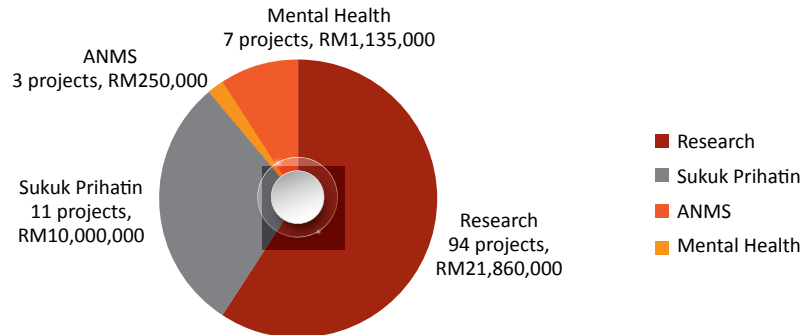
MALAYSIAN HEALTHY LIFESTYLE INDEX DEVELOPMENT

The Malaysian Healthy Lifestyle Index is a comprehensive index that measures healthy lifestyle scores. This lifestyle index will allow MOH to establish a systematic surveillance and evaluation system to monitor the health behaviour risk factors for future planning of health promotion programmes. This index consists of six (6) domains that include physical activity, healthy eating, mental health, smoking behaviour, alcohol intake and health literacy.

NIH MANAGER OFFICE

NIH Manager Office is the main focus in the development of policy strategic plans and research guidelines, the management and monitoring of research projects, and the setting of health research priority areas. The Management and Research Fund Unit process research grant applications from NIH and MOH researchers. This unit is responsible for coordinating the meetings of the NIH Research Evaluation Panel and MOH Research Grant Evaluation Panel. In addition, the unit manages and monitors the distribution of grant allocation. In 2021, a total of RM21,860,000 was allocated for Research and Development. Approximately 96 per cent was spent on the implementation of 94 projects. NIH also received additional allocation from various programmes such as *Program SUKUK PRIHATIN*, *Agenda Nasional Malaysia Sihat (ANMS)* and *Kesihatan Mental* (Mental Health).

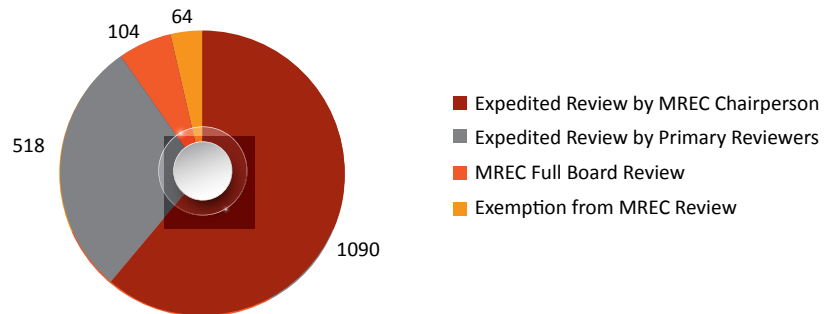
Figure 6.23
Disbursement of Research Allocation (Operating) in MOH for 2021



Source: National Institutes of Health, MOH

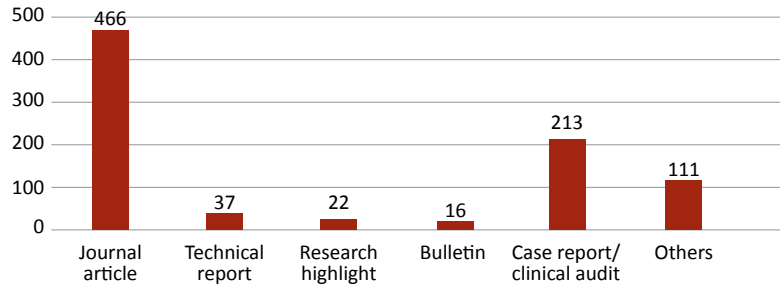
The Sector for Medical Research Ethics under the Office of NIH Manager has three (3) units, which include the NMRR and MREC secretariats. These units are involved in research registration, ethical approvals, reports of serious adverse reactions and research protocol deviations. Almost 4,000 research papers were processed in the NMRR system in 2021. The system has recently been upgraded to NMRR version 2.0.

Figure 6.24
Total Research with MREC Ethical Approvals in 2021



Source: National Institutes of Health, MOH

Figure 6.25
NIH Scientific Publications in 2021



Source: National Institutes of Health, MOH

NIH HEALTH RESEARCH PRIORITIES FOR THE TWELFTH MALAYSIA PLAN (12MP)

In 2021, NIH launched a book entitled **Health Research Priorities for Twelfth Malaysia Plan (12MP-HRP) 2021-2025**, which was initiated by the Minister of Health. The preparation for this book was led by the Evidence-Based Healthcare Sector, which aimed to improve the effectiveness and quality of research under the 12MP. The book consists of eight (8) main areas of health research that have been identified. These are the Health System, Contagious Diseases, Non-contagious Diseases, Senior Citizens, Mental Health, Environment and Natural Disaster Risks, Nutrition, Safety and Food Quality and Oral Healthcare.

Image 6.80
Health Research Priorities for Twelfth Malaysia Plan 2021-2025 Book Launch



Source: National Institutes of Health, MOH

E-BIOSTATISTICS SYSTEM

The e-Biostatistics System was developed through collaboration between the Sector for Biostatistics and Data Repository (SBDR) and Sector for Information Technology (STM) at NIH. The system is used to manage consultation clinics for biostatistical research at NIH. Consultation is carried out by 16 SBDR officers. The e-Biostatistics system was recently launched and made available for NIH and MOH researcher use. There were 139 consultation sessions in 2021.

OCCUPATIONAL SAFETY AND HEALTH UNIT (UKKP)

UKKP in NIH is responsible for ensuring the safety and wellness of staff. In 2021, many activities were carried out by the unit. UKKP conducted investigations of COVID-19 cases and their close contact tracing at the workplace. Nasopharyngeal and oropharyngeal swabs for RT-PCR COVID-19 tests were carried out for staff and close family members, which included a 'drive through' test. Immunisations were administered to staff through the National COVID-19 Immunisation Programme (PICK).

Image 6.81
Sampling for COVID-19 Tests



Source: National Institutes of Health, MOH

UKKP officers were involved in IMR Virology Unit activities of validating COVID-19 self-test kits before they were approved by the Medical Device Authority (MDA) for commercial use. UKKP provided phlebotomy or vaccine administration services in NIH institute projects, such as 'Post-Vaccination COVID-19 Immunity and Disease Surveillance in Malaysia' and 'Evaluation of Point of Care for Capillary Blood Glucose and Blood Cholesterol and HbA1c in Screening Diabetes and High Cholesterol. Annual wellness activities included health screenings for non-communicable diseases in the KOSPEN PLUS programme, Mantoux tests for tuberculosis and vaccinations for Influenza and Hepatitis B. The unit also cooperates with the National Blood Center to coordinate blood donation drives at NIH.

COCHRANE DATABASE AT NIH LIBRARY

The NIH Library is committed to providing services to facilitate medical research in elevating healthcare quality in Malaysia. The NIH library subscribes to Data Cochrane and the Cochrane Library is freely available to Malaysians. The Cochrane Library provides the latest scientific evidence to aid health-related decisions. In 2021, there was a total of 476,479 Cochrane Library users, which was a substantial increase compared to the previous year.

7 ORAL HEALTH



HIGHLIGHTS OF 2021

INTERNATIONAL AND REGIONAL COLLABORATION IN ORAL HEALTH

Malaysia-Japan Oral Health Seminar

The Malaysia-Japan Oral Healthcare Seminar 2021 with the theme of Healthy Life Through Oral Health was conducted on 21 January 2021 and held virtually via Zoom-Online Platform. The Seminar was organised by the OHP MOH, the Ministry of Economy, Trade and Industry (METI), Japan, in cooperation with the Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS). Almost 200 participants comprising dental specialists, dental officers and dental therapists took part in the seminar.

At the seminar, experts from Malaysia and Japan in the field of dentistry virtual presentations to participants on the importance of oral health care. The Japanese speakers shared experiences on oral health promotion, in particular the success of their 80:20 campaign; oral health care strategies, services and outcomes; and the community empowerment programme for lifelong oral health promotion in Japan. Meanwhile, OHP shared Malaysia's oral health care issues and challenges. Japanese Companies also participated in the seminar and provided information on made-in-Japan products for oral care.

DEVELOPMENT OF NATIONAL ORAL HEALTH POLICY (NOHPol) AND NATIONAL ORAL HEALTH PLAN (NOHP) 2021-2030

Oral Health Programme (OHP) has taken the initiative to develop the NOHPol and the NOHP 2021-2030 in line with the agendas of the 12th Malaysia Plan (12MP): Strategies to Streamline Health Care Services by Introducing Health Care Policy, and the Strategic Plan of the Ministry of Health (MOH) Malaysia 2021 - 2025. The development of NOHPol and NOHP is also in line with the World Health Organization (WHO) resolution to address key risk factors for oral diseases in integration with the non-communicable disease agenda and the Universal Health Coverage programme (UHC). This initiative was developed with the aim of creating a national agenda that unites all stakeholders in oral health to work together towards improving the oral health status of Malaysians.

The development of NOHPol and NOHP 2021-2030 began in 2019 with a series of engagement sessions with representatives from dental fraternities, public and private agencies and non-governmental organisations. The draft concept of NOHPol and NOHP were presented and approved by both the Special Meeting of the Director General of Health; and the Policy and Planning Committee Meeting (*Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan* in 2021. It was subsequently presented and approved by the *Mesyuarat Jawatankuasa Perancang dan Pembangunan Negara* on 13 December 2021. The Cabinet Memorandum paper for NOHPol and NOHP 2021 - 2030 is currently being finalised for Cabinet approval.

INCORPORATION OF ORAL HEALTH AGENDA IN NATIONAL AND MOH STRATEGIC PLANS

Agenda Nasional Malaysia Sihat (ANMS)

ANMS is a lifelong health package for the people through a culture of a healthy lifestyle and environmental sustainability that supports healthy living. OHP has strived to integrate elements of dental and oral health promotion in overall health through 3 cores areas namely:

- i. Promotion of healthy living culture - to cultivate a healthy living culture by improving people's health literacy eg. promoting visits to dental clinics at least once a year;
- ii. Health wellness services - to facilitate access to health wellness facilities and services through mobile dental teams, Wellness on Wheels Programme together with the Mobile Dental Clinic for health screening; and
- iii. Self-Health Control - for empowerment in self-health care for disease prevention. For example, self-examination; Effective Tooth Brushing Training, Dental Health Advocacy by Dental Icon (iGG) programme as well as involving other volunteers through the Whole of Government and Whole of Society Approach.

Integration of the Oral Health Programme with MOH Strategic Plan 2021-2025

This strategic plan outlines the MOH's strategic plan for 2021-2025. Among the major oral health agendas under the MOH Strategic Plan are as follows:

- i. Develop the NOHPol and the NOHP 2021-2030.
- ii. Introduce the Facilities and Human Resource Master plan covering the development activities of Specialist Centres in hospitals and Non-Hospital Based Dental Specialist Clinics in each zone or state.
- iii. Intensify cooperation and Integration of Services between the Public and Private Sectors for dental examinations and promotion to private kindergartens.
- iv. Enhancing Ageing Awareness and Health Care Programme through oral health screening activities for the elderly as part of the overall health towards maintaining at least 20 teeth for well-being and a better quality of life.
- v. Expanding the Hospital-Based Cluster Specialist services in the States of Perak, Sabah, Johor and Melaka and Non-Hospital Based Cluster Specialist services in Kedah, Perak and Sabah.
- vi. Expanding screening for oral potentially malignant disorders and oral cancer to all patients aged 18 and older in primary dental clinics.
- vii. Strengthen health promotion and healthy lifestyle practices through: Involvement of oral healthcare programmes with Wellness Hub; Developing a Mobile Dental Clinic for the State of Selangor; and iGG to create community awareness in oral health.
- viii. Implement national Electronic Medical Record (EMR) initiatives towards the development of Lifetime Health Record (LHR) to achieve an Integrated Health Information System.

MOH Digitalisation Strategic Plan 2021-2025

The MOH Digitalisation Strategic Plan 2021-2025 provides a direction towards an excellent digital health service in MOH (PSP MOH 2021-2025). Essentially, OHP aims to achieve an excellent digital oral health service through relevant PSP MOH 2021-2025 Strategic Thrust, Strategies and Programme that includes the expansion of the Teleprimary Care-Oral Health Clinical Information System (TPC-OHCIS) under the National EMR Project.

DEVELOPMENT OF POLICY AND DIRECTION-SETTING FOR SPECIALIST ORAL HEALTHCARE SERVICES

The development of a Dental Specialties' Master Plan 2021-2030 commenced in September 2020 to chart the direction of MOH specialist oral healthcare services. This process continued into 2021 with the involvement of all MOH dental specialities and the State Deputy Directors of Health (Dental). Gap analysis was carried out to explore and develop creative options towards the transformation of specialist oral healthcare services. The proposed Master Plan was approved at the OHP level in December 2021 and is expected to be presented to MOH top management in 2022. The implementation of these comprehensively developed strategies and initiatives will help ensure more equitable specialist oral healthcare services for the people.

PUBLIC-PRIVATE SECTOR INITIATIVES

Toddler Programme

A new initiative to increase toddler coverage through collaboration with external agencies was introduced in 2021. *Garis Panduan Perkhidmatan Kesihatan Pergigian Toddler: Kolaborasi Bersama Agensi Luar* was approved for implementation in all states on 1 April 2021. An online briefing was held on 9 March 2021 and attended by 42 representatives from various agencies including public and private universities, private dental practitioners, Malaysian Dental Association, Social Welfare Department, *Persatuan Pengasuh TASKA*, Malaysian Armed Forces and industry players. This briefing was held to provide information to external agencies regarding the implementation procedures of this collaboration project as well as the expected outcomes of this project.

Launching of National - Level Mouth Cancer Awareness Week

Mouth Cancer Awareness Week 2021 (MCAW 2021) was held from 7 to 13 November 2021 with the theme **#JomCheckMulut**. This event was organised by Oral Cancer Research and Coordinating Centre (OCRCC), Faculty of Dentistry, University of Malaya in collaboration with Oral Health Programme along with 20 other agencies.

At the national level, MCAW 2021 was launched by the Principal Director of Oral Health, on 7 November 2021. MCAW 2021 Virtual Run/Walk, TikTok/InstaReels video competition and colouring competition were among the highlights in conjunction with the launch.

At the state level, launching ceremonies, oral cancer screening and various promotional activities were successfully conducted. Promotional activities using Facebook Live platform were shared nationally throughout the week. A total of 1,368 awareness exhibitions, attended by 37,270 participants and 2,697 talks to 31,832 individuals were successfully conducted.

LAUNCHING OF NATIONAL-LEVEL AWARENESS CAMPAIGN ON DENTAL CHECK-UPS

In 2021, the virtual launching of the National-Level Awareness Campaign on Dental Check-ups was held on 8 July 2021 using Facebook Live platform. The grand virtual launching event with the theme *Ingat Hari Jadi, Ingat Doktor Gigi* was officiated by Kebawah Duli Yang Maha Mulia Seri Paduka Baginda Raja Permaisuri Agong Tunku Hajah Azizah Aminah Maimunah Iskandariah Binti Almarhum AlMutawakkil Alallah Sultan Iskandar Al-Haj. The campaign aims to increase the utilisation of oral health services, especially by young adults, adults and senior citizens. Pahang Oral Health Division as the co-organiser for this year's event provided the much-needed technical support for the launching as well as organised a virtual run competition. At the national level, pre-launch activities such as IGTV and infographic competitions received tremendous response and participation from all over the country. Meanwhile, various promotion and education activities continued after the launching in all the States.

TELE-DENTISTRY INITIATIVE

MOH and MAMPU successfully developed the *Sistem Janji Temu Klinik Kementerian Kesihatan Malaysia* (SJTKKM) which enabled MOH clients to book appointments via online for oral health care and piloted at five (5) health/dental clinics in Selangor and Melaka. Following that, the system was officially implemented and made available for MOH clients to initiate appointment for booking on 11 March 2021.

MOH and MAMPU also collaborated in the Proof of Concept (PoC) of Virtual Dental Clinic in four (4) pilot dental clinics in Federal Territory of Kuala Lumpur and Putrajaya, which is expected to Go-Live via the Google Work Space platform in 2022. Towards this end, an assessment of the infra ICT readiness of the respective clinics was made during site visits in October and November 2021.

HEALTH AND SAFETY WEEK WEBINAR

In conjunction with World Patient Safety Day 2021 (WPSD 2021), OHP successfully organised and conducted an inaugural patient safety seminar on 7 October 2021 on a virtual platform via Facebook Live. In line with WPSD 2021 theme "Safe maternal and newborn care", OHP

conducted this event with the theme; “Patient Safety, Our Priority” aimed at increasing awareness amongst all dental practitioners about prioritising patient safety, especially when caring for mothers and their vulnerable newborns.

This seminar was formally officiated and launched by the Principal Director of Oral Health, who reiterated OHP’s commitment and support of WHO’s resolution on “Global Action on Patient Safety”. Prior to this launch, a poster competition advocating patient safety was conducted nationwide. About 69 participants were shortlisted and the top three (3) and five (5) consolation prize winners were announced during this seminar. This seminar offered an engaging agenda of talks on Malaysian Patient Safety Goals 2.0 such as the New Phase of Patient Safety in Malaysia; and Telescoping the Roles of Clinician, Researcher and Beyond by eminent speakers, followed by a public forum with its debatable topic on “COVID-19: Patient Safety or Healthcare worker (HCW) safety? Who should be given more priority?”. This forum concluded that both patient and HCW safety were of utmost importance and should be monitored and maintained.

ACHIEVEMENTS IN INNOVATION AND OTHER AWARDS

MOH Innovation Award (AIKKM) 2021 was successfully conducted entirely online from 21 to 26 October 2021. There were four (4) categories of innovation in this event i.e. product, service, process and technology.

The organising committee consisted of the OHP as the main secretariat in collaboration with the Management Services Division, Family Health Development Division, Policy and International Relations Division as well as Information Management Division.

Winners from OHP in the Product Category include:

- i. Project “KOJAU” by Pejabat Kesihatan Pergigian Daerah Tampin, Negeri Sembilan (2nd Place); and
- ii. Project “Foot Operated Eco Friendly Suction” by Klinik Pergigian Durian Tunggal, Alor Gajah, Melaka (3rd Place).

In addition, OHP is proud to acknowledge the other seven (7) dental innovation projects below which were shortlisted and chosen out of 44 innovation projects to compete in the final stage of AIKKM 2020:

Product Innovation Category

- iBOX – Klinik Pergigian Taman Medan, Petaling Jaya, Selangor
- Trimming Box- Klinik Pergigian Lanang, Pejabat Pergigian Bahagian Sibul, Sarawak
- Postex Care – Klinik Pergigian Mentakab, Pahang
- Trimoshield – Klinik Pergigian Kota Samarahan, Sarawak
- Dentolit - Pejabat Kesihatan Pergigian Daerah Batang Padang, Perak
- D’Hygiene Box- Pejabat Kesihatan Pergigian Daerah Baling, Kedah

Process Innovation Category

- Portable Waterline Systems (PWLS) – Pejabat Kesihatan Pergigian Daerah Yan, Kedah

UTILISATION OF ORAL HEALTHCARE SERVICES

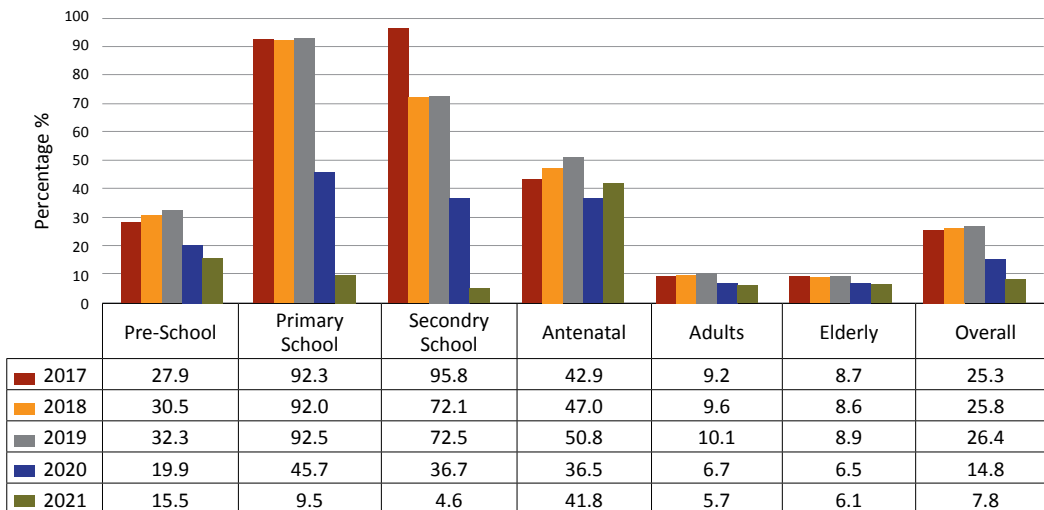
Primary Oral Healthcare Services

OHP is responsible for ensuring the delivery of primary oral healthcare in a comprehensive and integrated manner for each target group to improve the oral health status of the community. Services are rendered through two (2) delivery modes namely static (primary dental clinics) and Outreach. However, in 2021, primary oral healthcare services were affected by the COVID-19 pandemic where some outreach activities could not be carried out for example, school dental services and visits to institutions. However, oral healthcare services at primary dental clinics continued to be provided by adopting the new norm such as the implementation of an online appointment system to reduce congestion in the clinic as well as the use of additional equipment for Aerosol Generating Procedure (AGP) performed in the treatment room.

The overall utilisation of primary oral healthcare in MOH declined from 2019 (26.4 per cent) to 2020 (14.8 per cent) and to 2021 (7.8 per cent) due to the COVID-19 pandemic. As of November 2021, treatment involving AGP was available in 432 out of 717 primary dental clinics (60.3 per cent).

Throughout 2021, an allocation of RM832,885 from MOH Trust Fund was granted for the acquisition of 121 units of extra-oral vacuum suction (EOVS) and 59 units of air decontamination units (ADU) for distribution to all states and institutions. Meanwhile, RM2.3 million was allocated to the states and institutions through the MOH COVID-19 Fund for the acquisition of 230 EOVS and 230 ADU to further equip treatment rooms for AGP.

Figure 7.1
Percentage Utilisation of Primary Oral Healthcare Services by Patient Category for the year 2017 to 2021



Source: Health Informatics Centre, MOH

Specialist Oral Healthcare Services

There are nine (9) dental specialties in the MOH, namely Oral and Maxillofacial Surgery, Orthodontics, Paediatric Dentistry, Periodontics, Oral Pathology & Oral Medicine, Restorative Dentistry, Special Care Dentistry, Forensic Odontology and Dental Public Health. In 2021, there were 424 dental specialists in MOH, accounting for an increase of 22.2 per cent over the number of specialists in 2017.

Mapping of specialist services was done to ensure appropriate distribution of existing specialists based on needs and also to identify future training needs for all specialties. The expansion of six (6) dental specialist services was undertaken for 14 dental facilities in 2021 (**Table 7.1**).

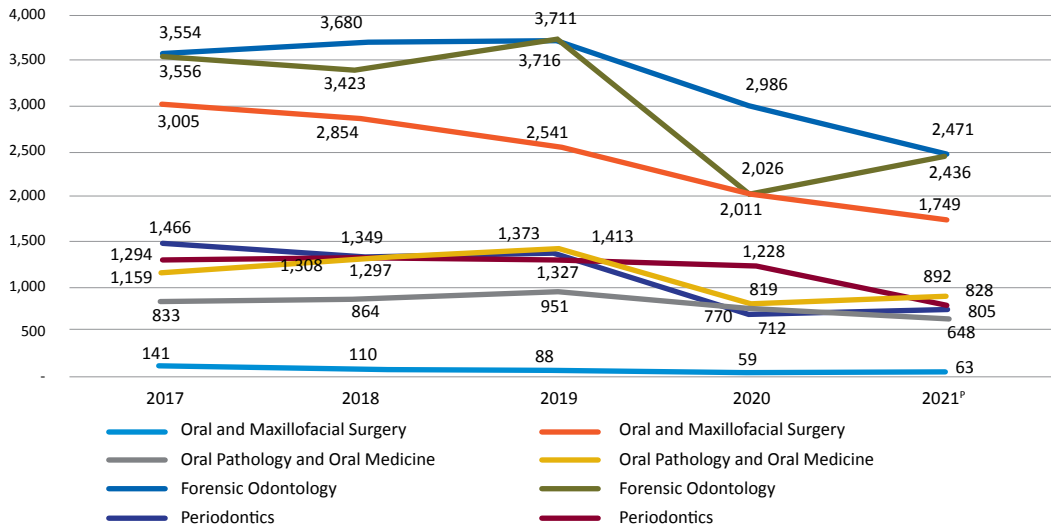
Table 7.1
New Specialty Services Established in 2021

Specialties	Facilities
Oral and Maxillofacial Surgery	Hospital Queen Elizabeth II, Sabah
Paediatric Dentistry	Hospital Sibul, Sarawak
Oral Pathology and Oral Medicine	Hospital Serdang, Selangor
Orthodontics	Klinik Pergigian Batu Berendam, Melaka Klinik Pergigian Chendering, Terengganu
Periodontics	Klinik Pergigian Bandar Tun Hussein Onn, Selangor Klinik Pergigian Taman Batu Muda, WPKL & Putrajaya Klinik Pergigian Rembia, Melaka Klinik Pergigian Labis, Segamat Johor Klinik Pergigian Bukit Indah, Johor Klinik Pergigian Marang, Terengganu Klinik Pergigian Luyang, Sabah
Restorative Dentistry	Klinik Pergigian Jalan Gambut, Pahang Klinik Pergigian Manir, Terengganu

Source: Oral Health Programme, MOH

Oral Healthcare Service (OHCS) data for each specialty was collected through Health Information and Management System (HIMS), except for Special Care Dentistry and Forensic Odontology specialties where data is still being collected manually. The workload (number of specialist per number of patients ratio) is shown according to each dental specialty below (**Figure 7.2**).

Figure 7.2
Workload of Dental Specialist by Disciplines for the year 2017 to 2021



Note: ^P preliminary data

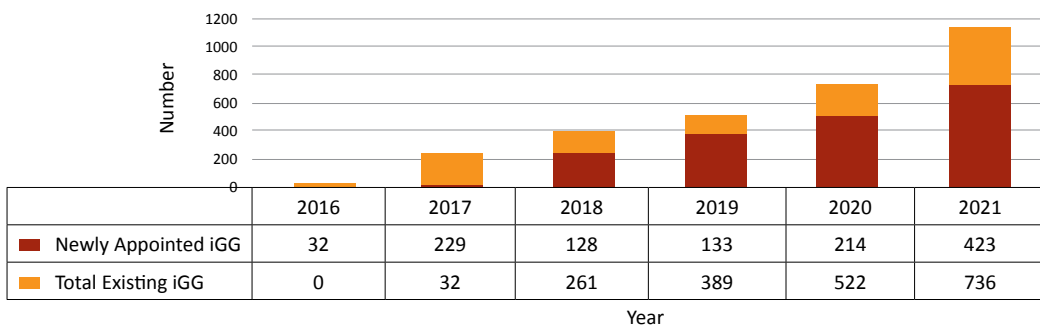
Source: Health Informatics Centre & Oral Health Programme, MOH

ORAL HEALTH PROMOTION AND ORAL DISEASE PREVENTION

Ikon Gigi Programme

Dental Icon (iGG) is a special programme whereby individuals in the community are trained in oral health education modules. The main objective of this programme is to disseminate oral health information more widely and to empower the community to improve their oral health. From 2016 to 2021, a total of 1,159 iGG were appointed nationwide (Figure 7.3). However, in 2021, only 694 iGG carried out oral health promotion activities actively in the community.

Figure 7.3
Number of iGG for the Year 2016 to 2021

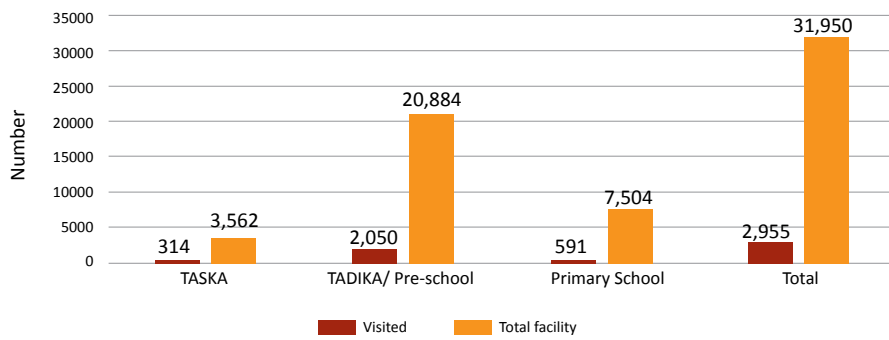


Source: Oral Health Programme, MOH

Effective Tooth Brushing Training Programme (BEGIN)

BEGIN is an oral health promotion activity aimed at promoting and instilling effective tooth brushing habits among school children. BEGIN aims to control dental plaque and inculcate a positive behaviour towards better oral health. One of BEGIN's indicators is the number of facilities visited which consist of TASKA, TADIKA/pre-schools and primary schools. **Figure 7.4** shows the breakdown of facilities visited from January to June 2021. Due to the COVID-19 pandemic and Movement Control Order, of 31,950 facilities only 2,955 were managed to be visited throughout the country.

Figure 7.4
Number of Type of Facilities Visited from January to June 2021

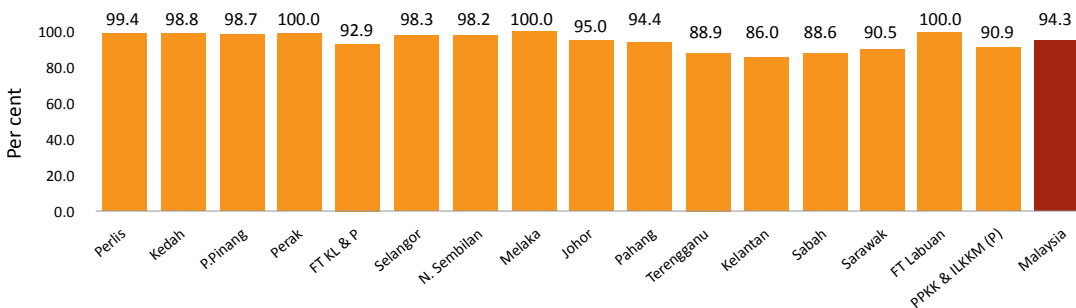


Source: Oral Health Programme, MOH

Tobacco Cessation Programme (KOTAK)

Staff training is an important activity in the KOTAK programme. Thus, the percentage of trained staff was selected as the Key Performance Indicator (KPI) in 2021 as shown in **Figure 7.5**. States with the highest rate of trained staff are Perak, Melaka and Federal Territory of Labuan (100 per cent) while the lowest is Kelantan (86 per cent).

Figure 7.5
Percentage of Trained Staff in the KOTAK Programme by State for the Year 2021

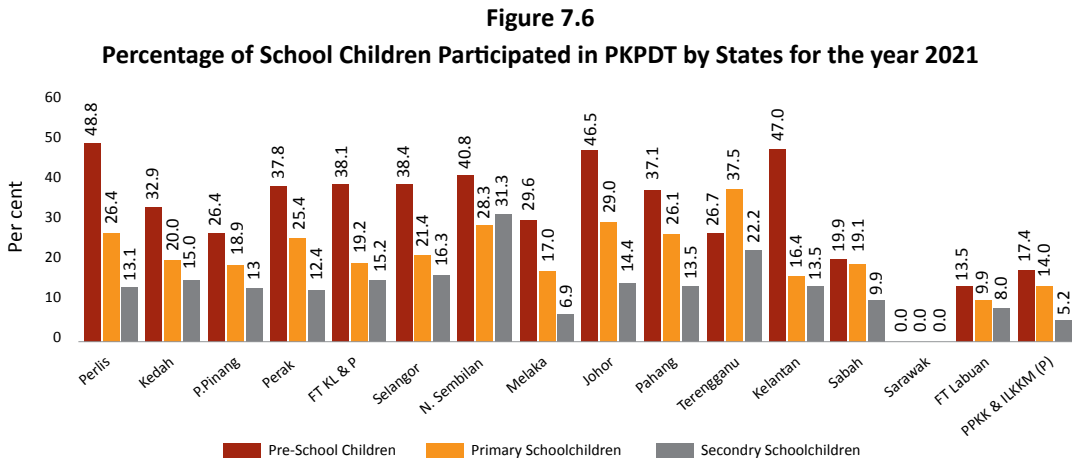


Notes: KPI KOTAK for 2021 (Standard = 80 per cent)

Source: Oral Health Programme, MOH

Online Oral Health Education (PKPDT)

PKPDT was first introduced nationwide in July 2021 as an alternative to face-to-face Oral Health Education due to the COVID-19 pandemic. Perlis, Terengganu and Negeri Sembilan had the highest percentage of participants from the pre-school, primary and secondary school with 48.8 per cent, 37.5 per cent and 31.3 per cent, respectively (**Figure 7.6**).

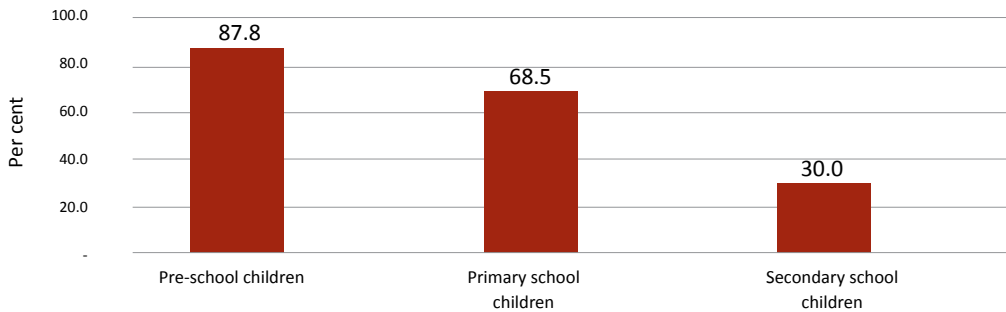


*Notes : The calculation is only based on school children aged 6, 9, 11, 14 and 16 years old only.
Malaysia : Pre-school children 31.3 per cent; Primary school children 20.5 per cent; Secondary school children 13.1 per cent*

Source : Oral Health Programme, MOH

In addition, the school children were also assessed for their level of understanding based on the specific PKPDT modules. Those scoring 70.0 per cent and above were considered to have a good understanding of the modules (**Figure 7.7**).

Figure 7.7
Percentage of School Children having a good understanding of the Module Content for the Year 2021



Notes: The calculation is only based on school children aged 6, 9, 11, 14 and 16 years old only.

Source: Oral Health Programme, MOH

Social Media

Since the COVID-19 pandemic, social media has become one of the important mediums in delivering Oral Health Education (OHE) to the community. OHE activities and launching ceremonies are no longer held face-to-face and are replaced by virtual platforms. As a result, the number of social media (Facebook) followers at the state level increased from 49,671 to 89,821 followers (**Figure 7.8**) while a similar trend was observed for the number of OHE materials uploaded (**Figure 7.9**).

Figure 7.8
Number of Social Media Followers at State Level

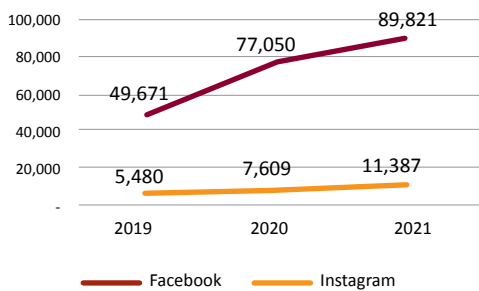
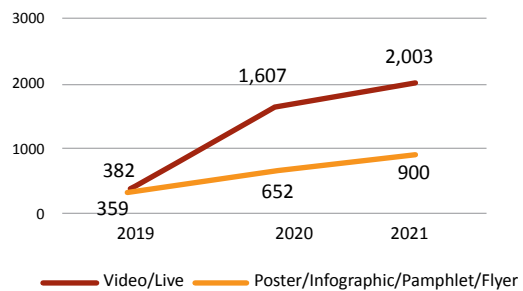


Figure 7.9
Number of OHE Material Uploaded at State Level

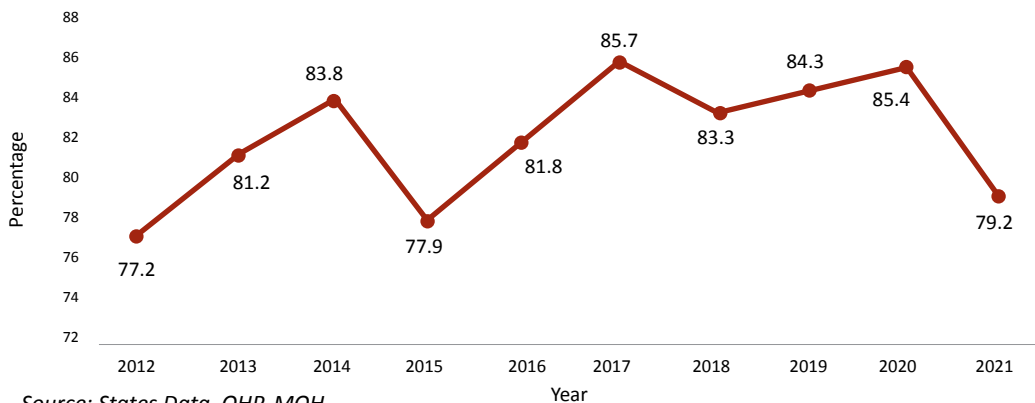


Source: Oral Health Programme, MOH

Water Fluoridation Programme

In 2021, it is estimated that 80 per cent of the population received public fluoridated water supply, in which 79.2 per cent of fluoride level readings taken at reticulation points conformed to the recommended range (**Figure 7.10**). However, more than 50 per cent of Water Treatment Plant (WTP) in Sabah, Sarawak and Kelantan do not have fluoride feeders to fluoridate water supplies while Pahang had no fluoridation coverage since 2020.

Figure 7.10
Conformance of Fluoride Level in Public Water Supplies to the Recommended Range (0.4 to 0.6ppm) for the Year 2012 to 2021



Source: States Data, OHP, MOH

Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers

Opportunistic screening for primary prevention and early detection of oral potentially malignant disorders and oral cancers was carried out for walk-in patients at dental clinics and community outreach services. Preliminary data of 2021 showed that out of 1,267,888 patients screened (aged 18 years and above), 83,411 patients were identified as having high-risk habits/oral lesions or both. The Screening was also done at 115 community locations identified as high-risk involving 1,403 residents. Among those screened, 883 patients had oral lesions. Two thirds of these patients (66.7 per cent) had high-risk habits. A total of 633 patients (71.7 per cent) were referred to Oral & Maxillofacial Surgeons/Oral Pathology and Oral Medicine Specialists for further investigation and management. Nevertheless, only 87.2 per cent of these patients attended the dental specialist clinic.

It was reported that 14.5 per cent (92 patients) had malignant lesions. Based on the TNM staging, out of the 96 lesions reported, 15.6 per cent were at Stage I, while 62.5 per cent were at advanced stages (stage III and IV).

ORAL HEALTH QUALITY

National Indicator Approach (NIA)

In 2021, there were four (4) indicators to measure the performance of the primary and community oral healthcare services (**Table 7.2**).

Table 7.2
Oral Health Indicators under NIA, January to December 2021

Indicator	Standard (%)	Achievement (%)	SIQ* Yes / No
Percentage of primary school children maintaining orally-fit status	≥65	39.8	Yes
Percentage of secondary school children maintaining orally-fit status	≥70	38.4	Yes
Percentage of non-conformance of fluoride level at reticulation points (Level < 0.4ppm)	≤25	20.6	No
Percentage of non-conformance of fluoride level at reticulation points (Level >0.6ppm)	≤7	0.2	No

Notes: *SIQ: Shortfall in Quality

Source: Oral Health Programme, MOH

Key Performance Indicators (KPIs) 2021

In 2021, OHP monitored 29 KPIs, with five (5) KPIs being monitored quarterly, 19 KPIs were monitored half yearly and five (5) KPIs were monitored on a yearly basis. Overall, 21 of these KPIs were achieved (**Table 7.3**).

Table 7.3
Oral Health Programme KPI for the year 2021

Domain	Indicator	Target (%)	Achievement (%)
Accessibility to MOH oral healthcare services	Percentage of dental clinics providing daily outpatient service to increase people's access to dental services everyday	≥84	87.6
	Percentage of Health Clinic with dental facility component	≥60	59.4
	Percentage of antenatal patient coverage	≥60	57.0
Oral health status of toddler	Percentage of toddlers maintaining orally-fit status (based on new attendances)	≥50	83.2
Oral health status of school children	Percentage of primary school children maintaining orally-fit (based on new attendances)	≥65	39.8
	Percentage of secondary school children maintaining orally-fit (based on new attendances)	≥70	38.4
	Percentage of caries free 6-year-old school children	≥41	29.4
	Percentage of caries free 12-year-old school children	≥70	70.6
	Percentage of caries free 16 year- old school children	≥61	38.6
	Percentage of fissure sealant retention in teeth	≥50	50.0
	Percentage of primary school students as active current smokers with a quit date after the KOTAK program intervention	≥50	-
Oral health status of antenatal mother	Percentage of antenatal mothers with orally fit status	≥33	34.9
Delivery of denture services	Percentage of patients aged 60 years and above who received their dentures within 8 weeks	≥50	74.9
Efficiency and effectiveness of services delivery	Percentage of failed restorations done under General Anaesthesia (GA) within 6 months	<3	1.7
	Percentage of patients with new referrals who received "Special Needs" consultation within 6 weeks from the date of referral	>85	93.8

Domain	Indicator	Target (%)	Achievement (%)
	Percentage of patients who showed a reduction in periodontal pocket depth \geq 50% after receiving treatment for 6 months	\geq 75	84.5
Quality dental service and MS ISO certification	Percentage of active <i>Ikon Gigi</i> (iGG)	\geq 75	98.2
	Percentage of out patients screened for oral lesions	\geq 37	79.1
	Percentage of New Biomedical Equipment (NBE) equipment supplied which functions well and does not disrupt the smooth delivery of oral health services	100	100
	Percentage of oral health personnel who followed short and medium -term modular courses and submitted proposals for the application of knowledge and skills acquired, to the Oral Health Programme, MOH (PKP KKM) within one month after course completion.	100	100
	Percentage of proposed application of knowledge and skills acquired from short- and medium -term modular courses implemented in the oral health services	\geq 50	50.0
	Percentage of MOH dental facilities achieving equal to or more than 80 % compliance during safety and health audits to ensure the audited facilities are at optimum levels	\geq 64	76.0
	Percentage of dental clinics with MS ISO 9001:2015 certification	\geq 85	89.4
	Monitoring of private dental clinics	Percentage of monitoring inspections conducted on identified Private Dental Clinics (KPS) to monitor compliance with relevant acts and regulations to ensure the safety and health of patients	\geq 95
Index of customers satisfaction	Percentage of customers satisfied with dental service / treatment received	\geq 95	98.2
Index of innovation culture	Cultivation of innovation in the Dental Clinic	\geq 80	92.0
Complaint's resolution index	Percentage of complaints in which the complainant was satisfied with the remedial action taken	\geq 70	99.4

Sources: Oral Health Programme, MOH

8

PHARMACY



INTRODUCTION

The Pharmaceutical Services Programme (PSP) is responsible to ensure pharmaceutical products used in the country comply with standards, are safe, efficacious and of high quality. The Programme safeguards the nation by enforcing relevant medicines legislation and regulation, while also facilitating access to medicines and advocating for rational medicine use by both healthcare providers and consumers. The Programme consists of five (5) main divisions headed by a Senior Director of Pharmaceutical Services:

- i. Pharmacy Policy and Strategic Planning Division;
- ii. Pharmacy Practice and Development Division;
- iii. Pharmacy Enforcement Division;
- iv. Pharmacy Board Malaysia Division; and
- v. National Pharmaceutical Regulatory Agency (NPRA).

ENSURING GOOD ORGANISATIONAL AND HUMAN RESOURCE MANAGEMENT

PHARMACEUTICAL SERVICES PROGRAMME STRATEGIC PLAN 2021-2025

PSP looks forward to complementing the Ministry's goals and aspirations over time. In the meantime, the Programme has developed strategic plans with initiatives and targets clearly stated for the next five (5) years to meet rising healthcare demands (2021-2025). The development of the PSP Strategic Plan 2021-2025 began in early 2020, based on input from all of PSP's divisions. A series of engagement sessions were held to determine the initiatives and path forward for the next term, which runs from 2021 to 2025. Aside from that, the accomplishments of the 2016-2020 Action Plans are also being presented and discussed.

As the programme comprises five (5) Divisions, the Programme has built its foundation in various prospects from these four (4) Strategic Thrusts with shared values and leadership practices. The Programme has designed strategies in different aspects as such:

i. Customer Engagement

- Multi-sectorial engagements towards better health awareness and high quality, safety and effective products & enhance the value proposition and roles of Pharmacy Services

ii. Innovation Driven

- Enhancing ICT-based service innovations
- Intensifying the use of research findings in policy development and practice

iii. Sustaining Operational Excellence

- Strengthen governance and regulatory control
- Strengthen monitoring of sales and advertisements of unregistered and adulterated products

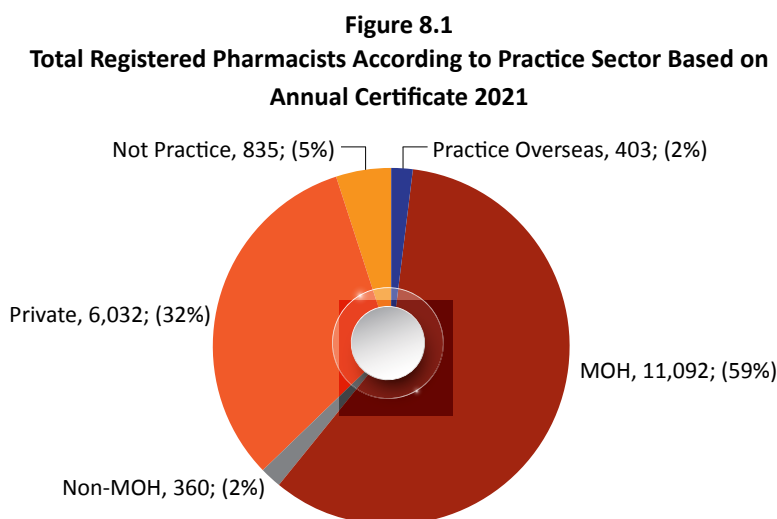
- Enhance organisational efficiency
- Enhance the accessibility of pharmaceutical products
- Enhance efficiency and optimise resources

iv. Enhancing Capability Building

- Enhance human resource and performance and optimising human resource capacity to ensure continuous service delivery

REGISTERED PHARMACIST IN MALAYSIA

There are a total of **18,722** registered pharmacists renewing their annual certificate for the year 2021 according to their practice sector as in **Figure 8.1**.



Source: Pharmacy Board Malaysia, MOH

ENSURING SUSTAINABLE ACCESS TO MEDICINES AND PHARMACEUTICAL SERVICES

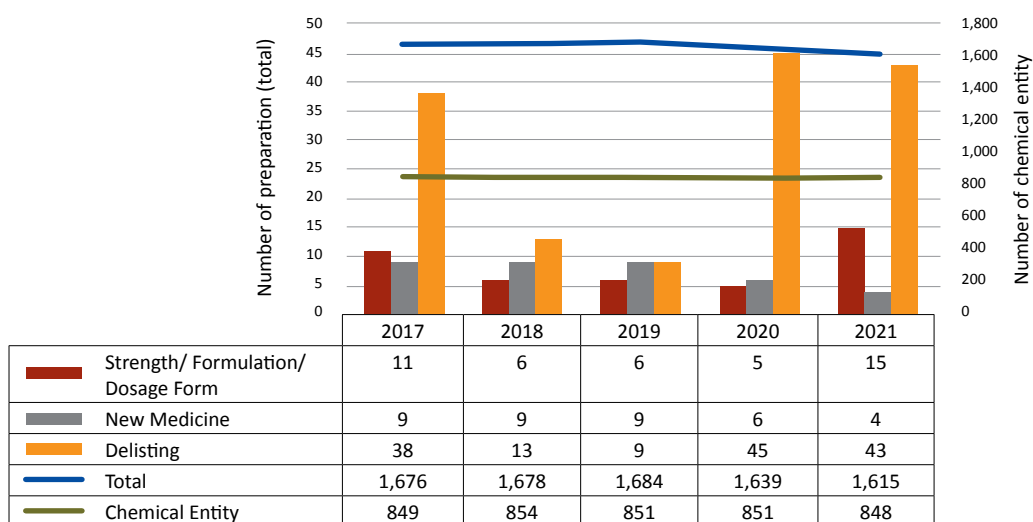
MEDICINES PROCUREMENT AND EXPENDITURE IN THE MINISTRY OF HEALTH MALAYSIA (MOH)

The total cost of medicines procured for all MOH hospitals, institutions and health clinics for the year 2021 was RM2,552.18 million. The expenditure increased by 1.01 per cent as compared to the total cost in 2020. The value for medicines expenditure through concessionaire company (APPL) was RM1,111.55 million (43.55%). For the MOH contract, the total expenditure was RM1,070.46 million (41.94%), meanwhile for direct purchase and quotations, the expenses were RM370.16 million (14.50%).

LISTING OR AMENDMENT TO MINISTRY OF HEALTH MEDICINES FORMULARY (MOHMF)

MOHMF 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 MOHMF will be tabled in the MOHMF Panel meeting which convenes three (3) times a year. There were a total of 1,615 preparations comprising 848 chemical entities listed in the MOHMF as of December 2021. The number of medicines listed in the MOHMF from the year 2017 to 2021 is summarised in **Figure 8.2**.

Figure 8.2
The Number of Medicines Listed in the MOHMF for The Year 2017 to 2021

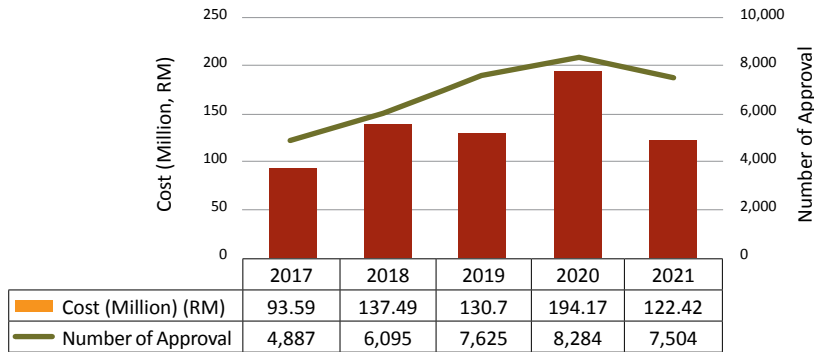


Source: Pharmacy Practice and Development Division, MOH

SPECIAL APPROVAL MEDICINES

Throughout the year 2021, a total of 8,124 applications were received from MOH facilities of which 92 per cent (7,504 applications) were approved with an estimated cost of RM122.42 million. The reduction seen in 2021 compared to the previous year is due to the change in the process whereby as of February 2021, all repeat applications for registered products are processed by the relevant MOH facility. The number of applications and costs of special medicine approvals for MOH facilities from the year 2017 to 2021 is summarised in **Figure 8.3**.

Figure 8.3
Number of Applications from MOH Facilities and Total Cost of Special Medicines Approvals for The Years 2017 to 2021

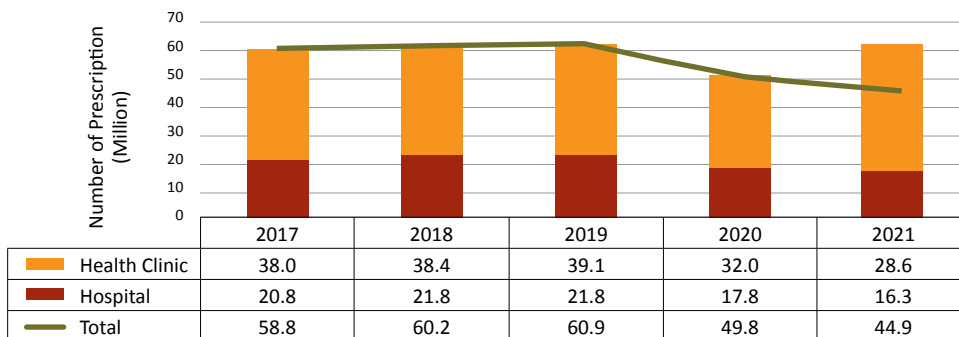


Source: Pharmacy Practice and Development Division, MOH

DISPENSING OF MEDICINES IN MOH HOSPITALS AND HEALTH CLINICS

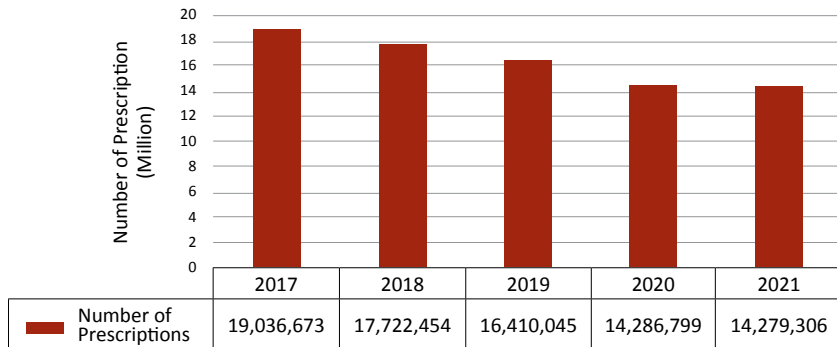
In 2021, patients were encouraged to use the various Pharmacy Value-added Services (VAS) to reduce patient congestion and waiting time at MOH facilities during the COVID-19 pandemic. Additionally, improvements in communication with patients via existing VAS such as email, WhatsApp, phone calls and the most recent addition, the MyUBAT system, have been implemented to streamline the registration process. In comparison to the previous year, the number of outpatient prescriptions received in hospitals and health clinics decreased by 9.8 per cent in 2021 due to the COVID-19 pandemic and widespread use of Pharmacy VAS (**Figure 8.4**). Prescriptions received at MOH facilities amounted to 44.9 million, with 28.6 million in health clinics and 16.3 million in hospitals. The number of inpatient prescriptions received at the hospital decreased by 0.05 per cent to 14.3 million (**Figure 8.5**).

Figure 8.4
Number of Outpatient Prescriptions Received for The Years 2017 to 2021



Source: Pharmacy Practice and Development Division, MOH

Figure 8.5
Number of Inpatient Prescriptions Received for The Years 2017 To 2021



Source: Pharmacy Practice and Development Division, MOH

IMPLEMENTATION OF MEDICINES SUPPLY MANAGEMENT SYSTEM FOR PHARMACY VALUE ADDED SERVICES (MyUBAT)

On the 28 April 2021, the PSP has launched the Medicines Supply Management System for Pharmacy Value Added Services (MyUBAT) to establish a centralised management portal for pharmacy value-added service activities at MOH facilities and to improve communication efficiency between pharmacists and patients.

This system facilitates and expedites the process of registration and supply of follow-up medicines for patients from the MOH health facilities and allows patients to monitor pharmacy value-added service appointments. Currently, the MyUBAT system provides two types of VAS i.e. appointments at the pharmacy counter and follow-up medicines delivery by post. In 2021, a total of 59,510 (40.1 per cent) new prescriptions were registered through the MyUBAT system application to obtain the pharmacy VAS. From its inception in August 2020 to January 2022, the system was used by 399 MOH facilities, with a total of 97,910 registered users (**Figure 8.6**).

Figure 8.6
Statistics Performance of MyUBAT System until 20 January 2022



Source: Pharmacy Practice and Development Division, MOH

DETERMINATION OF COVID-19 VACCINE MAXIMUM PRICE

COVID-19 vaccine is provided to all Malaysians as part of the National COVID-19 Immunisation Program (PICK). The government also offers a paid option for people to obtain COVID-19 vaccination more quickly at private hospitals and clinics that provide it. The Special Committee for Ensuring Access to COVID-19 Vaccine Supply (JKJAV) has agreed to establish the maximum wholesale and retail prices for the COVID-19 vaccine following the Price Control and Anti-Profitteering Act 2011. It aims to contain vaccine prices as a result of increased demand during the COVID-19 pandemic and expand access to affordable vaccines. The Medicines Pricing Panel which comprised government agencies such as Ministry of Domestic Trade and Consumer Affairs (KPDNHEP), consumer groups, and insurance associations has proposed maximum vaccine prices based on price reviews and negotiations with companies.

Table 8.1
The Maximum Wholesale Prices and Retail Prices of COVID-19 Vaccines

No.	Product	The 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.	COVILO Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL No.: MAL21076098AZ)	49.00	61.00

Source: Pharmacy Practice and Development Division, MOH

MEDICINES EDUCATION FOR CONSUMERS

Throughout 2021, *Duta Kenali Ubat Anda* together with pharmacists have worked to implement the Know Your Medicine Programme through alternative methods, such as webinars and Facebook Live sessions due to the COVID-19 pandemic situation. Additionally, information about medicines, particularly the COVID-19 vaccine, is disseminated via current technology such as the WhatsApp application. *Duta Kenali Ubat Anda* has also been appointed as MyCHAMPION. MyCHAMPION acts as an agent to the MOH to strengthen the culture of new norms in the face of pandemics. MyCHAMPION is also part of the Agenda Nasional Malaysia Sihat (ANMS) initiative.

In 2021, a total of 1,026 *Duta Kenali Ubat Anda* Programmes have been implemented. *Duta Kenali Ubat Anda* also assists the MOH to convey information and raise awareness to the public on the importance of obtaining the COVID-19 Vaccine, including booster dose injections. A total of eight (8) COVID-19-related infographics were produced and 31 TV and radio interview sessions aired. 11 articles were published through various platforms as well as three (3) educational videos related to COVID-19 and vaccines were also produced.

Image 8.1
Duta Kenali Ubat Anda Together with The Pharmacy Team
Conveys Medicines Information to The Public



Source: Pharmacy Practice and Development Division, MOH

Image 8.2
Information about Covid-19 Vaccine Delivered through Infographics



Source: Pharmacy Practice and Development Division, MOH

ENSURING QUALITY, SAFETY & EFFICACY OF MEDICINES

PRODUCT REGISTRATION

National Pharmaceutical Regulatory Agency (NPR) is responsible for processing registration applications for new drug products, biologic products, generic (non-scheduled poison) products, generic (scheduled) products, health supplements, natural products as well as veterinary products. Throughout 2021, a total of 1,732 new product registration applications were received and 1,491 products were registered (**Table 8.2**). These newly registered products comprise 60.33 per cent local products and 39.67 per cent imported products. The cumulative number of registered products up to December 2021 is 24,399 products.

Table 8.2
Number of New Products Registered for The Year 2017 to 2021

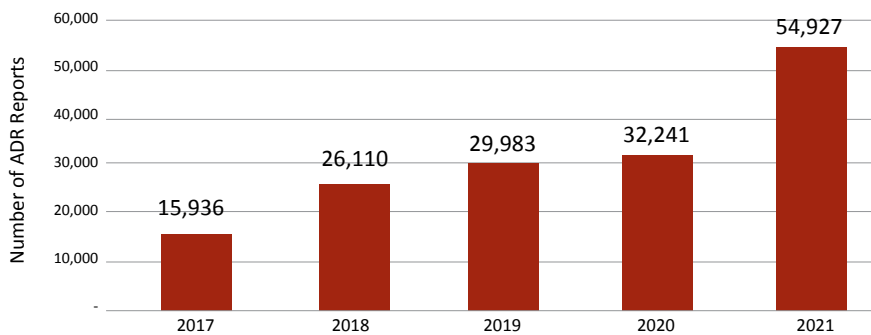
Product Category	2017	2018	2019	2020	2021
Prescription Products	325	354	187	277	292
Non-prescription Products	61	79	66	70	63
Natural Products	651	738	679	734	627
Health Supplements	242	322	315	424	438
Veterinary Products	68	73	77	69	71
Total	1,347	1,566	1,324	1,574	1,491

Source: National Pharmaceutical Regulatory Agency (NPRA)

POST PRODUCT REGISTRATION

NPRA continuously monitors registered products in the local market to ensure that the products adhere to quality, safety, efficacy and requirements. In 2021, the National Adverse Drug Reactions (ADR) Monitoring Programme received 54,927 reports, an increase of 41.3 per cent compared to the previous year (**Figure 8.7**). The increase in reporting is due to the adverse events following immunisation (AEFI) reporting for COVID-19 vaccines, in line with the launch of the PICK in 2021. From the final total, 24,042 reports consist of AEFI reports of COVID-19 vaccines.

Figure 8.7
Number of ADR Reports Received for The Year 2017 to 2021



Source: National Pharmaceutical Regulatory Agency (NPRA)

NEW VACCINE REGISTRATION FOR COVID-19

In supporting the government's aim to vaccinate as many of Malaysia's population as soon as possible, and in line with the launch of the PICK, the Drug Control Authority (DCA) has granted approval for conditional registration based on evaluation by NPRA for 13 COVID-19 vaccines as listed below:

Table 8.3
List of COVID-19 Vaccines Approved by DCA for Conditional Registration in 2021

No	Name of Vaccine and MAL No.	Product Registration Holder	Manufacturer
1.	COMIRNATY Concentrate for Dispersion for Injection (MAL21016022AZ)	Pfizer (Malaysia) Sdn. Bhd	Pfizer Manufacturing Belgium NV, Belgium
2.	COMIRNATY Concentrate for Dispersion for Injection (MAL21036039ASZ)	Pfizer (Malaysia) Sdn. Bhd	BioNTech Manufacturing GmbH, Germany
3.	COVID-19 Vaccine AstraZeneca Solution for Injection (MAL21036009ACZ)	AstraZeneca Sdn. Bhd.	AstraZeneca Nijmegen B.V., Netherlands
4.	COVID-19 Vaccine AstraZeneca Solution for Injection (MAL21066001ACSZ)	AstraZeneca Sdn. Bhd	Siam Bioscience Co., Ltd., Thailand
5.	COVID-19 Vaccine AstraZeneca Solution for Injection (The product approved by EMA is supplied under the commercial name: Vaxzevria) (MAL21046001AZ)	COVAX-MOH (from COVAX Facility)	<ol style="list-style-type: none"> 1. SK Bioscience Co. Ltd, South Korea 2. Catalent Anagni S.R.L, Italy 3. CP Pharmaceuticals Ltd, United Kingdom 4. IDT Biologika GmbH, Germany 5. Seqirus Pty Ltd, Australia 6. Daiichi Sankyo Biotech Co., LTD., Kitamoto Site, Japan 7. KM Biologics Co. Ltd. Koshi Production Center, Japan 8. AstraZeneca Nijmegen B.V., Netherlands 9. Amylin Ohio LLC (AZ), United States 10. Universal Farma, S.L. ("Chemo"), Spain (for AstraZeneca AB Sweden)
6.	COVID-19 Vaccine AstraZeneca Solution for Injection (MAL21116002ASZ)	AstraZeneca Sdn. Bhd	SK Bioscience Co. Ltd, South Korea

No	Name of Vaccine and MAL No.	Product Registration Holder	Manufacturer
7.	CoronaVac Suspension for Injection SARS-CoV-2 Vaccine (Vero Cell), Inactivated (MAL21036010ARZ)	Pharmaniaga LifeScience Sdn. Bhd.	Sinovac Life Sciences Co. Ltd., China
8.	CoronaVac Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL21046125ACSZ)	Pharmaniaga LifeScience Sdn. Bhd.	Pharmaniaga LifeScience Sdn. Bhd
9.	Convidecia™ Recombinant Novel Coronavirus Vaccine (Adenovirus Type 5 Vector) (MAL21066050AZ)	Solution Biologics Sdn. Bhd.	CanSino Biologics Inc, China
10.	Janssen Covid-19 Vaccine Suspension for Injection (MAL21076097ACZ)	Johnson & Johnson Sdn. Bhd	Janssen Pharmaceutica N.V., Belgium
11.	COVILO Suspension for Injection COVID-19 Vaccine (Vero Cell), Inactivated (MAL21076098AZ)	Duopharma (M) Sdn. Bhd	Beijing Institute of Biological Products Co., Ltd. (BIBP), China
12.	Spikevax 0.20 mg/mL dispersion for injection COVID-19 mRNA Vaccine (nucleoside modified) (MAL21086001ACZ)	Zuelig Pharma Sdn Bhd	Rovi Pharma Industrial Services, S.A. San Sebastian de Los Reyes, Spain
13.	COVID-19 Vaccine Janssen Suspension for Injection (MAL21066049AZ)	COVAX-MOH (COVAX Facility)	<ol style="list-style-type: none"> 1. Janssen Biologics B.V. Netherlands 2. Janssen Pharmaceutica NV Belgium 3. Aspen SA Sterile Operations, South Africa 4. Catalent Indiana LLC, USA 5. Grand River Aseptic Manufacturing Inc, USA 6. Catalent Anagni S.R.L., Italy 7. Merck Sharp & Dohme (MSD) Corp., United States <p>(for Janssen-Cilag International NV, Belgium)</p>

Source: National Pharmaceutical Regulatory Agency (NPRA)

COVID-19 VACCINE SAFETY AND QUALITY MONITORING

NPRA monitors the safety risks of all registered vaccines used in Malaysia including COVID-19 vaccines through the monitoring of AEFI reports. Reports or responses received are 'spontaneous' reports through passive monitoring. AEFI reports or responses are received directly by NPRA through the existing ADR or AEFI reporting system (PhIS, QUEST3+) and MySejahtera application (self-response). There are five (5) types of COVID-19 vaccines currently being used in Malaysia for the PICK which include Comirnaty (Pfizer), CoronaVac (Sinovac), AstraZeneca, Convidecia (CanSino) and Covilo (Sinopharm). AEFI reporting covers all five (5) vaccines.

Table 8.4
AEFI Data for PICK as of 31 December 2021

	Comirnaty (Pfizer)	CoronaVac (Sinovac)	AstraZeneca	Convidecia (CanSino)	Covilo (Sinopharm)	Cumulative
Total doses administered	32,120,991	20,608,643	4,157,338	199,676	33,129	57,119,777
RESPONSES VIA MySEJAHTERA APPLICATION:						
Total responses	400,752	186,961	386,342	13	66	974,134
Total adverse effects (31/12/2021)	1,134,066	472,042	1,871,387	37	243	3,477,775
Response rate per 1,000 doses	12.5	9.1	92.9	0.1	2.0	17.1
REPORTING VIA EXISTING SYSTEM:						
Total reports	17,954	4,887	1,155	45	1	24,042
Reporting rate per 1,000 doses	0.56	0.24	0.28	0.23	0.03	0.42
Non-serious AEFI reports	16,979	4,347	1,021	42	1	22,390
Serious AEFI reports	975	540	134	3	0	1,652
Serious AEFI /Total AEFI reports (%)	5.4	11.0	11.6	6.7	0	6.9
Serious report rate per 1,000 dos	0.03	0.03	0.03	0.02	0.00	0.03

Source: National Pharmaceutical Regulatory Agency (NPRA)

THE NPRA'S PREPAREDNESS AND TIMELY RESPONSE TO THE COVID-19 PANDEMIC

With the worsening of the COVID-19 situation, there was an urgent need for immediate access to COVID-19 vaccines. Measures were taken by NPRA to expedite the registration process in support of the PICK. The JKJAV co-chaired by the MOH and the Minister of Science, Technology and Innovation (MOSTI) was established on 14 October 2020 to ensure access to COVID-19 vaccines for the country can be obtained timely without compromising its quality, safety and efficacy. The COVID-19 Vaccine Registration Task Force headed by the Director of NPRA was tasked to identify mechanisms to expedite access to COVID-19 vaccines. The following are the measures taken by NPRA:

a. Conditional Registration Pathways by NPRA to expedite access to COVID-19 Vaccines during pandemic via the following mechanisms:

i. Conditional Fast Track Registration Pathway for Pharmaceuticals during Disaster

At the end of 2020, NPRA issued a directive on the fast-track conditional registration for pharmaceutical products during the disaster. This was to expedite the review of COVID-19 vaccines.

ii. Conditional Registration as Recognition based on World Health Organization (WHO) Emergency Use Listing (EUL) for COVID-19 Vaccines under COVAX facility

Implemented on all COVID-19 vaccines already granted WHO EUL based on specified criteria. A recognition procedure is recommended to facilitate immediate access to vaccines procured under COVAX based on the current situation where the application for registration is not submitted through a Product Registration Holder (PRH), without compromising the quality, safety and efficacy of the vaccines.

iii. Conditional Registration for Pharmaceutical Products During Disaster as Recognition

Taking into account the increasing number of COVID-19 vaccines granted Emergency Use Authorization (EUA) and conditional approval by the WHO and DCA's reference countries, the recognition procedure will expedite the registration process by using a risk-based approach without compromising the quality, safety and efficacy of vaccines by benefiting from the evaluation already performed by WHO or Stringent Regulatory Authorities (SRAs).

Additionally, facilitation was also implemented by NPRA to allow the importation of several registered vaccine sources into Malaysia:

- Vaccine donations from the governments of the United States of America, Japan, China, United Kingdom, Singapore and United Arab Emirates (UAE); and
- Acceptance of COVID-19 vaccines via diplomatic channels for use by employees of foreign embassies in Malaysia.

b. COVID-19 Clinical Trials

DCA at its 367th meeting on 13 December 2021 has agreed to accept applications for

Clinical Trial Exemption (CTX) to manufacture unregistered products for clinical trial purposes for COVID-19 vaccines manufactured locally and developed through R&D in Malaysia, which also involve First-in-Human (FIH) trials. CTX applications for the above will be accepted by NPRA from 1 January 2022 based on existing procedures.

c. Lot Release Activity

The DCA agreed to exempt the requirement to conduct physical testing for Lot Release on all imported COVID-19 vaccines which are being used during the pandemic. Subsequently, the Lot Release activity conducted on all imported registered COVID-19 vaccines will include the following:

- Lot summary protocol evaluation; and
- Cold chain inspection at warehouse or health facility which received the vaccines directly from the manufacturer.

Image 8.3

Lot Release Cold Chain Inspection by NPRA Officers at a Health Facility



Source: National Pharmaceutical Regulatory Agency (NPRA)

d. Supply chain and logistical management of COVID-19 vaccines

With the development of relevant vaccines (which are categorized as Time and Temperature Sensitive Product-TTSP) that require different storage and handling conditions, the challenge encountered at every point of the supply chain is greatly amplified, especially with the introduction of ultra-low temperature storage and distribution systems.

To ease the distribution process, the COVID-19 vaccine distribution model was developed following the mutual agreement of the pharmaceutical company/importer/supplier.

There are two (2) types of vaccine distribution models:

- Direct delivery to health facilities from manufacturers through shipping companies appointed by the PRH; and

- Delivery through a local distributor warehouse appointed by the pharmaceutical company or the Government of Malaysia.

e. Vaccine Safety Monitoring

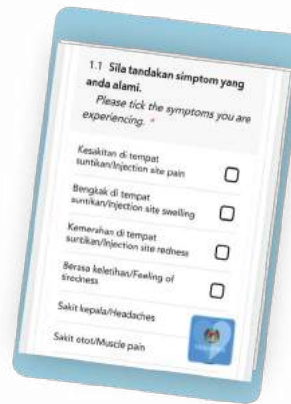
The national strategy for the pharmacovigilance of the COVID-19 vaccine are is as follows:

- **Pre-registration:** The PRHs are required to provide safety-related documents including the company’s Pharmacovigilance System Summary (PVSS) and the Risk Management Plan (RMP) with a Malaysian Specific Annex (MSA) to mitigate any identified and potential risks of the vaccines.
- **Post-registration:** Safety monitoring and the management of AEFI for COVID-19 vaccines for the country is mainly anchored on the current ADR monitoring system. Vaccine recipients may also self-report mild to moderate adverse events in their MySejahtera application which enables NPRA to monitor the incidence and trends of documented adverse events among vaccine recipients.
- Apart from passive surveillance by NPRA, the Institute of Clinical Research (ICR) also conducts active surveillance of selected Adverse Events of Special Interest (AESI) as a research project.

Figure 8.8
Adverse Drug Reaction/Adverse Events Following Immunisation Reporting Tools



Access to NPRA Website: npra.gov.my / mycovid.aefi@npra.gov.my



MySejahtera

Source: National Pharmaceutical Regulatory Agency (NPRA)

f. Dissemination of information on COVID-19 vaccines

In the age of misleading information in digital and physical environments during disease outbreaks, NPRA played a role in highlighting the correct facts on COVID-19 vaccines to assure the public of their quality, safety and efficacy. Many NPRA officers participated in public engagement with various media outlets to address infodemics.

Image 8.4

Dissemination of Information Related to Covid-19 by NPRA Officers through Various Media



Source: National Pharmaceutical Regulatory Agency (NPRA)

GOOD REGULATORY PRACTICE AWARD FROM MALAYSIAN PRODUCTIVITY CORPORATION (MPC)

In conjunction with the 2021 National Conference on Good Regulatory Practice} the MOH was honoured with three (3) awards namely the Ministry Actively Implementing GRP, the Active Regulator Award/Unified Public Consultation (UPC) and the GRP Figure Ministry-Level. NPRA was awarded with the Active Regulator Award/Unified Public Consultation for NPRA’s commitment and active participation in implementing GRP initiatives through the use of UPC as a vehicle for stakeholder engagement. Since its inception in 2020, NPRA has conducted 13 online public consultations on new guidelines and policies via the UPC medium. The implementation of UPC is vital to allow stakeholders’ views to be heard and promotes accountability, transparency and inclusiveness.

Image 8.5

NPRA Was Awarded the Active Regulator Award/UPC at the 2021 National Conference on Good Regulatory Practices



Source: National Pharmaceutical Regulatory Agency (NPRA)

ENFORCEMENT ACTION AGAINST UNREGISTERED IVERMECTIN PRODUCTS

The sudden increase in the online sale of Ivermectin pills is a challenge that needs to be addressed immediately as many people believe that Ivermectin can prevent deaths and serious side effects of the COVID-19 infection. Based on the high number of complaints regarding the sale of Ivermectin pills received by the Pharmacy Enforcement Division, integrated inspections and raids were conducted on the sale of unregistered Ivermectin pills nationwide. A total of 49 raids were carried out against sellers and premises found to be unlawfully selling unregistered Ivermectin products in 2021. More than 22,000 Ivermectin pills of various brands with a value of RM160,000 were seized. All cases will be investigated under Regulation 7(1)(a), Control of Drugs and Cosmetics Regulations 1984, and if found guilty, the individual can be punished with a fine up to RM25,000 or a jail sentence not exceeding 3 years or both.

Image 8.6
Ivermectin Pills that were Seized



Source: Pharmacy Enforcement Division, MOH

ENHANCING PARTNERSHIP AND COLLABORATION IN HEALTHCARE

OPERATION PANGEA XIV

Operation Pangea XIV which started from 18 to 25 May 2021 is Malaysia's 9th participation since Operation Pangea began. This Pangea XIV operation focuses on websites and social media selling illegal and illicit medications including medical devices. This year, the focus was on the sale of medicines and medical devices that were misused for COVID-19 treatment. A total of 2,600 websites were detected selling pharmaceutical products that violated the enforced law were monitored, investigated and taken action.

In addition, a total of 972 postal parcels were inspected. Out of the total, 157 postal parcels found to contain 9,115 units of unregistered pharmaceutical products were confiscated and valued at RM108,352. In comparison to 2020, over 60 per cent of the products seized this year were medicines controlled under the Poisons Act 1952. 18 percent of the controlled medicines

seized were psychotropic substances. Inspections were also carried out at all international entry points across the country involving air cargo, airports, border checkpoints and ferry terminals. A total of 961 units of unregistered medicines valued at RM42,213 were confiscated. During this operation, 94 business premises selling unregistered pharmaceutical products including premises distributing unregistered psychotropic substances were raided. 61,864 units of illegal pharmaceutical products were seized for investigation and valued at RM2,071,855. A total of 206 consumer awareness campaigns to the public on the potential dangers of buying medicines online were also conducted during the operation.

Image 8.7
Operation Pangea XIV



Source: Pharmacy Enforcement Division, MOH

9 FOOD SAFETY AND QUALITY



POLICY, STRATEGIC PLANNING AND STANDARD CODEX DIVISION

THE 15TH MEETING OF NATIONAL FOOD SAFETY AND NUTRITION COUNCIL (NFSNC)

The National Food Safety and Nutrition Council (NFSNC) is the country's principal advisory body dealing with all matters related to food safety and nutrition. The council is chaired by the Minister of Health and comprises members from various Ministries and agencies, food industry associations, consumers associations as well as professional bodies and academia. The NFSNC has been working in close collaboration with various stakeholders in the country's effort to ensure the people receive safe, wholesome and nutritious food. The 15th NFSNC Meeting was held on 27 April 2021. The list of presentation from various agencies as in **Table 9.1**.

Table 9.1
List of presentation during the 15th NFSNC

Title	Agency
Issue of Pesticide Abuse in Vegetables and Fruits in the Malaysian Market for Food Safety and Security	FSQP, MOH
Strategic Plan to Reduce Sugar Intake Among Malaysians (2021-2025)	Nutrition Division, MOH
Implementation of Holistic Framework of Food Safety Assurance for Home-based Food	FSQP, MOH
Malaysian National Nutrition Policy 2.0	Nutrition Division, MOH
Improvement of the Code of Good Practice at Palm Oil Mills or Code of Good Milling Practice for Palm Oil Mills for the purpose of Monitoring and Enforcement at Palm Oil Mills	Malaysian Palm Oil Board, MPIC
Stable Isotopes Techniques to confirm the authenticity and geographical origin for the safety of food products	Malaysian Nuclear Agency, MOSTI

Source: Food Safety and Quality Programme, MOH

Image 9.1
The 15th NFSNC Meeting chaired by Minister of Health on 27 April 2021



Source: Food Safety and Quality Programme, MOH

GO LIVE OF FOOD SAFETY INFORMATION SYSTEM OF MALAYSIA (FoSIM)

The Food Safety Information System of Malaysia (FoSIM) is developed under FSQP, Ministry of Health (MOH) by MIMOS Berhad, providing a single gateway towards a centralised system, which can be accessed through web portals and mobile applications. FoSIM is a one-stop web-based system that caters various user groups namely public, food importers, exporters, food handlers. It is an on-line database system for all services provided by the programme and has started to Go Live on 1 March 2021.

Image 9.2
Food Safety System of Malaysia (FoSIM) Portal



Source: Policy and Development Branch, FSQP, MOH

Image 9.3
Handover of ICT Equipment to the State Health Department on 26 February 2021



Source: Food Safety and Quality Programme, MOH

MALAYSIA AS THE HOST COUNTRY FOR 27TH SESSION OF CODEX COMMITTEE ON FATS AND OILS (CCFO)

Malaysia has been the host government, chairman and secretariat of the Codex Committee on Fats and Oils (CCFO) since 2007. FSQP has successfully chaired the 27th Session of Codex Committee on Fats and Oils (CCFO27) virtually on 18 to 26 October 2021. The Meeting was co-hosted by the Codex Secretariat in Rome, Italy and participated by approximately 400 delegates from 67 Members countries/organisations and 10 international observers. The meeting was officiated by the Minister of Health and chaired by Director of Compliance and Industrial Development of FSQP.

Image 9.4

27th Session of Codex Committee on Fats and Oils (CCFO27)



Source: Food Safety and Quality Programme, MOH

This session has successfully finalised the amendment to the standard for sunflower seed oil and made progress on a few more agenda. Also, few new work proposals were agreed, i.e new standard for sacha inchi oil, camellia seed oil, calanus oil and high oleic soybean oil, indicating more works for CCFO in the coming years.

20TH ASEAN TASK FORCE ON CODEX (ATFC) MEETING

FSQP hosted the 20th ATFC Meeting that was convened via video conference on 2 to 3 September 2021. ATFC is a forum to discuss and formulate ASEAN positions on Codex issues that are important to ASEAN. The meeting agreed on positions, including a proposal from Malaysia to support on Draft Procedural Guidance for Committees Working by Correspondence under Codex Committee on General Principles for adoption at the 44th Codex Alimentarius Commission.

Image 9.5
The 20th ATFC Meeting



Source: Food Safety and Quality Programme, MOH

THE BEST FSQD RECOGNITION AWARD YEAR 2020

In 2021, FSQP introduced the recognition award for the Best Food Safety and Quality Division (FSQD) at the state level to recognise their achievement in the year 2020. The evaluation for the recognition was based on the achievement of the action plan, KPIs, client charter, innovation participation and financial management.

Image 9.6
The Best FSQD Recognition Award Year 2020



Winner PSQD Pahang

First Runner Up FSQD Melaka

Second Runner Up FSQD Johor

Source: Food Safety and Quality Programme, MOH

INNOVATION COMPETITION 2021

Food Safety and Quality Program Innovation Competition 2021 was virtually held on 13 July 2021 and received nine (9) participations from various State Health Departments, District Health Offices and the Food Safety and Quality Laboratory.

Image 9.7
FSQP Innovation Competition 2021



Source: Food Safety and Quality Programme, MOH

NATIONAL CLEAN AND SAFE MARKET AWARDS PROGRAMME 2020/2021

A Clean and Safe Market Awards Programme 2020/2021 was virtually held in conjunction with the World Food Safety Day 2020 with the theme **Safe Food in Markets** and was officiated by the Minister of Health on 24 November 2021.

Image 9.8
National Clean and Safe Market Awards Programme 2020/2021



Source: Food Safety and Quality Programme, MOH

WORLD FOOD SAFETY DAY 2021

The United Nation has announced 6th June as the World Food Safety Day starting in the year 2019. The theme of World Food Safety Day 2021 was “Safe Food Now for a Healthy Tomorrow”. FSQP has produced 20 infographics related to food safety information in conjunction with World Food Safety Day 2021.

Image 9.9
 Infographics Related to the Celebration of World Food Safety Day 2021

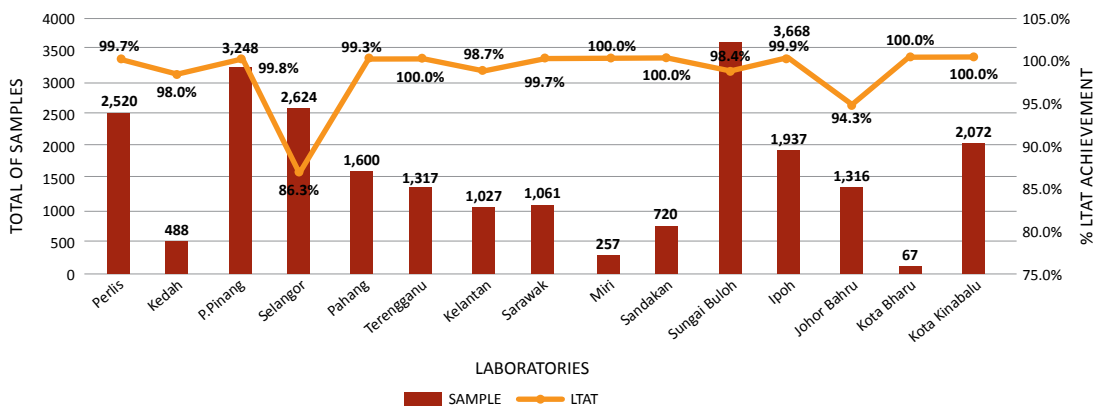


Source: Food Safety and Quality Programme, MOH

FOOD LABORATORIES ANALYSIS SERVICE

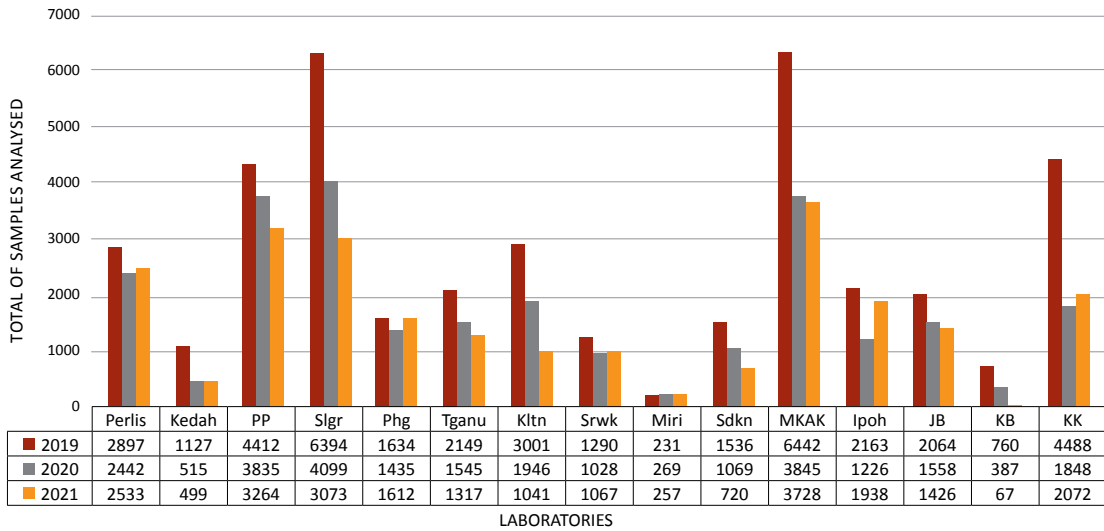
FSQP laboratories have been receiving samples from State Health Departments, Entry Points and District Health Offices for monitoring and enforcement activity. To ensure the credibility of laboratory services, the results of the analysis generated by the laboratories need to be issued within the prescribed laboratory turn-around-time (LTAT). Total samples received and its LTAT achievement by state as in **Figure 9.1**.

Figure 9.1
 Total of Samples Analysed and LTAT Achievement for the Year 2021



Source: Food Safety and Quality Programme, MOH

Figure 9.2
Comparison on Total of Samples Analysed for the Year 2019 to 2021

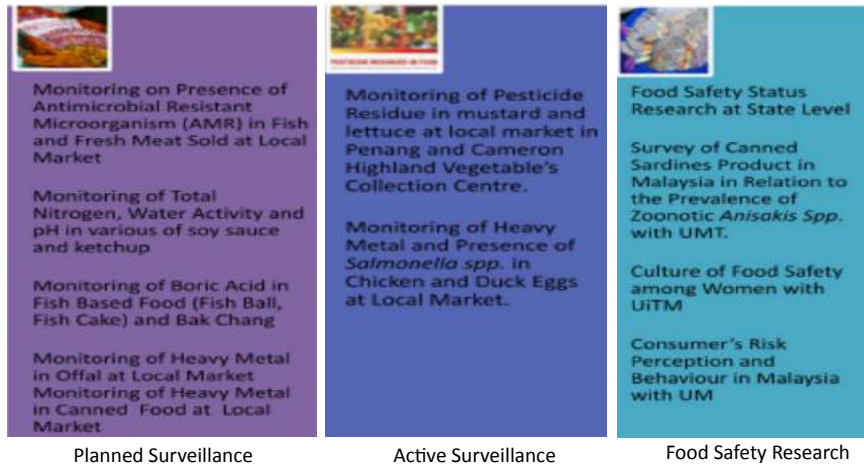


Source: Food Safety and Quality Programme, MOH

FOOD SAFETY SURVEILLANCE AND RESEARCH

The list of surveillance activities and food safety research for the year 2021 is shown in **Figure 9.3**.

Figure 9.3
List of Food Safety Conducted in the Year 2021



Source: Food Safety and Quality Programme, MOH

Food Safety Campaign on Social Media

The Food Safety Campaign utilised social media platforms aiming at increasing the level of consumer knowledge and disseminating information related to food safety in an interactive and engaging manner. In 2021, FSQP has broadcasted two (2) short drama videos, six (6) specific videos and two (2) doodles videos.

Image 9.10
Food Safety Short Drama Video on Social Media



Santau Nasi Lemak
10 weeks ago · 120.1K views

Kecuaian Membawa Padah
11 weeks ago · 113.4K views

Source: Food Safety and Quality Programme, MOH

Image 9.11
Specific Video on FSQD Services



Source: Food Safety and Quality Programme, MOH

COVID-19 EDUCATIONAL MATERIAL

During the pandemic, FSQP has produced numbers of infographics and guidelines on food safety related to COVID-19 issues for public awareness.

Image 9.12
Infographics on COVID-19 and Foods



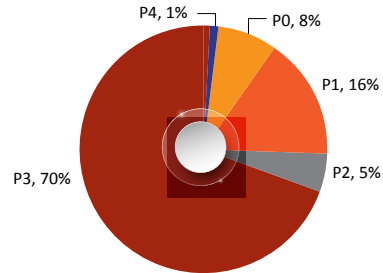
Source: Food Safety and Quality Programme, MOH

COMPLIANCE AND INDUSTRIAL DEVELOPMENT DIVISION

FOOD PREMISE REGISTRATION

All food premises shall be registered with the MOH as required under Food Hygiene Regulations 2009. In 2021, a total of 10,642 food premises were registered i.e. 1,742 food factories (P1), 495 food catering services (P2), 7,482 food outlet premises (P3), 86 vehicles selling food (P4) and 837 other food premises (P0).

Figure 9.4 Registration of Food Premises

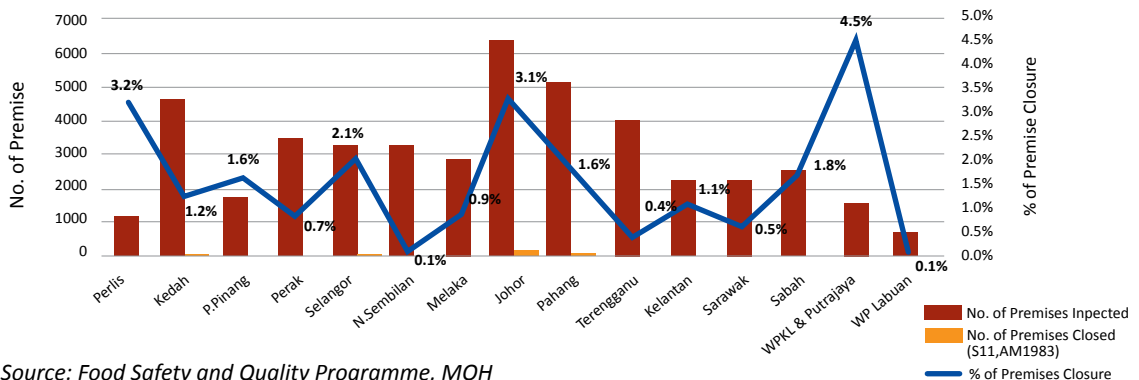


Source: Food Safety and Quality Programme, MOH

FOOD PREMISE INSPECTION

Food premise inspection was conducted to ensure the cleanliness of the premises are complied with the Food Act 1983 and Food Hygiene Regulations 2009. In 2021, a total of 45,361 food premises were inspected, with 697 (1.5 per cent) of premises were instructed to temporarily close under Section 11, Food Act 1983 due to hygiene issues. **Figure 9.5** shows inspection and closure of food premises by state in 2021.

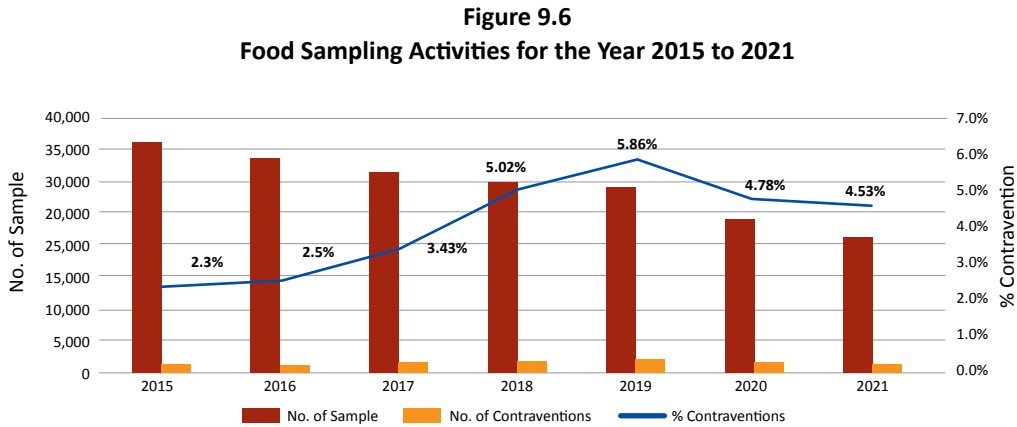
Figure 9.5
Inspection and Closure of Food Premises by State for the Year 2021



Source: Food Safety and Quality Programme, MOH

FOOD SAMPLING

Food sampling was conducted to ensure that food prepared or sold in Malaysia markets comply to the requirements of Food Act 1983 and Food Regulations 1985. In 2021, a total of 20,993 food samples were taken, of which 950 samples (4.5 per cent) were found contravened under the Food Act 1983 and Food Regulations 1985. Food contravention trend for 2021 compared to 2020 shown in **Figure 9.6**.



Source: Food Safety and Quality Programme, MOH

SPECIAL OPERATION

In 2021, FSQP had organised four (4) special operations as a proactive measure to address food safety issues namely Ops Water Vending Machine (MJA), Ops *Caras Hijau*, Ops Chinese New Year and Ops Ramadhan.

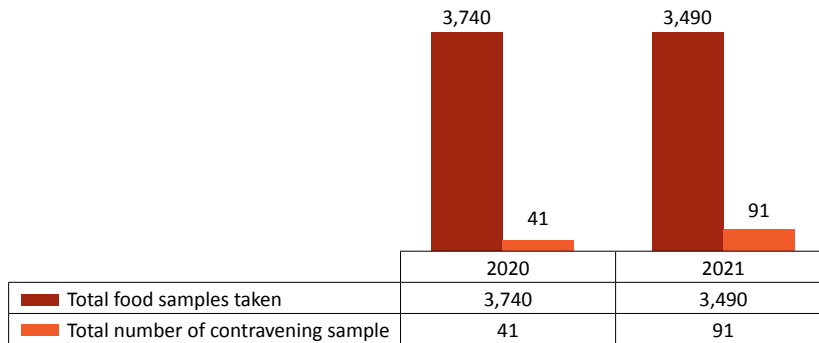


Source: Food Safety and Quality Programme, MOH

FOOD IMPORT CONTROL

Food import control activities were implemented through 56 entry points throughout Malaysia. A total of 336,545 food consignments were imported into Malaysia in 2021 compared to 219,053 food consignments in 2020. From the total, 144,672 (43 per cent) consignments were inspected and 3,490 (2.4 per cent) consignments were sampled for analysis of various types of parameters. Sampling activities and contravening samples in 2021 shown in **Figure 9.7**.

Figure 9.7
Samples contravening Food Regulations for the Year 2020 to 2021



Source: Food Safety and Quality Programme, MOH

FOOD EXPORT CONTROL

The food export monitoring programme is one of the activities under the official control of the FSQP, MOH. It is developed based on specific commodities and importing country requirements as shown in **Image 9.14**.

Image 9.14
Sampling for Export Monitoring Programme for the Year 2021



Source: Food Safety and Quality Programme, MOH

FOREIGN VERIFICATION AUDIT

Despite the COVID-19 pandemic, the food export control activities were still carried out accordingly. In 2021, China has carried out several foreign verification audits remotely through video inspection on the export establishments in Malaysia to ensure the compliance with the requirements for food safety and prevention of COVID-19.

Image 9.15
Video Inspection by General Administration Customs China (GACC)

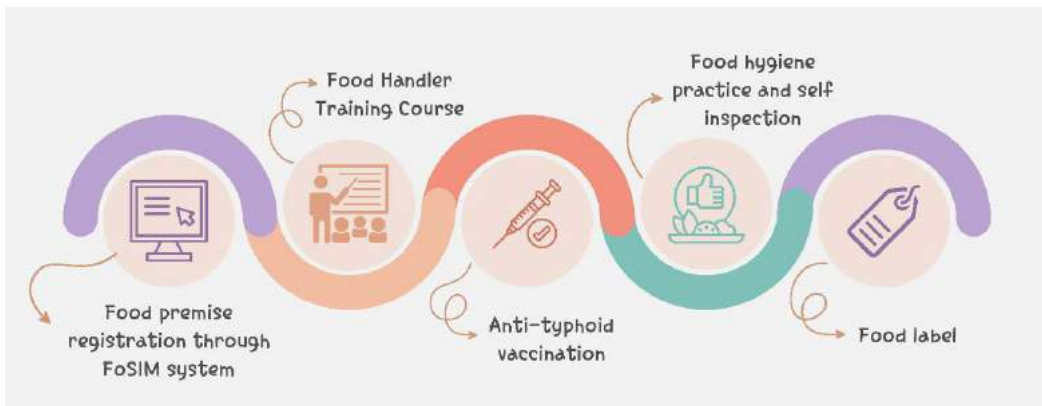


Source: Food Safety and Quality Programme, MOH

FOOD SAFETY CONTROLS FOR HOME-BASED FOOD

FSQP has initiated a programme specifically for home-based food operators to formalise the activity as well as the food safety control measures. On 1 April 2021, Home-Based Food Listing programme with basic requirements was launched.

Figure 9.8
Basic Requirements for Home-Based Food Listing Programme



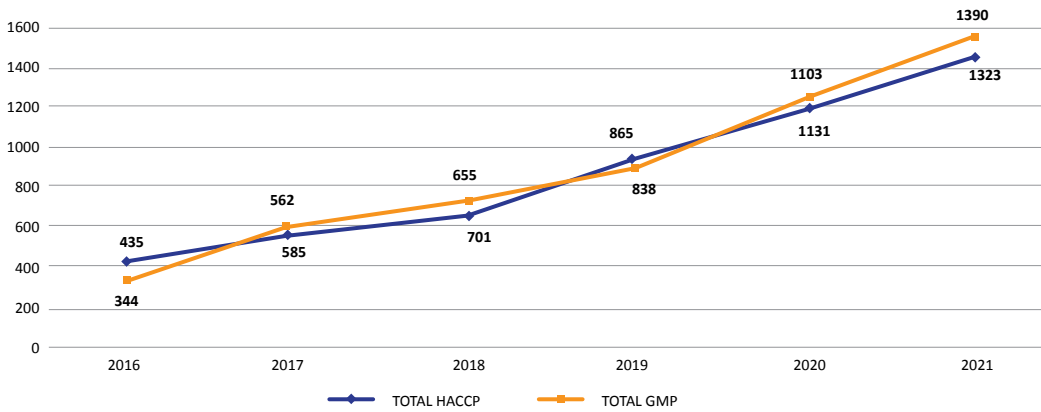
Source: Food Safety and Quality Programme, MOH

In 2021, a series of webinars, Facebook Live, seminars, talks, exhibitions as well as television and radio broadcasts related to home-based food listing promotion have been carried out. As of 31 December 2021, from 2,006 registered home-based food premises, 84 were successfully listed under this programme.

CERTIFICATION OF FOOD SAFETY SYSTEM

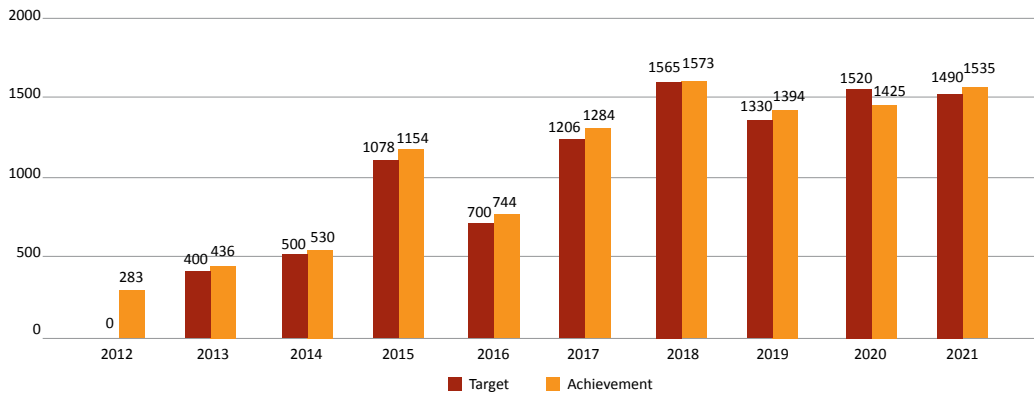
In 2021, the trend and achievements for the certification of food safety systems as in **Figure 9.9** to **Figure 9.11**.

Figure 9.9
Cumulative of HACCP and GMP certificate holders for the Year 2016 to 2021



Source: Food Safety and Quality Programme, MOH

Figure 9.10
MeSTI certificate holders for the Year 2012 to 2021



Source: Food Safety and Quality Programme, MOH

Figure 9.11
Cumulative of BeSS Recognition for the Year 2013 to 2021

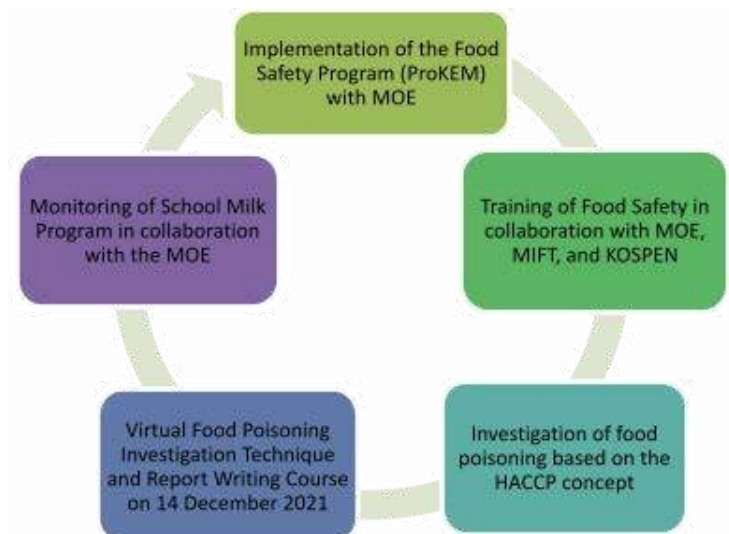


Source: Food Safety and Quality Programme, MOH

FOOD POISONING PREVENTION ACTIVITIES

In 2021, collaboration programmes with various agencies for food poisoning activities are shown in **Figure 9.12**.

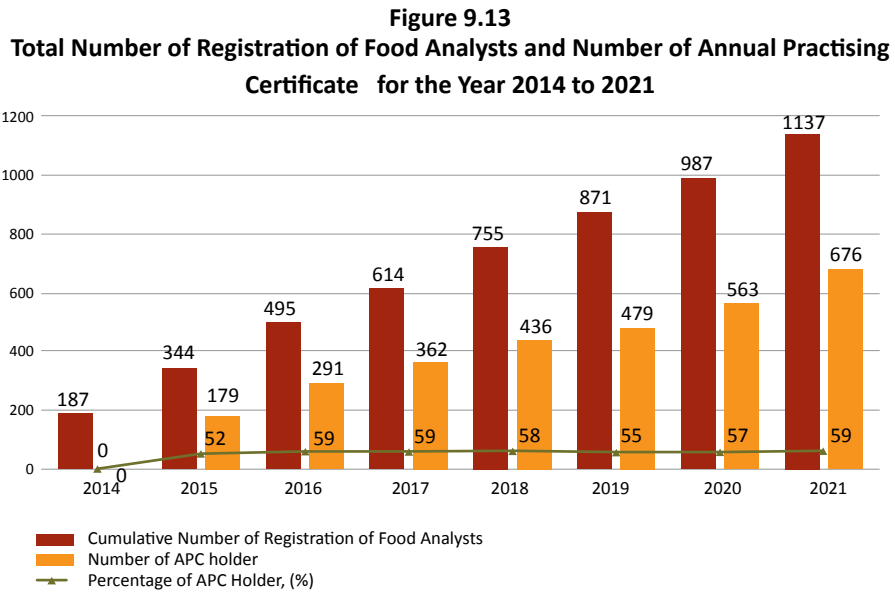
Figure 9.12
Food Poisoning Prevention Activities



Source: Food Safety and Quality Programme, MOH

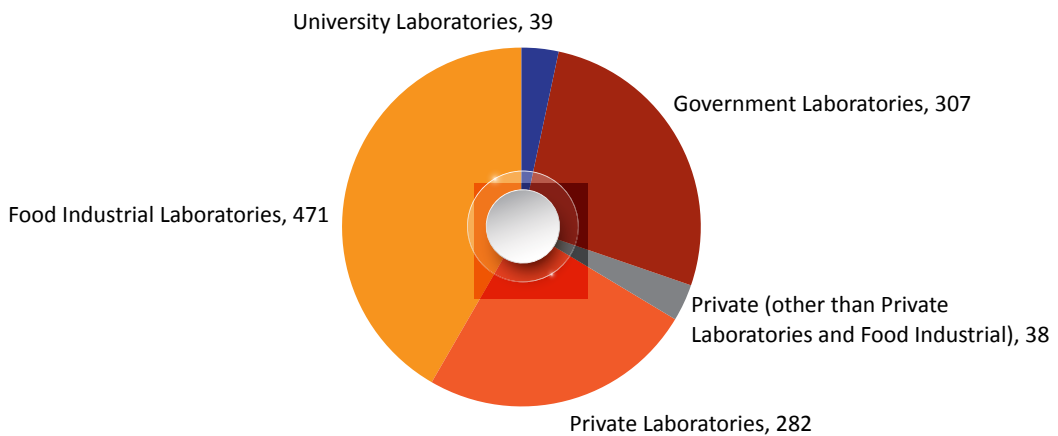
FOOD ANALYSTS REGISTRATION AND ANNUAL PRACTISING CERTIFICATION

In order to legally practice in Malaysia, food analysts are required to be registered with the Malaysian Food Analysts Council and to have a valid Annual Practising Certificate through Food Safety Information System of Malaysia (FoSIM). As of 31 December 2021, the cumulative number of food analysts registered under Food Analyst Act 2011 was 1,137 as shown in **Figure 9.13**.



Source: Malaysian Food Analysts Council

Figure 9.14
Total Number of Registration of Food Analysts by Sectors for the Year 2014 to 2021.



Source: Malaysian Food Analysts Council

10 MEDICAL DEVICE AUTHORITY



INTRODUCTION

Medical Device Authority (MDA) is a federal statutory agency under the Ministry of Health (MOH) 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 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 carry out post-market surveillance and vigilance, advertisements control and enforcement activities;
- ii. To implement, enforce, assess and propose improvements to medical device laws;
- iii. To supervise all medical device matters involving its industries and activities;
- iv. To encourage and promote medical device development, medical device industry and its activities including research and training;
- v. To provide consultation, advice and any other services involving medical device industry and its activities; and
- vi. To impose fees or any charges on the provision of its services.

ACTIVITIES AND ACHIEVEMENTS

MEDICAL DEVICE REGISTRATION & ESTABLISHMENT LICENSING

In 2021, MDA made a total of 4,880 new registrations of medical devices and 1,179 re-registrations of medical devices. **Table 10.1** shows the total number of medical device registration and re-registration according to medical device risk classification, throughout the year 2021.

Table 10.1
Total Number of Medical Device Registration and Re-registration by
Risk Classification for the Year 2021

Risk Class	Number Of Medical Device Registration	Number Of Medical Device Re-Registration
Class A	2,680	618
Class B	1,139	268
Class C	826	159
Class D	235	134
TOTAL	4,880	1,179

Source: Registration Unit, 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 a period of three (3) years and the establishment requires the renewal of the license before its expiry. The establishment is also required to notify MDA for any amendment to its license and any change of ownership of medical devices registered under its name. **Table 10.2** shows the establishment licensing activity, where a total of 659 new establishment licenses were issued, 957 establishment licenses were renewed and 284 licenses were amended. A total of 542 changes of medical device ownership have also been approved in 2021.

Table 10.2
Number of Establishment License Application Registered for the Year 2021

Type Of Application	Number Of Approval
New establishment license	659
Renewal of establishment license	957
Amendment of establishment license	284
Change of medical device ownership	542

Source: Licensing Unit, MDA

Conformity Assessment Body (CAB) is the body that is registered by MDA to assess and certify the conformity of the quality management system of an establishment and medical device to the regulatory requirements under the Act 737 and Medical Device Regulations 2012. The validity of CAB registration is valid for three (3) years and the CAB shall apply for re-registration to continue its conformity assessment activities. Apart from registration and re-registration, MDA also approves technical staff and conducts inspection activities to ensure CABs compliance with the regulatory requirements and conformity assessment activities in accordance with the regulations.

Table 10.3
Achievement of the Activities Related to CAB for the Year 2021

Type Of Application	Number Of Approvals
Registration of new CAB	5
Re-registration of CAB	8
Approved technical personnel of CAB	49
Inspection	13

Source: CAB Unit, MDA

POST-MARKET SURVEILLANCE AND VIGILANCE, ADVERTISEMENT CONTROL AND ENFORCEMENT

Post-market surveillance and vigilance, advertisement control and enforcement activities were carried out at the post market stage, when medical devices have been 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 carried out and their respective achievements are depicted in **Table 10.4**.

Table 10.4
Number of Post Market Activities Conducted for the Year 2021

Activity	Number
Identification of incidents based on the assessment of complaints on safety and performance of medical device	369 incidents out of 724 complaints
Assessment of field correction action report	567
Investigation on complaints and incidences	14
Assessment of medical device recall	91
Awareness on post-market elements for establishments and CABs	20
Compliance inspection CAB (pre-registration, surveillance, witness audit)	14
Compliance inspection on establishment	85

Source: Post-Market Unit, MDA

Enforcement activities were normally initiated with the receipt of complaints and were followed up with inspection, issuance of warning letter, raid and seizure. The activities for enforcement are as shown in **Table 10.5**.

Table 10.5
Enforcement Activities Conducted in 2021

Activity	Number
Complaints received	355
Inspection and observation	166
Inspection (COVID-19 test kits)	61
Inspection (PANGEA XIV) with Pharmacy Enforcement	69
Issuance of warning letter	250
Raid and seizure	21
Taking down medical device link on e-commerce platform	17,189
Complaints completed	133

Source: Enforcement Unit, MDA

ISSUANCE OF THE RELEVANT CERTIFICATE/LETTER TO FACILITATE EXPORT OF MEDICAL DEVICES

MDA also plays a role in facilitating the export of medical devices by issuing the relevant certificates of free-sale (CFS), manufacturing certificates (MC) and notification letters as per requirements of the importing countries. **Table 10.6** shows the number of the certificates and notification letters issued by MDA to facilitate export of medical devices in 2021.

Table 10.6
Number of Certificates and Notification Letters Issued by MDA to Facilitate Medical Device Export for the Year 2021

Activity	Number
CFS application evaluation	678
CFS for Export-Only application evaluation	120
MC application evaluation	30
Issuance of notification letter for export-only	95
Issuance of notification letter for re-export	11

Source: Policy, Code and Standard Division, MDA

EXEMPTION NOTIFICATION, SPECIAL ACCESS, CONDITIONAL APPROVAL AND PRODUCT CLASSIFICATION

Some unregistered medical devices may be required for certain purposes such as research, education and special access in emergency situations or in the event that conventional medical treatment has failed, are unavailable or unsuitable. MDA allowed the importation and distribution of such medical devices by exempting them from registration via the notification process under the Medical Device (Exemption) Order 2016.

When COVID-19 was declared as pandemic, MDA has played its part in facilitating the importation and distribution of certain unregistered medical devices that are required to manage the pandemic, such as COVID-19 test kits, ventilators and facemasks. Two (2) guidance documents have been developed and two (2) technical committees have been established to provide a framework for the assessment and approval to import and distribute the unregistered medical devices. In addition, MDA has established the conditional approval route for COVID-19 self-test kits. This is to allow these self-test kits to be made available for the public to be able to do their own tests and reduce the workload of healthcare workers during the height of the pandemic. MDA evaluated the submission according to the framework and if the set criteria were met, a no restriction letter (COVID-19 test kits

for professional use) or conditional approval (for COVID-19 self-test kits) will be issued to import and distribute the unregistered medical devices. In addition, MDA has also obtained the assistance of six (6) accredited laboratories to conduct validation tests for COVID-19 test kits as a part of the assessment of the test kits.

Table 10.7
Issuance of No Restriction Letter for Special Access Medical Device, Conditional Approval for COVID-19 Self-Test Kits and Product Classification for the Year 2021

Activity	Number
Issuance of no restriction letter for special access medical device: active medical device (x-ray machine, ventilator, patient monitor, SpO ₂ , reverse osmosis water system)	14
Issuance of no restriction letter for special access medical device: COVID-19 IVD test kit (for professional use)	103
Issuance of no restriction letter for special access medical device: others	77
Issuance of conditional approval for COVID-19 self-test kit	115
Issuance of product classification letter	411

Source: Technical Evaluation Division and Registration Unit, MDA

MEDIA AND PUBLIC RELATIONS

MDA has been increasingly visible amongst the public especially during COVID-19 pandemic and MDA received many inquiries, complaints and inaccurate news since then. MDA needs to manage various communication needs and strategies, which include media communications, to handle the situation and to maintain its reputation amongst the public and any other parties. In 2021, MDA managed to have engagements with the media via interview sessions, awareness commercials and news coverage on MDA activities by various radio and TV stations and newspapers. MDA has also been constantly updating its website and actively using current communication channels, namely Facebook, Instagram and YouTube to deliver information and respond to the public promptly and accurately on the issues relating to medical devices, as well as to educate and create awareness amongst the general public on the role of MDA in regulating medical devices. In 2021, MDA has appeared in seven (7) television and three (3) radio shows and 1,041 social media postings to educate and create public awareness.

11 DEVELOPMENT



INTRODUCTION

The Development Division is responsible for managing activities related to the management such as planning, implementing, controlling, monitoring and evaluating development programs and projects of MOH's health facilities implemented under the Malaysia Rolling Plan (RMK). The division were reorganized into three (3) main sections and supported by 12 units as follows:

1. Section of Project Management I:
 - i. Project 1 (North Region) Unit
 - ii. Project 2 (Central Region) Unit
 - iii. Project 3 (East Region) Unit
 - iv. Public, Private and Partnership Unit

2. Section of Project Management II:
 - i. Project 4 (South Region) Unit
 - ii. Project 5 (Sabah and Sarawak) Unit
 - iii. Budget RMK Unit
 - iv. Technical and Procurement Unit

3. Section of Resource Management:
 - i. Land Unit
 - ii. Finance and Administration Unit
 - iii. Coordination (Visits / Parliament) Unit
 - iv. Coordination (Meeting Secretariat) Unit

ACTIVITIES AND ACHIEVEMENTS

DEVELOPMENT EXPENDITURE IN 2021

In the 12th Malaysia Plan First Rolling Plan (RP1) Year 2021, MOH was granted with the development expenditure (DE) of RM4,717,819,000 for the implementation of 401 development projects of health facilities involving 167 new projects and 234 extension projects. During the time, MOH had received two (2) Notices of Restriction on Warrant Allocation consecutively on 3 June 2021 and 2 July 2021 for the overall total of RM350,000,000. It resulted in the actual allocation of DE approved for the year 2020 was RM4,367,819,000.

Table 11.1
The MOH's Development Expenditure in 2021

Project	Current Expenditure 2021 (RM)	Liability 2021 (RM)	Expenses 2021 (RM)	Liability + Expenses 2021 (RM)	%
BP 100 – TRAINING	10,300,000	0	10,280,192	10,280,192	99.81
102 - Upgrading Training Projects	-	-	-	-	-
105 - In Service Training	10,300,000	0	10,280,192	10,280,192	99.81
BP 200 – Public Health	340,916,366	234,588	339,996,215	340,230,803	99.80
201 - Public Health Service Rural Areas	119,400,000	234,588	119,149,873	119,384,461	99.99
202 - Water Supply and Environmental Health (BAKAS)	8,716,366	0	8,679,771	8,679,771	99.58
203 - Public Health Service City Areas	212,800,000	0	212,166,571	212,166,571	99.70
204 - Mobile Clinic	-	-	-	-	-
BP 300 – Health Facilities	2,531,661,303	704,970	2,563,729,007	2,564,433,977	101.29
BP 400 – Hospital	326,584,001	0	324,963,330	324,963,330	99.50
BP 500 – Research & Development (R&D)	15,900,000	0	15,835,079	15,835,079	99.59
BP 600 – Upgrading & Maintenance	150,000,000	246,481	149,144,568	149,391,049	99.59
BP 700 – Land Acquisition & Maintenance	16,175,000	0	16,156,784	16,156,784	99.89
BP 800 – Information & Technology (ICT)	33,280,000	0	33,256,298	33,256,298	99.93
BP 900 – Quarters Maintenance	107,802,017	11,526	107,721,832	107,733,358	99.94
BP 900 – Staffs Facilities	18,204,993	0	18,189,233	18,189,233	99.91
901 - Rural Areas Quarters	9,580,007	11,526	9,531,267	9,542,793	99.61
902 - City Areas Quarters	29,905,017	0	29,890,242	29,890,242	99.95
904 - State Health Office	50,112,000	0	50,111,090	50,111,090	100.00
BP1100 – Equipment And Vehicles	789,150,313	5,436,804	4,992,112,866	4,997,549,670	633.28
BP1200 – Public Private Partnership Project (PPP)	42,800,000	0	42,773,939	42,773,939	99.94
BP9000 – Health Tourism	3,250,000	0	3,250,000	3,250,000	100.00
Total	4,367,819,000	6,634,368	8,599,220,111	8,605,854,478	197.03

Source: Development Division, MOH

LAND MANAGEMENT AND MONITORING

The Development Division is also responsible to administer the management and acquisition of land and buildings following 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 34 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 in the year 2021.

Table 11.2
List of JKPPT Meeting in the Year 2021

Meetings	Date	Numbers of Papers
MJKPPT Bil. 1/2021	3 March 2021	6
MJKPPT Bil. 2/2021	20 April 2021	7
MJKPPT Bil. 3/2021	3 August 2021	5
MJKPPT Bil. 4/2021	21 September 2021	7
MJKPPT Bil. 5/2021	27 December 2021	9
Total		34

Source: Land Unit, Development Division, MOH

TRAINING DEVELOPMENT FOR ENHANCING THE OFFICERS' COMPETENCIES

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 2021 is as per **Table 11.3** below.

Table 11.3
List of Training Activities for Competency Development for The Year 2021

Activity	Date
Hybrid Session: Updating RP1 12 th MP Projects in MyProjek Monitoring System	26 February 2021
Hybrid Session: Updating MyProjek Monitoring System in collaboration with ICU, JPM	9 March 2021
Project Updating Workshop (via hybrid) in MyProjek Monitoring System	5 to 7 July 2021
Project Updating Workshop in MyProjek Monitoring System (via hybrid) in collaboration with JKN.	12 July 2021
Lab on Way Forward of Health Facility Development Projects under JKR Malaysia Supervision on JKR Malaysia at Hotel Everly, Putrajaya	20 October 2021
Project Updating Workshop in MyProjek Monitoring System at Anggerik Meeting Room, KKM.	27 to 29 October 2021

Source: Coordination Unit, Development Division, MOH

Image 11.1
Lab on Way Forward of Health Facility Development Projects under JKR Malaysia's Implementation at Hotel Everly, Putrajaya on 20 October 2021



Source: Coordination Unit, 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, Public Works Department (JKR) and the contractors involved. After the facility or building was completely built and all related processes were properly undertaken, the key will be awarded to the end-user, namely the State Health Department or health institutes. In 2021, total 12 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 in the Year 2021

Projects Completed and Delivered	Date
Health Clinic (Type 7) With Kuala Tekal Quarters, Temerloh, Pahang	16 June 2021
Health Clinic (Type 3) With Rantau Panjang Quarters, Pasir Mas, Kelantan	17 July 2021
Health Clinic (Type 7) With Limau Kasturi Quarters, Gua Musang, Kelantan	15 August 2021
Health Clinic (Type 7) With Star Quarters, Gua Musang, Kelantan	15 August 2021
Health Clinic (Type 3) With Ulu Tiram Quarters, Johor	24 August 2021
Health Clinic (Type 3) With Kg Quarters, Kenangan, Muar, Johor	3 October 2021
Health Clinic (Type 2) Bandar Perda, Seberang Prai Tengah, Pulau Pinang	16 October 2021
Health Clinic (Type 3) With Miner's Quarters, Kota Bharu, Kelantan	6 November 2021
Health Clinic (Type 7) With Bahagia Quarters, Kuala Krai, Kelantan	6 November 2021
Health Clinic (Type 3) With Kapar Quarters, Klang, Selangor	27 November 2021
Hospital Sri Aman, Sarawak	15 December 2021
Health Clinic (Type 7) With Kg Labu Quarters, Jerantut, Pahang	31 December 2021

Source: Coordination Unit, Development Division, MOH

12

INTERNAL AUDIT



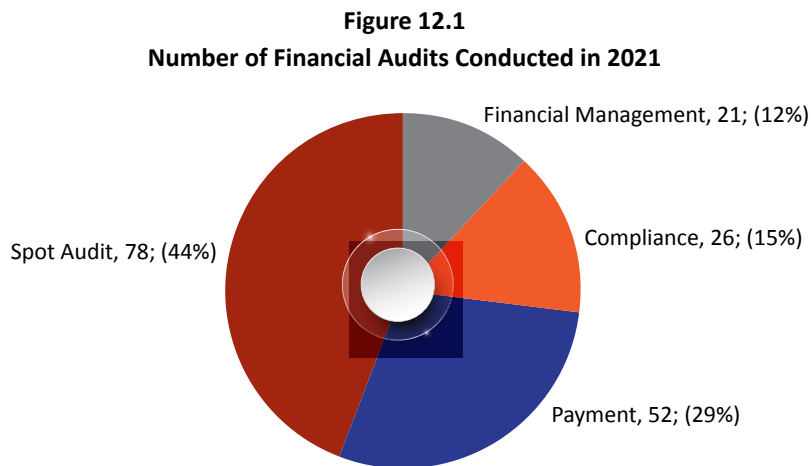
INTRODUCTION

The Internal Audit Division (IAD) of the Ministry of Health (MOH) was established in 1980 following the Treasury Circular No.2 Year 1979. The roles and responsibilities of the IAD have been strengthened through Treasury Circular PS 3.1/2013 and Internal Audit implementation by the Ministry or Department of the Federal and State Government.

The IAD is led by the Head of Internal Audit and is authorised to conduct independent, fair, and equitable audits and reports directly to the MOH Secretary-General. The IAD also serves by providing independent assurance in assisting the Ministry to achieve its objectives by ensuring that internal controls and risk management are sound and systematic.

FINANCIAL AUDITING

Financial Auditing encompasses a wide range of methods that includes auditing of internal controls, financial/legal regulations compliance including financial records as well as the financial system established in the Responsibility Centres (RCs). In 2021, IAD conducted four (4) types of activities under Financial Auditing including Financial Management Auditing, Compliance Audit, Payment Audit, and Spot Audit (**Figure 12.1**).



Source: Internal Audit Division, MOH

FINANCIAL MANAGEMENT AUDITING

Financial management audit examines financial records to ascertain whether the provisions of the Federal Constitutions, Financial Procedure Act and other relevant rules and regulations have all been complied with. It also seeks to ensure that the necessary precautions have been

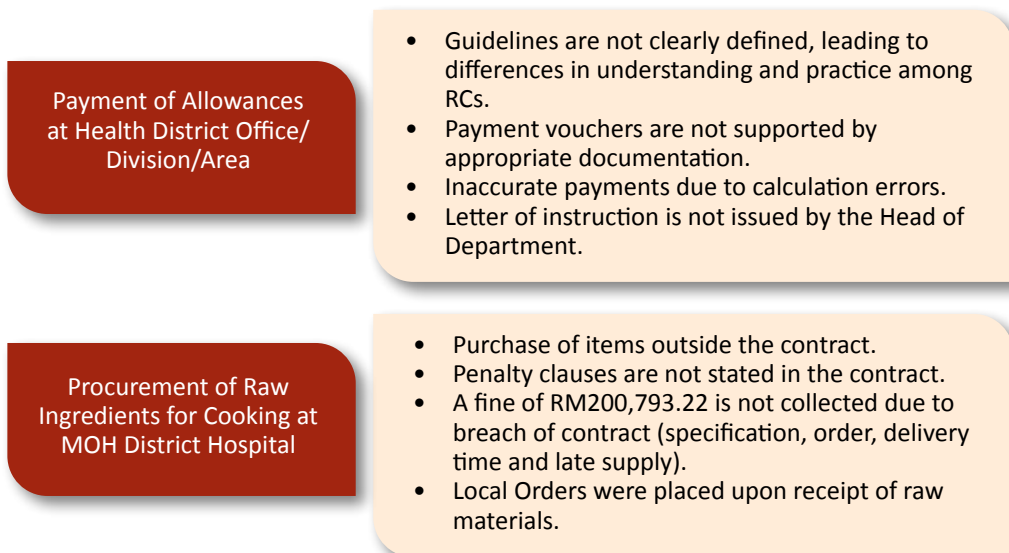
taken to safeguard the collection of revenues, expenses of public funds and the maintenance of assets, stores and their disposition. The audit scope covers five (5) major controls, namely receipts control, procurement management, expenditure control, management of assets and stores as well as management 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 issued to 21 audited RCs, three (3) RCs were rated as satisfactory, while 18 RCs were rated as least satisfactory.

COMPLIANCE AUDIT

Compliance Audit covers financial management following International Standards of Supreme Audit Institutions (ISSAI) 4000 and 4100. This audit focuses in-depth on a key audit area/financial management control based on risk profiling implemented for each Ministry/Department Federal and State Agencies. In 2021, IAD has implemented two (2) Compliance Audits and among the material/significant audit findings include:

Figure 12.2
Material/ Significant Audit Findings



Source: Internal Audit Division, MOH

PAYMENT AUDIT

Payment Audit is carried out to determine whether the procedures or work processes set for payment are properly performed and supported by complete documentation, in accordance with the prescribed laws and regulations, and whether relevant records are maintained and updated.

A total of 10,367 samples of payment vouchers worth RM106.17 million were audited in 2021, involving 52 RCs and raising 513 issues. The top three (3) main control elements that raised the most frequent number of issues were Payment Management (177 issues), Contract Administration (62 issues) and Work Procurement (59 issues) (**Table 12.1**).

Table 12.1
Number of Issues in Payment Auditing

Elements	No. of Issues
Delegation of Power/ Access Limit	28
Payment Management	177
Local Orders	56
Bills Management	13
Direct Purchase	16
Quotation	42
Work Procurement	59
Contract Administration	62
Assets Management	39
Store Management	21
TOTAL	513

Source: Internal Audit Division, MOH

SPOT AUDIT

The Spot Audit is an audit approach in which the office visited is not informed of the actual date of the visit. The audits were conducted on three (3) major financial management controls namely receipts, asset and store management as well as departmental vehicles in Cost Centre such as Health Clinics and Dental Clinics under the Health District Office/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. The impacts of Spot Audit are as follows:

Table 12.2
Spot Audit Impacts

Controls	Auditing Impacts
Receipts	<ul style="list-style-type: none"> • Cash Book has been properly maintained and checked. • The officer who voids the receipt has been appointed in writing. • The Revenue Form Register (Kew.67) has been properly maintained and updated. • The physical number of books of Official Receipts (Kew.38)/ unused Coupons is the same as the balance in the Register (Kew.67) and Statement (Kew.68). • Internal Inspection (AP 308) and Surprise Inspection (AP 309) is carried out by the Head of Department within the stipulated period.
Asset & Stores	<ul style="list-style-type: none"> • <i>Daftar Harta Modal</i> (Kew.PA-3) and <i>Aset Alih Bernilai Rendah</i> (Kew.PA-4) are properly maintained and updated. • <i>Senarai Aset Alih</i> (Kew.PA-7) was updated as changes occurred and posted on site. • The physical balance with Stock Register Card (KEW.PS-3) is equal. • Assets have been tagged or labelled as Government property.
Vehicle	<ul style="list-style-type: none"> • The responsible officer has been appointed in writing. • The vehicle has been used with the approval of the responsible officer. • Register/Log Book are properly maintained and updated. • The Indent Card has been kept by the responsible officer.

Source: Internal Audit Division, MOH

PERFORMANCE AUDITING

IAD 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 of the program/activity will be examined to determine the achievement of the program/activity and the management of the program. In the year 2021, a total of 10 performance audits were conducted involving procurement management, programs/activities management and ICT projects (Table 12.3).

Table 12.3
List of Performance Audits

Topics
Management of Research Grants at National Institute of Health (NIH)
Management of Linen and Laundry at MOH Hospital
Management of Water Vending Machine at Food Safety and Quality Division, MOH
Management of Shoe Allowance for MOH Public Service Officer
Management of Emergency Procurement of Ventilators at MOH
Management of Medico-Legal Litigation at MOH
Management of Cancelled Tenders at MOH
Management of COVID-19 Gifts/Contributions at MOH
Auditing Towards <i>The Replacement of Hospital Information System (HIS)</i> at Selayang Hospital
Auditing on Systems/Applications at MOH

Source: Internal Audit Division, MOH

VERIFICATION OF INITIAL BALANCE OF ASSETS AND LIABILITIES (ACCRUAL ACCOUNTING)

As agreed in the Accrual Committee Meeting, IAD needs to perform verification of the initial balance of assets and liabilities in the Ministry's financial statements, which are balance sheet items. In the year 2021, IAD had conducted four (4) 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, Finance Lease Assets and Accounts Receivable (Hospital Treatment Charges) (Table 12.4).

Table 12.4
Verified Initial Balance Data of Assets and Liabilities

Items	Cut Off 31 December 2020 (RM)	Cut Off 30 June 2021 (RM)
Movable Asset	-	715,629,846.08
Immovable Asset	18,688,001.00	22,400,000.00
Finance Lease Asset	2,147,166,166.07	-
Account Receivable	121,671,865.07	122,634,407.11

Source: Internal Audit Division, MOH

FINANCIAL MANAGEMENT RISK ASSESSMENT

In conducting the financial management risk assessment, MOH RCs use the assessment method based on the previous year's annual financial records. The selection of RCs is based on the highest and lowest performance data analysis in the iGFMAS system. The best financial management achievement based on the best work process will become the benchmark and recommendation for implementation in each RCs.

An audit conducted in 2021 was to assess the level of risks associated with revenue collection in the MOH Financial Statements. The details of patient treatment charges and arrears in MOH hospitals are evaluated to ensure that the iGFMAS system data are reliable, valid and with integrity. Five (5) hospitals were selected for auditing purposes (**Table 12.5**).

Table 12.5
Samples of Hospital

Hospital Name	Level of Risk
Hospital Malacca	Low
Hospital Kajang	High
Hospital Sultanah Aminah, Johor Bahru	Medium
Woman and Child Hospital, Kota Kinabalu	High
Hospital Duchess of Kent, Sandakan	Medium

Source: Internal Audit Division, MOH

As a result of the risk assessment, the IAD has recommended the following.

- i. Notification to the authorities i.e. Royal Malaysia Police and Immigration Department must be carried out;
- ii. The implementation of deposit collection should be carried out more effectively to reduce arrears; and
- iii. Periodic monitoring of claims to SPIKPA should be established to identify unclaimed hospital treatment bills.

INTERNAL CONTROL STATEMENT FOR ITEMS IN FINANCIAL STATEMENTS

The Statement on Internal Control for 2021 is based on the audit of the financial management risk assessment for revenue collection which has been carried out at five (5) MOH hospitals. The main objective is to assess the level of implementation of revenue internal control procedures in MOH hospitals in order to reduce the risk of leakage of public money.

The scope of the internal control statement covers three main areas of MOH hospital revenue management, namely the effectiveness of the registration process through deposit payments, the discharge process through bill payments and the collection process through payment of arrears of hospital treatment bills. Based on the audit analysis, the MOH Finance Division is recommended as followed.

- i. Remind all hospitals to monitor the arrears of hospital treatment charges;
- ii. Ensure that the revenue collection work process adheres to the hospital level; and
- iii. Review the revenue management system to the at-risk hospital to assist the hospital management in controlling the backlog of revenue.

13

**CORPORATE
COMMUNICATIONS
UNIT**



INTRODUCTION

The Corporate Communications Unit was established with the objectives of enhancing the image of the Ministry and promoting the policies and programmes of the Ministry through an organised and effective public relations strategy. In addition, Corporate Communications Unit 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. Customer Service Section.

MEDIA SECTION

THE PRIME MINISTER RECEIVES THE FIRST COVID-19 VACCINE INJECTION

It was a historical moment when the Prime Minister (PM) of Malaysia received the first COVID-19 vaccine injection, Pfizer-BioNTech, thus becoming the first Malaysian to take the first dose injection, on 24 February 2021. PM received the injection from the Chief Nurse at the Putrajaya District Health Office (PKD).

Apart from the PM, the Director General of Health and frontliners of the Ministry of Health Malaysian also received their injections. The event was broadcasted live through various media channels to enable the people to get a comprehensive picture of the National COVID-19 Immunisation Programme which officially started on that day. The second dose of the injection for the PM will be administered after 21 days from the first dose, which is on 17 March 2021.

Image 13.1

The Early Recipients of COVID-19 Vaccine in Malaysia



Source: Media Section, Corporate Communications Unit, MOH

ARRIVAL OF THE FIRST COVID-19 PFIZER BIONTECH VACCINE IN MALAYSIA

The first batch of Pfizer-BioNTech COVID-19 vaccine arrived at Kuala Lumpur International Airport (KLIA) via flight MH604 on 21 February 2021 which was managed by MABkargo Sdn. Bhd. (MASKargo) while the delivery of the Pfizer vaccine was managed by Pfizer and DHL through a global agreement. The vaccines departed from Puurs, Belgium and transited at Leipzig Halle Airport, before being sent to Singapore for distribution to other Asia Pacific countries, including Malaysia. A total of 312,390 doses of Pfizer-BioNTech COVID-19 vaccine were delivered by Passenger-to-Cargo (P2C) flights using the Airbus 330-300 aircraft. Upon arrival in Malaysia, vaccine distribution was handled by DHL Express, which was appointed as the agent for the global distribution of Pfizer-BioNTech vaccines.

Image 13.2

Arrival of Pfizer-BioNTech COVID-19 vaccine in Malaysia



Source: Media Section, Corporate Communications Unit, MOH

KING VISITED THE VACCINATION CENTER AT KUALA LUMPUR HEALTH CLINIC (KKKL)

Yang Di-Pertuan Agong Al-Sultan Abdullah Ri'ayatuddin Al-Mustafa Billah Shah Ibni Almarhum Sultan Haji Ahmad Shah Al-Musta'in Billah arrived at the Kuala Lumpur Health Clinic Vaccination Centre (KKKL) for a special visit. The Kuala Lumpur Health Clinic has been selected as the Vaccine Storage Centre (PSV) and the Vaccine Delivery Centre (PPV). His Majesty spent time inspecting the vaccine storage room where vaccines were kept in the Ultra-Low Temperature Refrigerator (ULTF) and observed COVID-19 vaccination activities at KKKL. His Majesty also visited six (6) vaccination stations at the Health Clinic and observed health workers giving vaccines to the frontliners.

Image 13.3

Visit of His Majesty to Vaccine Storage Centre (PSV) and the Vaccine Delivery Centre (PPV)



Source: Media Section, Corporate Communications Unit, MOH

THE COVID-19 VACCINE DELIVERY SIMULATION TRAINING TO HOSPITAL IN SARAWAK

To ensure access to the supply of COVID-19 vaccine, the Malaysian government has signed a preliminary agreement with COVAX Facility and Pfizer as well as several other COVID-19 vaccine suppliers to obtain a supply of vaccine that will cover 80 per cent of Malaysians.

Simulation training took place to ensure that vaccine delivery was ready before the actual supply of Pfizer vaccines delivered in Malaysia. The simulation training was a dry run delivery of COVID-19 vaccines to the hospital in Sarawak under the National COVID-19 Immunisation Programme.

The main objective of this dry run activity is to maintain the temperature retention ability of -75°C (+/-15°C) for the COMIRNATY vaccine during the delivery process, from the manufacturer to frontliners at MOH facilities in Sarawak before the vaccine is given to the public including those living in rural areas.

Image 13.4
COVID-19 Vaccine Delivery Simulation Training to Hospital in Sarawak



Source: Media Section, Corporate Communications Unit, MOH

MODIFIED AMBULANCE BUS FOR THE COVID-19 PATIENTS AT THE COVID-19 LOW RISK QUARANTINE AND TREATMENT CENTRE (PKRC)

The Secretary General of MOH represented the Ministry to accept the Ambulance Bus which has been creatively and innovatively modified by the Selangor State Health Department and Rapid KL Sdn Bhd. The Selangor State Health Department has modified the Ambulance Bus to ferry COVID-19 Category 3 and 4 patients from the Low Risk Quarantine and Treatment Centre

(PKRC) to Sungai Buloh Hospital. Apart from that, the MOH joint venture with Rapid KL Sdn Bhd involves bus renovation for the use at the COVID-19 Low Risk Quarantine and Treatment Centre (PKRC) MAEPS, in Serdang.

Image 13.5

Modified Ambulance Bus for the COVID-19 Patients



Source: Media Section, Corporate Communications Unit, MOH

THE PICK TEENAGERS KICK-OFF PROGRAMME TARGET 80 PER CENT COMPLETE VACCINATION OF TEENAGERS

The PICK Teenagers Kick-Off Programme was held at Sekolah Menengah Kebangsaan Putrajaya Precinct 8 (1) on 20 September 2021. During the function, the Minister of Health stated that the MOH has targeted 60 per cent of teenagers aged 12 to 17 years old to get at least 1 dose of vaccine by November 2021 and 80 per cent of those eligible to be vaccinated to receive the full dose before school opens for the 2022 session.

Image 13.6
PICK Teenagers Kick-Off Programme



Source: Media Section, Corporate Communications Unit, MOH

STRATEGIC COMMUNICATIONS SECTION

The Strategic Communication Section focuses on current developments in the COVID-19 pandemic and COVID-19 vaccine. This section provides communication materials in the form of infographics including posters related to COVID-19 pandemic and vaccine, apart from live coverage broadcasted via the Ministry of Health Malaysia official social media platform. In recent times, there has been a drastic increase in terms of total views and followers in MOH social media as shown in Table 13.1.

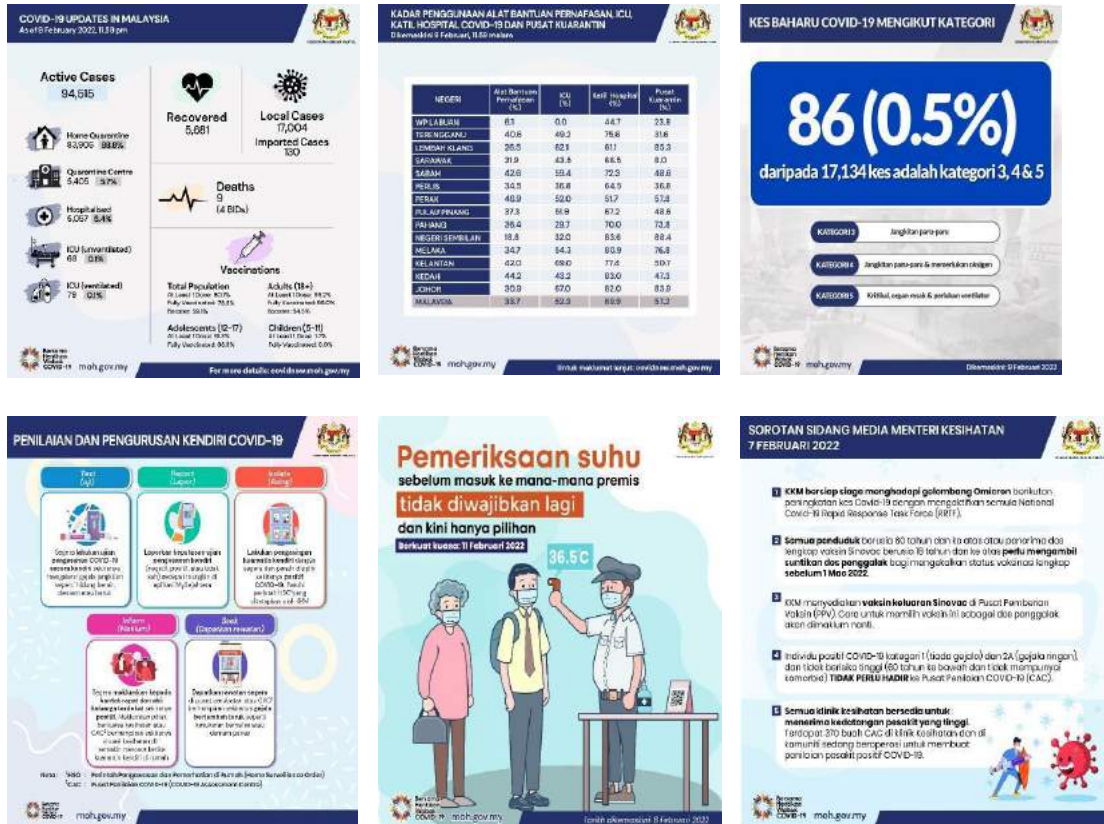
Table 13.1
Achievement of Goals for MOH Social Media Followers (Until 31 Dec 2021)

Activity	Current Amount
Facebook (KEMENTERIAN KESIHATAN MALAYSIA)	5.7 million
Twitter (KKMalaysia)	1.8 million
Instagram (kementeriankesihatanmalaysia)	1.4 million
Youtube (Kementerian Kesihatan Malaysia)	61,000
Telegram (OFFICIAL KEMENTERIAN KESIHATAN MALAYSIA)	41,000
TikTok (@kkmputrajaya)	230,000

Source: Strategic Communications Section, Corporate Communication Unit, MOH

Infographics were posted consistently to disseminate relevant information to the general public.

Image 13.7
Infographics of COVID-19



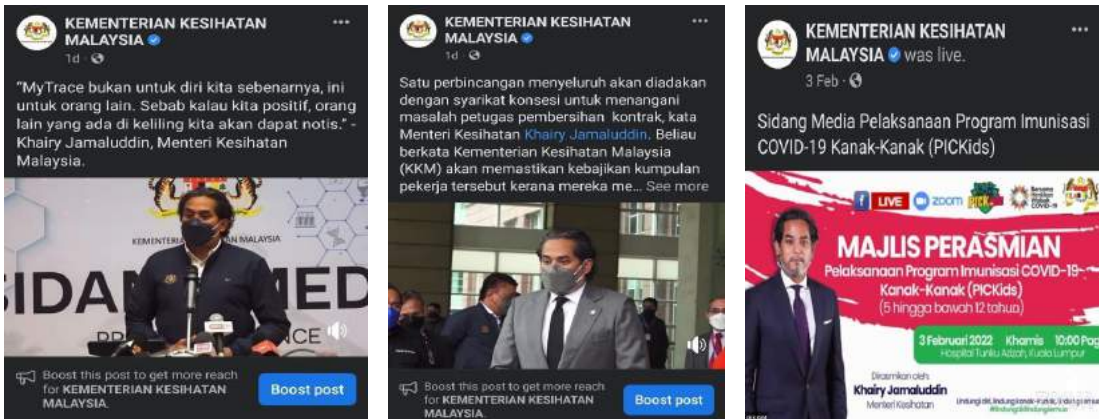
Source: Strategic Communications Section, Corporate Communication Unit, MOH

In an effort to ensure the latest information about COVID-19 reaches the public, this section conducted live broadcasts via FB MOH and highlighted important information through video snippets such as:

- i. Live broadcast of the Minister of Health and Deputy Minister of Health I Press Conference;
- ii. Live broadcast of the Minister of Health programme;
- iii. Video snippets of Minister of Health Press Conference; and
- iv. Video snippets from MOH’s Top Management Engagement Session with Media.

Image 13.8

Live broadcast on the COVID-19 information



Source: Strategic Communications Section, Corporate Communication Unit, MOH

CORPORATE AFFAIRS SECTION

PUBLICATION OF E-NEWSLETTER 2021

The Malaysia Sihat Sejahtera e-Bulletin is a monthly publication produced by the Corporate Communication Unit that displays activities of the ministry throughout the year 2021. It also serves as a source of reference for civil servants and the public.

Image 13.9

Malaysia Sihat Sejahtera e-Bulletin



Source: Corporate Affairs section, Corporate Communication Unit, MOH

COVID-19 CONTRIBUTION OF THE MINISTRY OF HEALTH MALAYSIA

COVID-19 Contribution (Sumbangan COVID-19) is a programme by MOH to gather public contributions to the MOH, either in financially or donations in the form of equipments such as face masks, personal protective equipment (PPE) and other health equipments. Donations are intended to assist MOH in dealing with the spread of the COVID-19 in Malaysia.

Image 13.10
Public Contributions to the MOH



Source: Corporate Affairs Section, Corporate Communication Unit, MOH

PUBLIC RESPONSE MANAGEMENT SECTION

The MOH has received a total number of 20,585 public feedback in 2021 based on the categories listed in **Table 13.2**

Table 13.2
Number of Public Feedbacks Received by Categories in Year 2021

Type of Feedback	Categories	Received	Type of Feedback
Complaint	Ordinary	7,174	8,711
	Complex	1,537	
	Recognition	5,480	
	Report	3,019	
Non Complaint	Inquiries	1,901	11,874
	Application	927	
	Suggestion	547	
Total Public Feedbacks			20,585

Source: Complaint Management Section, Corporate Communication Unit, MOH

Overall, the Ministry has achieved 91.7 per cent in resolving complaints received for the year 2021. As for the Ordinary categories, a total of 6,478 (90.3%) have been resolved within 15 working days as shown in **Table 13.3**.

Table 13.3
Number of Received and Resolved Complaints in 2021

Categories	Resolve Duration	Received	Resolved (%)	Resolved within 15 Days (KPI) (%)
Ordinary	15 working days	7,174	6,954 (96.9%)	6,478 (90.3%)
Complex	>16 – 365 days	1,537	1,033 (67.2%)	
Total		8,711	7,987 (91.7%)	

Source: Complaint Management Section, Corporate Communication Unit, MOH

MOH complaints analysis is in accordance with categories of complaints set out in the Sistem Aduan Pengurusan Aduan Awam (SisPAA) as shown in **Table 13.4**.

Table 13.4
Percentage of Complaints Received Base on Issues for the Year 2021

Complaint Category	Percentage (%)
Patient Management	56.1
Administration Management	19.1
Quality of Governance Services	12.0
Public Health	6.1
Public Facilities	3.0
Clinical Facilities	1.3
Pharmaceutical Services	1.3
Food Safety and Quality Division Services	0.2

Source: Complaint Management Section, Corporate Communication Unit, MOH

In 2021, MOH has achieved the Key Indicator Performance (KPI) target which is resolving ordinary complaints within 15 working days above 85 per cent and resolving non-complaint feedback (excluding Report feedback) above 90 per cent. As for resolving ordinary complaints, MOH has reached 90.3 per cent and for resolving non-complaint feedback, it has reached the target with 95.3 per cent feedback being resolved. The details of these achievements are shown in **Table 13.5**.

Table 13.5
KPI for the Year 2021

Key Indicator Performance	Target	Achievement
Resolving Ordinary Complaint Within 15 Working Days	85%	90.3%
Resolving Non-Complaint Feedback (excluding Report feedback) Within 15 Working Days	90%	95.3%

Source: Complaint Management Section, Corporate Communication Unit, MOH

CUSTOMER SERVICE SECTION

The Customer Service section is responsible for managing incoming calls from the public. **Table 13.6** shows an increasing total number of 2,730 phone calls which indicates an increase of 1.06 per cent in 2021 compared to 2020.

Table 13.6
Number of calls received by the Customer Service Centre

Month	2020	2021
January	5,567	4,916
February	6,270	4,925
March	3,736	6,614
April	1,904	6,251
May	2,169	4,360
June	4,828	4,078
July	5,265	3,977
August	4,247	4,392
September	5,072	5,046
October	5,265	3,971
November	4,247	4,757
December	4,665	4,682
Total	48,988	51,718

Source: Customer Service Section, Corporate Communication Unit, MOH

14

**POLICY AND
INTERNATIONAL
RELATIONS**



INTRODUCTION

The Policy and International Relations Division (BDHA) consists of three (3) sections - Policy and Strategic Planning Section, Cabinet and Secretarial Section and International Section. BDHA is responsible for managing the following tasks:

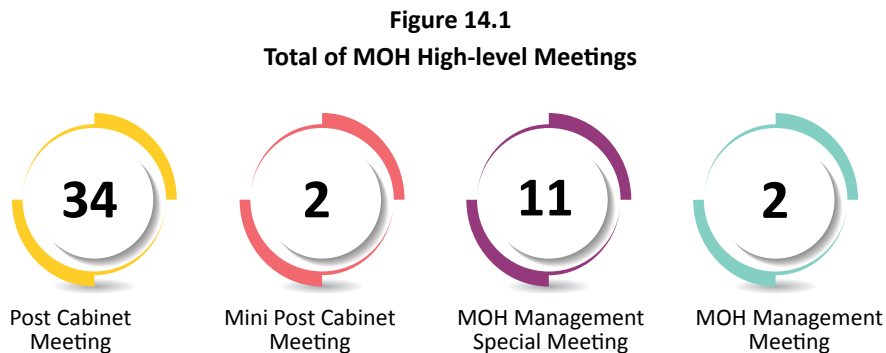
- i. Formulation and implementation of public health policies;
- ii. Focal point in international affairs and the development of healthcare industries;
- iii. Coordinating international trade issues;
- iv. Ensuring Malaysia's health-related interests are voiced and protected in diplomacy through the international legal instruments and the Free Trade Agreement (FTA);
- v. Coordinating the preparation of Cabinet Papers; and
- vi. Secretariat role for Post-Cabinet Meetings and MOH management meetings.

CABINET RELATED MATTERS

BDHA has facilitated in preparing and submitting 10 Cabinet Notes and 42 Memorandums for tabling at the Cabinet Meeting. In addition, BDHA has also provided inputs and facilitated in the preparation of a total of 141 comments on Memorandums received from other ministries, as well as 84 feedbacks to decisions made by the Cabinet throughout the year 2021.

HIGH-LEVEL MEETINGS WITHIN THE MINISTRY OF HEALTH

Various high-level meetings coordinated by BDHA within MOH are as follows:



Source: Policy and International Relations Division, MOH

THE MINISTRY OF HEALTH TWELFTH MALAYSIA PLAN (12MP) WEBINAR AND DIALOGUE SESSIONS

In 2021, BDHA in collaboration with the Planning Division and Corporate Communication Unit organized two (2) series of webinar sessions on the 12MP at the MOH level. These sessions involved the top management of MOH and panel guest speakers from various fields such as academic, private and non-governmental (NGO)/community. The objective of these webinar sessions is to promote the Government’s development planning related to the health sector during the 12MP period. The first series of the 12MP webinar session entitled The Crisis and Disaster Preparedness was held on 11 November 2021, and the second series entitled The Health System Reform was held on 2 December 2021.

In addition, the 12MP dialogue session with the Deputy Minister of Health was broadcasted on 11 December 2021 in the Soal Rakyat program on TV3 which discussed the ongoing roles of MOH in combating communicable and non-communicable diseases.

COVID-19 VACCINE ACCESS GUARANTEE COMMITTEE (JKJAV)

The COVID-19 Vaccine Access Guarantee Committee (JKJAV) was specially established in line with the decision of the Cabinet Meeting on 14 October 2020 to ensure that the supply of COVID-19 vaccines can be procured efficiently and is safe for use by the people of Malaysia. The JKJAV committee which was co-chaired by the Minister of Health and the Minister of Science, Technology and Innovation, has four (4) working committees comprising various Government

Image 14.1
Posters of the Twelfth Malaysia Plan (12MP)
Webinar Sessions, MOH, Malaysia



Source: Policy and International Relations Division, MOH

Image 14.2
Poster of the 12MP Dialogue Session,
Ministry of Health Malaysia



Source: Policy and International Relations Division, MOH

agencies as pillars to serve the objective. BDHA has been selected as the main secretariat together with MOSTI to ensure that the meetings are done systematically. A total of 18 series of meetings have been coordinated throughout 2021.

INTERNATIONAL COOPERATION

Due to the COVID-19 pandemic, most international meetings were held online via video conference. Throughout 2021, BDHA had facilitated MOH participation in international conferences and meetings as follows:

- i. Special Video Conference of ASEAN Health Ministers Meeting on COVID-19;
- ii. Panellist Global Town Hall; and
- iii. Tokyo Nutrition for Growth Summit 2021.

In addition, BDHA also coordinated the participation of technical experts from the MOH for the meetings/workshops/seminars/forums organised by the World Health Organization (WHO). The list of the workshops and other related meetings held in the year 2021 are as follows:

- i. Virtual 74th World Health Assembly Meeting;
- ii. Virtual 149th Executive Board Session.
- iii. The 72nd Session of the WHO Regional Committee Meeting for the Western Pacific.
- iv. Biregional Workshop on Health Financing for Universal Health Coverage in Asia and The Pacific Beyond COVID-19;
- v. Expert Consultation on the Draft Operational Framework for Strengthening the Traditional Medicine System in the Western Pacific Region;
- vi. WHO Informal Consultation on Revision of Guidelines on Evaluation of Similar Biotherapeutic Products;
- vii. Extraordinary Strategic Advisory Group of Experts on Immunization (SAGE) Meeting - AstraZeneca Vaccine;
- viii. Virtual Meeting of the Biregional Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III): Advancing Implementation of the International Health Regulations (2005);
- ix. 27th Meeting of the Regional Commission for the Certification of Poliomyelitis Eradication in the Western Pacific;
- x. Informal consultation on the Draft global health sector strategies on Human Immunodeficiency Virus (HIV), viral hepatitis and Sexually Transmitted Infections (STIs);
- xi. Forum on Law and COVID-19: Strengthening Legal Preparedness and Response for the Future;
- xii. Workshop on Implementation of the Regional Action Plan for Tobacco Control in the Western Pacific (2020-2030) and Preparation for the ninth session of The Conference of the parties to the WHO FCTC; and
- xiii. Regional Conference to Strengthen Implementation of the INSPIRE Strategies to End Violence against Children during COVID-19 and Beyond.

Image 14.3
Minister of Health Malaysia delivering his speech during the 72nd Session of the WHO Regional Committee Meeting for the Western Pacific



Source: Policy and International Relations Division, MOH

MEMORANDUM OF UNDERSTANDING (MoU)

MOH has strategic bilateral collaborations on the development of the health sector with almost 78 countries through the Memorandum of Understanding (MoU) on cooperation in the field of health. To date, seven (7) MoUs have been signed under BDHA and it is expected that several more MoUs will be signed in 2022.

Image 14.4
MoU Signing Ceremony between the Government of Malaysia and the Government of the United Kingdom of Great Britain and Northern Ireland on 8 November 2021



Source: Policy and International Relations Division, MOH

CONTRIBUTIONS FROM FOREIGN GOVERNMENTS

BDHA has played a vital role in obtaining Government policy decisions and coordinating legal documents for the COVID-19 vaccine donations from Japan, China and Singapore involving a total of 2,599,020 doses of vaccines. The contribution of these vaccines has increased the vaccine portfolio in the country and has assisted the efforts to implement vaccinations under the National COVID-19 Immunisation Programme (PICK).

On 5 July 2021, Malaysia received 1,000,350 doses of Pfizer-BioNTech (COMIRNATY) COVID-19 vaccine from the United States. In addition, Malaysia also received vaccine donations from Saudi Arabia and the United Arab Emirates. The donations have helped the country in fighting the COVID-19 pandemic and reflect Malaysia's good relations with foreign countries. In addition to vaccine donations, BDHA has also coordinated donations in the form of medical equipment and personal protective equipment from Japan, China, Taiwan and Brunei.

VACCINATED TRAVEL LANE (VTL)

With the increase in vaccination rates worldwide, the Vaccinated Travel Lane (VTL) was introduced to facilitate the movement of fully vaccinated travellers. BDHA has been actively involved in the Malaysia - Singapore VTL initiative which was successfully launched on 29 November 2021. VTL negotiation sessions with neighbouring countries in the ASEAN region will also be actively implemented in 2022.

COURTESY CALLS

BDHA was also tasked to coordinate courtesy calls upon the Minister of Health Malaysia and top management by foreign delegates. The lists of courtesy calls are as follows.

<p>8 Jan. 21</p>  <p>Ambassador of Republic Korea to Malaysia</p>	<p>20 Jan. 21</p>  <p>Ambassador of German to Malaysia</p>
<p>12 Mar. 21</p>  <p>Ambassador of Belgium to Malaysia</p>	<p>22 Mar. 21</p>  <p>Ambassador of Norway to Malaysia</p>



<p>15 Apr. 21</p>	<p>UN Resident Coordinator for Malaysia, Singapore & Brunei Darussalam</p>	<p>8 Oct. 21</p>	<p>WHO Regional Director for the Western Region</p>		
<p>15 Oct. 21</p>		<p>Ambassador of Japan to Malaysia</p>	<p>8 Dec. 21</p>		<p>Ambassador of UAE to Malaysia</p>
<p>8 Dec. 21</p>	<p>Malaysian Organisation of Pharmaceutical Industries (MOPI)</p>	<p>10 Dec. 21</p>	<p>UNICEF Representative to Malaysia</p>		

Image 14.5
Courtesy Calls Activities for the Year 2021



Courtesy Call by His Excellency Ambassador of the United Arab Emirates



Courtesy Call by Dr. Rashed Mustafa Sarwar, UNICEF Representative to Malaysia



Courtesy Call by WHO Regional Director for the Western Pacific Region on Minister of Health Malaysia



Courtesy Call by Malaysian Organisation of Pharmaceutical Industries (MOPI)

Source: Corporate Communication Unit, MOH

15 LEGAL ADVISORS



INTRODUCTION

The Legal Advisor's Office (LA Office) Ministry of Health Malaysia (MOH) is responsible, among others, for the following matters:

- i. provide legal advice to divisions, departments, agencies and institutions under the Ministry including legal opinion which related to Cabinet Paper, Standard Operation Procedure, Guidelines, Instructions and Circulars;
- ii. to draft Bills and Amendment Bills as well as subsidiary legislation in relation to the Ministry in accordance with the policies of the Ministry;
- iii. vet and approve legal documents including agreements, memorandums of understanding and international legal instruments on behalf of the Ministry;
- iv. attend meetings to discuss legal issues as well as administrative issues involving the Ministry;
- v. to peruse investigation papers and give instruction to charge under the Private Healthcare Facilities and Services Act 1998 [Act 586]; and
- vi. coordinate civil claim cases on behalf of the Ministry for civil cases handled by the Attorney General's Chambers where the Government is the Defendant.

ACTIVITIES AND ACHIEVEMENTS

The amount and scope of work handled by the LA Office is subject to the application submitted by the Ministry as well as the departments and agencies under it. In 2021, the LA Office has attended 1,081 meetings, vetted 1,677 legal documents, provided 1,982 legal opinions and drafted 115 Bills, Amendment Bills as well as subsidiary legislations. Throughout the year, the LA Office has also handled nine (9) prosecution cases against criminal offences under Act 586 and 130 cases of civil claims in court.

The LA Office plays an active role in assisting the Ministry in the management of the COVID-19 pandemic in Malaysia by ensuring that the legislation under the Ministry is in order. The LA Office is also involved in drafting the Dental Act 2018 [Act 804], Tobacco Bill 20XX, Drinking Water Quality Bill 20XX and amendments to the Prevention and Control of Infectious Diseases Act 1988 [Act 342] and Poisons Act 1952 [Act 366].

WAY FORWARD

The LA Office is committed to performing its responsibilities as the Ministry's Legal Advisor to ensure that policy implementation within the Ministry is based on existing legislation.

16

INTEGRITY



INTEGRITY UNIT

In 2021, 241 cases of misconduct and wrongdoing in the workplace were reported to the Integrity Unit involving various categories such as Criminal Cases, Disciplinary and Ethical Breaches. The breakdown of the data is as below.

Table 16.1
The Number of Reports Based on Various Categories

Category	Number of Reports
Criminal Case	16
Disciplinary	104
Ethical Breaches	121
Total	241

Source: Integrity Unit, MOH

The Annual Conference of the Disciplinary Board in the Ministry of Health (MOH) has been held virtually on the 29 July 2021 which was attended by 886 members from 329 Disciplinary Board in the MOH's facilities. During the conference, "Buku Panduan Mengurus dan Melaporkan Tindakan Tatatertib KKM" 2nd Edition was launched. In terms of operations, the Integrity Unit successfully resolved a total of 418 cases of disciplinary action under MOH Disciplinary Board for the year 2021 for *Kumpulan Pengurusan* and *Kumpulan Sokongan* reported from Responsibility Centre (RC) under MOH facilities.

Image 16.1
The Annual Conference of Disciplinary Board in MOH



Source: Integrity Unit, MOH

The Ministry of Health Anti-Corruption Plan 2021-2025 was launched on 8 October 2021. The development of this plan is aligned with the MOH's commitment to promoting "Zero Tolerance Towards Corruption" and complimenting the implementation of the National Anti-Corruption

Plan (NACP) 2019-2023. Regarding the Anti-Corruption mechanisms in MOH, the Integrity Unit as the Secretariat of the Anti-Corruption Committee has held three (3) Anti-Corruption Committee Meetings chaired by the Secretary-General of MOH. MOH is among the active ministries in bringing issues to the National Anti-Corruption Committee (NACC) Meeting for attention, discussion and consensus decision making. Among the highlighted issues that catch the NACC’s attention were the issue of Payment of Shoes Allowance and Standardising the Surcharge Calculation for Disciplinary Board in MOH by making use of the tools of the Straight-Line Method.

Image 16.2
Anti-Corruption Committee Meeting



Source: Integrity Unit, MOH

Integrity Unit is actively promoting and nurturing the importance of integrity among the MOH’s staff by organising various courses and seminars. In 2021, there were three (3) sessions of the forum *Bicara Integriti* has successfully organized on 17 March, 17 June and 3 November 2021. There were two (2) seminars called “Round Table Talk” held in Nursing Division on 11 March 2021 and Disease Control Division on 22 April 2021. The Integrity PEP Talk and SMART Integrity Course were held simultaneously on 1 September 2021. The highlight of the Integrity Unit event was the *Sambutan Hari Integriti KKM* on 17 November 2021.

Image 16.3
The Integrity PEP Talk and SMART Integrity Course



Source: Integrity Unit, MOH

17
**MALAYSIA
HEALTHCARE
TRAVEL
COUNCIL (MHTC)**



INTRODUCTION

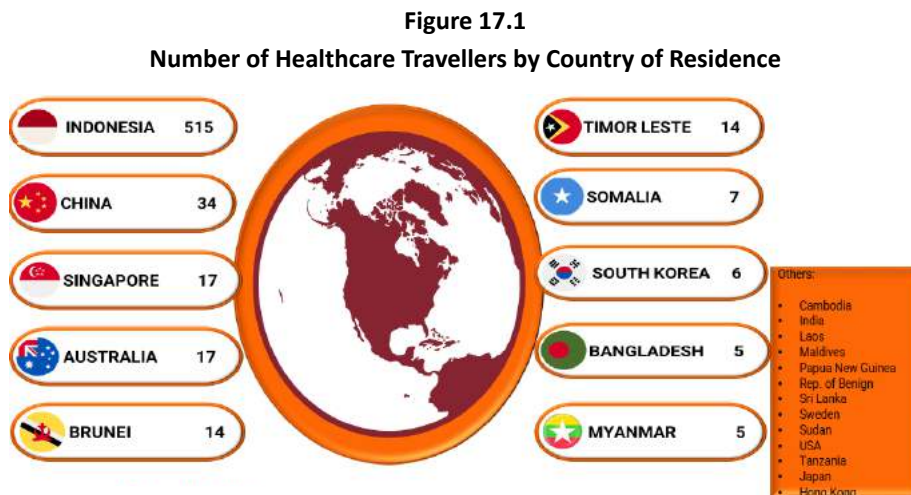
The healthcare travel industry has remained a key economic sector while Malaysia works toward reopening safely to gradually recover from the impact of COVID-19. As one of the first countries in the world to establish a medical travel bubble in July 2020, Malaysia Healthcare was able to continue providing continuity of care to patients in need, even despite constant changes in border restrictions. The implementation of this medical travel bubble and the stringent Standard Operating Procedure (SOP) that accompany it allowed for a projection of RM480 million in revenue for 2021.

MHTC continued its efforts to brand, promote and market Malaysia Healthcare through various physical, hybrid and virtual events, managing to achieve a total of RM535 million in revenue for 2021.

With the recent launch of the Malaysia Healthcare Travel Industry Blueprint 2021-2025, MHTC is committed to continuing growing the healthcare travel industry on a global level via the Recovery (2021-2022) and Rebuild (2023-2025) phases, providing healthcare travellers around the world the best Malaysia healthcare travel experience by 2025.

MALAYSIA HEALTHCARE’S MEDICAL TRAVEL BUBBLE PROGRAMME

As one of the first countries in the world that formed a dedicated medical travel bubble programme for the healthcare travellers in need, Malaysia healthcare welcomed a total of 672 patients from 1 July 2020 to 31 December 2021. The total hospital bills spent were RM36 million with the average spent per patient at RM64,000. Further results and statistics of the programme are available below in **Figure 17.1**.



Source: Malaysia Healthcare Travel Council (MHTC)

INITIATIVES BY MHTC

The Malaysia Healthcare Virtual Week, a three-day virtual event, was held from 10 to 12 September 2021 with the Indonesian market to ensure top-of-mind brand awareness of Malaysia as the ideal destination for healthcare.

Together with MHTC, member hospitals such as Gleneagles Hospital Penang, Sunway Medical Centre and Sunfert International Fertility Centre participated in the following activities:

- i. Launch of the Malaysia Healthcare jingle for the Indonesian market via a virtual press conference;
- ii. Various health talks with Malaysian doctors on topics related to oncology, cardiology, orthopaedics, women's health and IVF, and paediatrics; and
- iii. Collaborations with the Key Opinion Leaders (KOLs) community, and top media in Indonesia to promote Malaysia Healthcare.

MHTC exceeded the initial targets with the following details:

- i. Campaign leads: 1,110 (123%);
- ii. Campaign impressions: 17,403,807 (1,740%);
- iii. Number of media coverage: 22 (110%);
- iv. Public Relation Value (PRV): RM1.1 million; and
- v. Instagram followers: An increase of 914 followers from the campaign itself.

KEY MHTC INITIATIVES

LAUNCH OF THE MALAYSIA HEALTHCARE TRAVEL INDUSTRY BLUEPRINT 2021-2025

MHTC launched the Malaysia Healthcare Travel Industry Blueprint 2021-2025 on 1 November 2021. The event was graced by Minister, Secretary-General and Director-General, Ministry of Health Malaysia, during a virtual event that saw the attendance of 28 media members from local and international publications such as Indonesia, Vietnam and Cambodia. The news coverage for the event reached 98 news clippings (broadcast, radio, print, online) with a PR Value of RM41,664,866.92.

The Blueprint serves as a guide for industry stakeholders to provide the best Malaysia healthcare travel experience by 2025. It aims to enhance the current healthcare travel ecosystem, strengthen the Malaysia Healthcare brand and expand the introduction of Malaysia's healthcare offerings to more targeted markets. The blueprints had been downloaded 650 times.

InsigHT2021

MHTC continued to forge industry resilience with InsigHT2021, the region's leading medical travel market intelligence conference. Themed Forging Resilience, InsigHT2021 was launched by the Minister of Health. InsigHT2021 took place from 16 to 18 November 2021 as a hybrid event, attended by 676 participants.

Image 17.1
Region's Medical Travel Market Intelligence Conference



Source: Malaysia Healthcare Travel Council (MHTC)

EXPO DUBAI 2020

Malaysia Healthcare showcased its excellence in healthcare service delivery and providing seamless healthcare journey experiences during Week 14 of Expo 2020 Dubai. From 2 to 8 January 2022, expo participants visited the Malaysia Pavilion to discover Malaysia's strengths as the Fertility and Cardiology Hub of Asia, Cancer Care Centre of Excellence and Hepatitis C Treatment Hub of Asia, showcased by participating leading private healthcare institutions, Thomson Hospital Kota Damansara and TMC Fertility and Women's Specialist Centre, as well as Pharmaniaga, Malaysia's largest pharmaceutical company.

Networking opportunities were available during the five (5) days event, with Malaysia healthcare leaders present from various segments of the healthcare travel value chain, including healthcare, pharmaceuticals, facilitators, technology solution providers and policymakers. Participants can also discover and build collaborative opportunities with Malaysian digital start-ups which were showcased during the Digital Health Investment Dialogue.

Image 17.2
EXPO Dubai 2020



Source: Malaysia Healthcare Travel Council (MHTC)

THE AGED CARE STUDY

In partnership with the Economic Planning Unit (EPU), MHTC is developing the International Retirement Living programme, designed to offer retirees the ‘best retirement experience in Malaysia’.

The Aged Care report indicated examples of retirement living models from other countries like Australia, Singapore, and South Korea where there is insurance for aged care/retirement village, and formalised agreement between Government-to-Government (G2G) retirement funds. However, the report did not specifically mention which financial planning model Malaysia should embark on. This discussion would require the relevant agencies, like Employee Provident Fund (EPF) to land on an agreement with its counterpart from the identified receiving country.

ANNUAL PUBLIC RELATIONS VALUE (PRV) RESULT

In combination with the MHTC team’s efforts in growing the Malaysia Healthcare brand and building stronger public-private partnerships with industry stakeholders, MHTC has successfully garnered a total of RM886,935,511.92 which exceeds 197 per cent of the initial PRV targets of RM450,000,000.00.

FLAGSHIP MEDICAL TOURISM HOSPITAL PROGRAMME

Figure 17.2

Key Milestones And 2021 Progress Update Since 21 June 2021



Source: Malaysia Healthcare Travel Council (MHTC)

AWARDS AND RECOGNITIONS

In 2021, MHTC brought home two (2) awards, namely an award for Outstanding Leadership in Medical Tourism at the Malaysia Tourism Council Gold Awards 2021 and Outstanding Leadership in Healthcare Travel in the Asia Pacific from the Global Health Asia Pacific Awards 2021.

Image 17.3

Global Health Asia Pacific Awards 2021



Source: Malaysia Healthcare Travel Council (MHTC)

18
**PROTECT
HEALTH**



INTRODUCTION

ProtectHealth Corporation Sdn Bhd (ProtectHealth) was incorporated on 19 December 2016 as a wholly-owned subsidiary of ProtectHealth Malaysia (PHM), established under the Ministry of Health, Malaysia (MOH). As a not-for-profit status, the company coordinates, administers and manages initiatives related to financing healthcare services as mandated by MOH.

On 15 April 2019, as per the Strategic Purchaser mandate, the role as the healthcare scheme administrator has been undertaken for *Skim Peduli Kesihatan* for B40 group (PeKa B40) as mandated by the Government. Starting from 12 November 2020, ProtectHealth has been appointed as the Electronic Service Provider operator for *Skim Perlindungan Insurans Kesihatan Pekerja Asing* (SPIKPA). Given the experience and capabilities in discharging the Strategic Purchasing role, on 8 March 2021 MOH has appointed ProtectHealth as the implementer of Private Medical Practitioners' and Healthcare NGOs' participation in the National COVID-19 Immunisation Programme or *Program Immunisasi COVID-19 Kebangsaan* (PICK).

SERVICE PROVIDERS

PeKa B40 PROVIDERS

ProtectHealth is the first purchaser in the country that has been successful in purchasing services from both public and private providers. This is a part of the strategic purchasing mandate fulfilment. As of 31 December 2021, PeKa B40 benefits are discharged through providers from 2,589 General Practitioners (GP), 182 laboratory partners, 897 *Klinik Kesihatan* (KK) and 145 MOH Hospitals.

PRIVATE MEDICAL PRACTITIONERS (PMPs) AND HEALTHCARE NGOS IN THE NATIONAL COVID-19 IMMUNISATION PROGRAMME (PICK)

By conducting multiple engagements with various stakeholders and promoting on multiple platforms, ProtectHealth has managed to secure more than 4,100 private medical practitioners (PMPs) and healthcare NGOs to register with ProtectHealth to be part of PICK. As of 31 December 2021, there are 2,269 vaccination centres (Pusat Pemberian Vaksin - PPV) and healthcare NGOs that are active in administering vaccination as shown in **Table 18.1**.

Table 18.1
Active PPV and Healthcare NGOs as of 31 December 2021

Type of PPV	Number of PPV
PPVGP	2,034
PPVKP	25
PPVHS	136
PPVACC	34
HCO	36
NGO	4
Total	2,269

Note:

PPVGP – PPV General Practitioners, PPVKP – PPV Specialist Clinics, PPVHS – PPV Private Hospitals, PPVACC – PPV Ambulatory Care Centres, HCO – Healthcare Organiser, NGO – Non-Governmental Organisation
Source: ProtectHealth

PERFORMANCE

PeKa B40 PERFORMANCE

Despite the COVID-19 global pandemic which has largely impacted the number of visits for health screening in 2021, especially the outreach programmes, health screenings were still conducted at PeKa B40 registered clinics. As of 31 December 2021, a total of 555,311 beneficiaries have undergone health screening. **Table 18.2** shows the number of approved applications for all PeKa B40 benefits. The total cost for all approved applications is indicated in **Table 18.3**.

Table 18.2
Number of Approved Applications for Each Benefit as of 31 December 2021

Benefit Approved Applications	2021	Total Cumulative
Benefit 1: Health Screening	Health Screening 1	101,673
	Health Screening 2	94,482
Benefit 2: Health Aid	Approved Applications	12,924
Benefit 3: Completing Cancer Treatment Incentive	Approved Applications	1,508
Benefit 4: Transport Incentive	Approved Applications	5,548
		20,275

Source: ProtectHealth

Table 18.3
Total Cost for All Approved Applications as of 31 December 2021

PeKa B40 Benefits	Total Cost Paid (RM)
Benefit 1: Health Screening	74,703,042.00
Benefit 2: Health Aid	99,631,745.97
Benefit 3: Completing Cancer Treatment Incentive	4,370,176.00
Benefit 4: Transport Incentive	3,544,892.00
Total	182,249,855.97

Source: ProtectHealth

PERFORMANCE OF PMPS AND HEALTHCARE NGOs

As of 31 December 2021, PMPs and healthcare NGOs under ProtectHealth have contributed over 28.1 million doses of vaccines, or 48.7 per cent of over 57.7 million doses of vaccines administered involving more than 2,200 PPVs nationwide. MOH vaccinated 49.3 per cent whilst 1.9 per cent were vaccinated through the private purchase programme.

In efforts to assist the government to accelerate the vaccination rate and maximise access to the vaccination programme, the Ministry of Finance has approved a grant of RM410 million in the year 2021 through MOH and mandated ProtectHealth to outsource PICK via PMPs and healthcare NGOs.

Table 18.4
Total Fees Paid and Doses Administered by PPVs as of 31 December 2021

Vaccination Centre	Doses Administered	PMP & ProtectHealth Fees Paid (RM)
General Practitioners	5,138,328	88,535,515
Private Hospital	2,947,379	46,712,480
Ambulatory Care Centre	267,741	4,244,805
Specialist Clinic	54,232	908,520
AstraZeneca Vaccination Centre	3,238,783	48,581,755
Public-Private Joint Vaccination	11,247,964	169,135,580
Mobile Vaccination	474,778	7,179,055
Adolescent Vaccination	1,871,403	28,095,320
Total	25,240,608	393,393,030

Source: ProtectHealth

To expand PICK reachability to nationwide critical economic sectors, the COVID-19 Immunisation Task Force (CITF) Federal has agreed to set up vaccination centres for industry or Pusat Pemberian Vaksin Industri (PPVIN) under the purview of various ministries with the involvement of ProtectHealth to appoint PMPs to perform the vaccination. All related service fees are borne by the organisers, saving the cost to the government of RM42 million.

Table 18.5
Total Fees Paid and Doses Administered under PPVIN for Year 2021

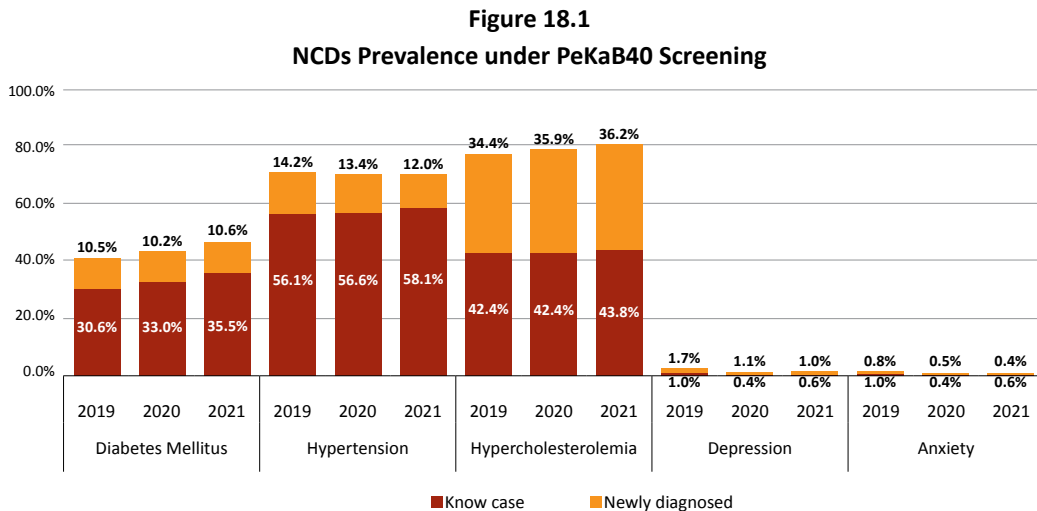
Vaccination Centre	Doses Administered	PMP & ProtectHealth Fees Paid (RM)
Various Vaccination Centre of PPVIN	2,800,220	41,981,744

Source : ProtectHealth

PeKa B40 FINDINGS: DETECTION OF NEWLY DIAGNOSED NON-COMMUNICABLE DISEASES (NCD)

Among the key findings of PeKa B40 health screening is the detection of new cases of NCDs. Referring to **Figure 18.1**, newly diagnosed NCD cases (data as of 31 December 2021) showed a higher percentage in 2021 compared to 2020, especially for Dyslipidaemia at 32.2 per cent. Newly diagnosed patients will be referred to MOH facilities or be treated at the same facility they visited for screening, depending on the patient’s preference.

As a total prevalence of known cases and newly diagnosed NCDs among our screened PeKa B40 population, Dyslipidaemia was the highest at 71.2 per cent with Hypertension not far behind (63.3 per cent).



Source: ProtectHealth

QUALITY MONITORING

Medical Audit Section (MAS) is established under Quality Assurance Department with the main objective to ensure quality and performance monitoring of all ProtectHealth partners in delivering healthcare services to promote an effective and efficient healthcare system and delivery. All private medical practitioners, NGOs and partner laboratories registered with ProtectHealth must adhere to the policies, guidelines and Standard Operating Procedures set by ProtectHealth Corporation. For the year 2021, apart from the existing task of monitoring service providers enrolled under PeKa B40 programme, MAS has been additionally assigned to monitor vaccination conducted by partner providers under PICK.

In 2021, MAS audited 21,050 PeKa B40 claims with an average of 1,754 claims per month (**Table 18.6**). From the audit conducted, continuous quality improvement measures and

education to the providers are undertaken regularly to ensure the best possible outcome and services for the beneficiaries under PeKa B40 programme.

Table 18.6
Number of PeKa B40 Claims Audited as of 31 December 2021

Month (2021)	Claims Audited
January	2,452
February	3,798
March	1,919
April	1,809
May	850
June	1,000
July	1,582
August	1,631
September	1,632
October	1,601
November	1,125
December	1,651
Total	21,050

Source: ProtectHealth

Throughout 2021, MAS also has been actively monitoring vaccinations conducted by PMPs and NGOs through PICK. The audit activities covered all types of PPVs both at facilities or outside facilities including Private Clinics, Private Hospitals, Specialist Clinics, PPV Integrated and outreach sites nationwide. At least 1,422 PPVs (**Table 18.7**) were audited by MAS in 2021 where active interventions and corrective measures were undertaken when and where necessary to ensure quality and safe vaccination services are provided at all times to the public.

Table 18.7
Type of PPV Audited as of 31 December 2021

Type of PPV	Number of PPV Audited	
At Facility	PPVGP	975
	PPVHS	98
	PPVKP	2
	PPVACC	4
Outside Facility	PPV Integrated	272
	PPV Outreach	63
	PPV Offsite	8
Total	1,422	

Source: ProtectHealth

19
**CLINICAL
RESEARCH
MALAYSIA**



INTRODUCTION

Clinical Research Malaysia (CRM), established in 2012, is a corporatised entity wholly owned by the Ministry of Health Malaysia to facilitate sponsored clinical research in Malaysia. Its Board of Directors, chaired by the Minister of Health comprises of senior officers from the Ministry of Health as well as experts in clinical research from academic institutions and private hospitals.

To ensure smooth and consistent trial delivery that meets global quality standards, CRM works closely with the government and relevant authorities to ensure that all regulations and best practices are thoroughly met. As studies unfold, CRM works together with industry players and investigators to propel clinical research in Malaysia, while at the same time create high-skilled job opportunities in the industry.

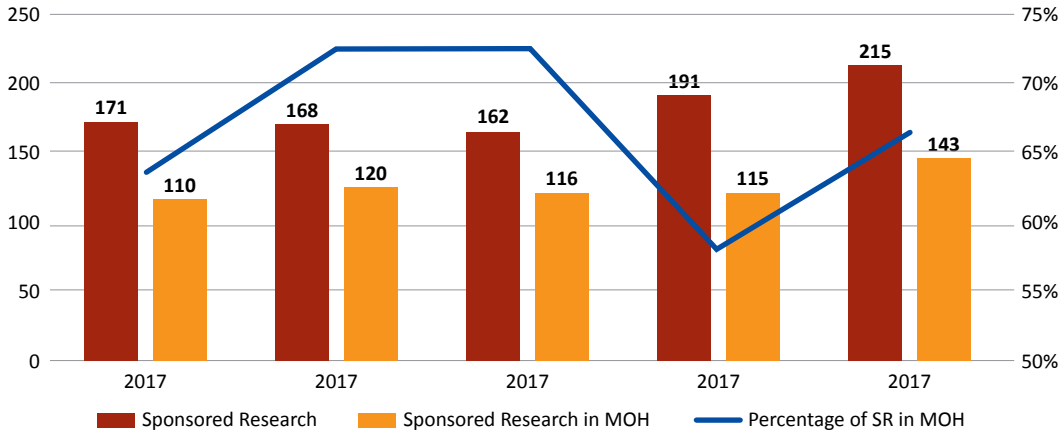
Among CRM's main services include complimentary feasibility studies and investigator matching, consultation and management of clinical trial budget, review of Non-Disclosure Agreement (NDA) and Clinical Trial Agreement (CTA) as well as placement of Study Coordinators at trial sites. In addition, CRM had also initiated two new services in 2021, which are Clinical Trial Advertisement service and Study Material Destruction service. These services further expand the scope of end-to-end clinical research support provided by CRM to its stakeholders.

Since 2019, CRM has been certified with ISO 9001:2015 Quality Management System (QMS), with its certification recently renewed by SIRIM QAS. CRM was also certified with ISO 37001:2016 Anti-Bribery Management System (ABMS) in 2021, cementing the company's commitment in being a globally trusted organisation to all its stakeholders.

ACHIEVEMENTS

Sponsored Research (SR) in Malaysia has continued to expand over the years, with a total of 215 sponsored research approved by Medical Research and Ethics Committee (MREC) and Institutional Review Boards/Independent Ethics Committees (IRB/IECs) in 2021, the highest record noted compared to the years before. Additionally, over 65 per cent of sponsored research conducted in Malaysia were carried out in Ministry of Health (MOH) facilities (**Figure 19.1**), which includes public hospitals and primary healthcare centres.

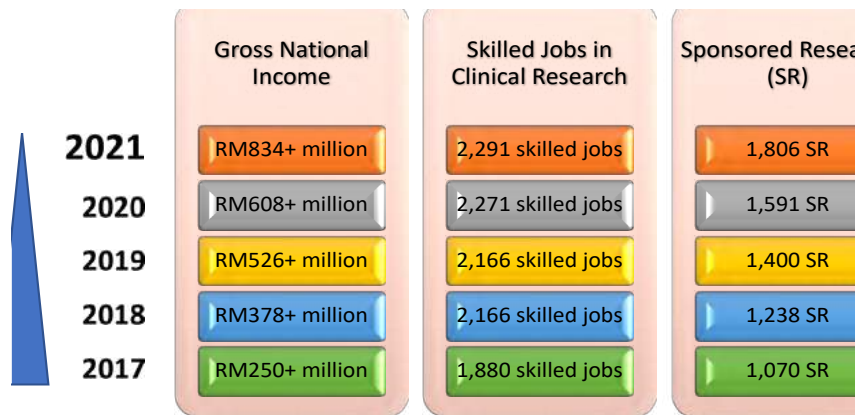
Figure 19.1
Number of Sponsored Research from 2017 to 2021



Source: Clinical Research Malaysia

For the first time, based on data from clinicaltrials.gov, Malaysia has climbed to second position after Singapore in number of new sponsored research conducted within the South East Asia region. This indicates continued high interest by global stakeholders on sponsored research conduct in Malaysia, despite challenges with the ongoing Covid-19 pandemic. In addition, RM226,206,446 investment value was captured from the Clinical Trial Agreements (CTA) executed in 2021, contributing to a total of RM834,621,009 in Gross National Income (GNI) for the clinical research industry in Malaysia, since CRM’s conception in 2012. The nation’s clinical research industry has also created 2,291 skilled jobs in the country (**Figure 19.2**).

Figure 19.2
Clinical Research Scorecard from 2017 to 2021



Source: Clinical Research Malaysia

On the company performance, CRM have delivered on all its Key Performance Indicators (KPIs), with surplus income of RM1,795,394 (**Table 19.1**).

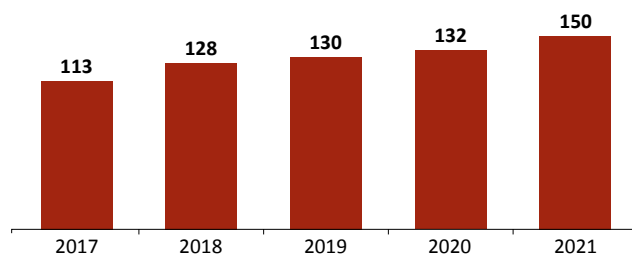
Table 19.1
CRM KPI Performance in 2021

Key Performance Indexes (KPIs)	Target	Actual	Rate Difference from Target (%)
KPI 1: Sponsored Research (SR)	166 New Studies	215 New Studies	+29.5
KPI 2: SR in Ministry of Health (MOH) Centres	114 New Studies	143 New Studies	+25.4
KPI 3: CRM Income	RM13,100,000	RM15,763,796	+20.3
KPI 4: CRM Expenses	RM15,600,000	RM13,968,402	-10.4
KPI 5: GNI (CTA Value)	RM80,000,000	RM226,206,446	+182.8

Source: *Clinical Research Malaysia*

CRM also functions as a Site Management Organisation (SMO) for sponsored research conducted at Ministry of Health sites, mainly through its Study Coordinator services. In keeping with the rising demand of CRM's Study Coordinator services at study sites, the number of CRM Study Coordinators (SCs) have been increased to 150 SCs nationwide in 2021 (**Figure 19.3**). The role and responsibilities of CRM SCs are to support investigators in various study activities, including facilitating with study recruitment activities to ensure investigators could achieve the recruitment targets. In 2021, CRM recorded an average of 86 per cent subject recruitment in studies supported by CRM Study Coordinators, ahead of its targeted recruitment rate of 83 per cent.

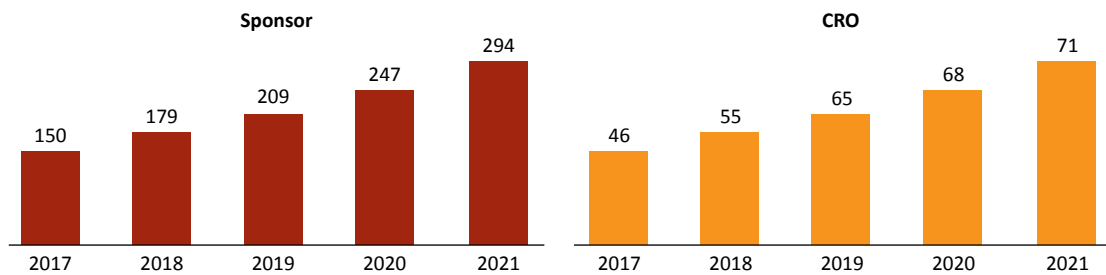
Figure 19.3
Number of Study Coordinators in CRM from 2017 to 2021



Source: *Clinical Research Malaysia*

In attracting more sponsored research into the country, CRM have continuously engaged with new industry players that makes up small and mid-size contract research organizations (CRO), as well as pharma/biotechnology/medical device companies (Sponsor) to further expand the country's footprint in the global clinical research landscape (**Figure 19.4**). These initiatives were also accelerated through CRM's virtual presence, with over 25.2 million visits and impressions to CRM's website and social media platforms recorded in year 2021.

Figure 19.4
Growth of Sponsor and CRO that have engaged with CRM from 2017 to 2021



Source: Clinical Research Malaysia

COMPLETION OF P1RP

Early phase studies are vital to further enhance Malaysia's capability in multi-therapeutics drug development. The Phase 1 Realisation Project (P1RP) initiative which was initiated by CRM in 2016 was developed primarily for the purpose to enable and drive early phase research in Malaysia through its five identified pillars:

- i) Guidelines for Phase 1 Clinical Trial;
- ii) Risk Management;
- iii) People Development;
- iv) Capability Development; and
- v) Preparation of Sites.

The P1RP project marked its completion in 2021, wrapping 18 per cent savings from its budget of RM2,600,000. Under the P1RP, the development of the Guidelines for Phase 1 Clinical Trial was the precursor to the rest of the initiatives that took place, including the Phase 1 Unit Inspection and Accreditation Program by National Pharmaceutical Regulatory Agency (NPRA). With the completion of this project, CRM has further supported the enhancement of First-in-Human (FIH) capabilities and capacities in Malaysia, by providing exposure and training in early phase drug development to Malaysia's regulators and investigator, equipping trial sites with the necessary infrastructure for early phase study and the establishment of a Scientific Review Panel to support the Medical Research and Ethics Committee (MREC) in reviewing First-in-Human studies.

In March 2021, NPRA reviewed and approved the first FIH study, which was later conducted in Sarawak General Hospital. The study investigator, Dr. Chew Lee Ping became first global recruiter ahead of other global sites for this study, marking significant study achievement and progress for Sarawak General Hospital.

EVENTS AND ACTIVITIES

CRM has participated and conducted numerous activities and events throughout year 2021, some with close collaborations with both local and global stakeholders. Among notable participations were CRM's presence in programs organised by both the Japanese Society of Medical Oncology (JSMO) and Japan Pharmaceutical Society, in which CRM presented on Malaysia's clinical research ecosystem and growing opportunities for drug development. On the local front, CRM was the co-organiser in the annual National Conference for Clinical Research (NCCR) together with Institute for Clinical Research (ICR). CRM also formed new partnerships and business collaborations through the inking of Memorandum of Understandings with both Docquity and University of Technology MARA (UiTM), in efforts to further elevate awareness and interest on clinical research in Malaysia and in developing an accredited Bioequivalence centre in UiTM Hospital respectively. In addition, CRM has also conducted numerous trainings, workshops, and dialogues throughout the year to ensure continuous engagement with stakeholders (**Table 19.2**).

Table 19.2
CRM Programs in 2021

Training/ Activities	Frequency
Good Clinical Practice Refresher Workshop	4
Provisionally Registered Pharmacist Attachment	3
Patient Recruitment and Retention Workshop	3
Nurturing New Talents in Sponsored Research	3
Preparation for Regulatory Inspection Workshop	2
Protocol Compliance Workshop	2
Industry Dialogue	2
Investigator Dialogue	1
Plan of Action (PoA) 2021	1
Training to Improve Performance of Study Coordinators (TIPS): Train the Trainer	1
Training to Improve Performance of Study Coordinators (TIPS)	1
Early Phase Research Webinar	1
NPRA Good Submission Practice Workshop	1

Source: *Clinical Research Malaysia*

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 (Amendment) Act 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 (Amendment) Act 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 (RMP); and
 - c. Accreditation of medical programmes.

ACTIVITY AND ACHIEVEMENT

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 2021 are shown in **Table 20.1**:

Table 20.1
MMC Registration Application Approved Under The Medical (Amendment)
Act 2012 For The Year 2021

Application	2021
Provisional Registration	3,867
Full Registration with No Condition Section 14(1) of the Act	5,404
Full Registration with Condition Section 14(2A) & 14(3) of the Act	201
Specialist Registration Section 14C of the Act	937
Temporary Practising Certificate Section 16(1) of the Act	23
Letter of Good Standing	637
Annual Practising Certificate Section 20(1) of the Act	62,388

Source: Malaysian Medical Council (MMC)

LAW AND REGULATIONS (COMPLAINT)

Medical Act 1971 & the Medical (Amendment) Act 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 (Amendment) Act 2012 (New Medical Act), there are five (5) Preliminary Investigation Committee (PIC) in total. Hearing under the New Medical Act runs actively throughout the year via online meetings as it only involves the review of documentation internally whereas hearing under the Old Medical Act involved physical hearings which were postponed due to COVID-19.

Below is the total number of complaints registered under the Medical Act 1971 & the Medical (Amendment) Act 2012 in 2021 (**Table 20.2**):

Table 20.2
Statistics of Complaints Sentenced to the Preliminary Investigation Committee (PIC) under the Medical Act 1971 & the Medical (Amendment) Act 2012 In 2021

Act	PIC	PIC I/1	PIC II/2	PIC III/3	PIC IV/4	PIC V/5	PIC VI	Total
Medical Act 1971		7	5	7	4	7	3	33
Medical (Amendment) Act 2012		21	9	37	15	11	-	93
TOTAL		28	14	44	19	18	3	129

Source: Malaysian Medical Council (MMC)

FINANCIAL REPORT

MMC financial report prepared for the year ended 2021 has not been audited yet by the Auditor General of Malaysia. Below are the summary of the report:

- i. MMC total profit in Year Assessment (YA) 2021 is RM8,491,866 higher than in YA 2020 with differences of RM1,993,744;
- ii. MMC income from Government Grant in YA 2021 is 50 per cent lower than in YA 2020 with differences of RM1,000,000; and
- iii. MMC Total Expenses in YA 2021 is lower than YA 2020 with differences of RM1,728,595.

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

