

STRATEGIC FRAMEWORK OF THE MEDICAL PROGRAMME Ministry of Health Malaysia **2021 – 2025**



“ Improving access to medical care, leaving no one behind through strengthening, enhancement and consolidation of medical services ”

STRATEGIC FRAMEWORK OF THE MEDICAL PROGRAMME Ministry of Health Malaysia **2021–2025**



The process of developing this strategic framework
was coordinated by the Hospital Management Unit,
Medical Development Division

Strategic Framework of the Medical Programme,
Ministry of Health Malaysia (2021 – 2025)

ISBN 978-967-0509-19-8
eISBN 978-967-0509-20-4
MOH/P/PAK/438.20(BK)-e

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Published by

Hospital Management Unit
Medical Development Division
Ministry of Health Malaysia
Level 5, Block E1, Complex E
Federal Government Administrative Centre
62590 Putrajaya MALAYSIA
Tel: +603-88831178
Website: www.moh.gov.my

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*Most of the pictures featured in this publication were taken during
the COVID-19 pandemic. We would like to thank the Hospital
Directors and their teams at the National Cancer Institute, Putrajaya,
Hospital Kajang and Hospital Tengku Ampuan Rahimah, Klang in their
assistance in this matter.

Printed in Kuala Lumpur.

Printing edition, May 2020.

eISBN 978-967-0509-20-4



Table of Contents

Overview

ii	Foreword by the Secretary-General to the Ministry of Health Malaysia
iv	Foreword by the Director-General of Health Malaysia
vi	Foreword by the Deputy Director-General of Health (Medical)
viii	List of tables
ix	List of figures
xi	Executive Summary
xii	Process of drafting the Strategic Framework
xvi	Glossary of terms, acronyms and abbreviations

Who We Are

2	Introduction
4	Functions and Scope of the Medical Programme
4	> Secondary and tertiary care services
4	> Medical profession
5	> Nursing profession
5	> Allied health profession
5	> Medical care quality
5	> Health technology assessment
6	> Medical practice
6	> Traditional and complementary medicine
6	> Medical Aid Fund
7	Vision Statement
7	Mission Statement
8	Organisational Structure

What We Have Achieved

12	Achievements during the Eleventh Malaysia Plan (2016 – 2020)
12	> Expansion and development of hospital services
15	> Development of medical professions
16	> Improving quality of services
17	> Making patients' safety as priority
17	> Embracing evidence-based and value-based practice
18	> Ensuring quality of private healthcare through regulatory activities
19	> Safeguarding medical practices through legislation
19	> Ensuring safe and quality practices of traditional and complementary medicine
20	> Preparing the healthcare system for future reform to improve access to healthcare coverage
21	> Management of COVID-19 pandemic

Table of Contents

What We Are Facing

25	Issues and Challenges
25	> Increasing economic burden and scarce financial resources
26	> Increasing burden of non-communicable diseases
27	> Emergence and re-emergence of infectious diseases
27	> Disaster and crisis management
30	> Sustaining national health indicators
30	> Changing sociodemographic
30	> Old health facilities and equipment
31	> Unmet human resource needs with increasing workload and complexity
31	> Rapid development of technology
32	> Intersectoral / Multisectoral collaboration and international commitment
32	> Increasing needs for better stewardship and governance in healthcare
34	> Maintaining quality and safety of services
34	> Rapid development of healthcare industry
35	> Research

Our Plan

38	Way forward
38	> Principles and Philosophy
38	> Objectives
38	> Strategies and priority areas
42	Implementation Plan for each Strategy
42	> Strategy 1: Strengthen healthcare services delivery in hospitals
54	> Strategy 2: Optimise resource management including facility, equipment and financing
58	> Strategy 3: Enhance capacity and capability of human resource for health
64	> Strategy 4: Strengthen governance and stewardship of healthcare system
72	> Strategy 5: Strengthen safety and quality in delivery of healthcare system
76	> Strategy 6: Leverage the use of information technology to improve efficiency
80	> Strategy 7: Promote safe and quality practices of traditional and complementary medicine

What's Next

84	Monitoring and Evaluations
87	Conclusion
88	References
92	> Annex 1. List of Head of Divisions in the Medical Programme
95	> Annex 2. Drafting Committee
98	> Annex 3. Contributors
104	> Annex 4. Reviewers



FOREWORD BY
THE SECRETARY-GENERAL TO THE MINISTRY OF HEALTH MALAYSIA



I am pleased to note that the Medical Programme has taken the initiative to develop Strategic Framework of the Medical Programme 2021 - 2025. The Framework will serve as a guide for the Medical Programme to determine its direction especially in supporting the government initiatives or policies in the coming years. The Ministry of Health aims to maintain a world-class healthcare system, yet affordable and accessible to all. Universal health coverage is our ultimate goal and the Medical Programme shall continue to play its crucial role to achieve that.

I believe careful consideration and detailed discussions have been made to develop this framework and all relevant stakeholders have been engaged. Therefore, I hope a more thorough and detailed implementation plan can be outlined to ensure the strategies can be delivered. Despite challenges such as escalating healthcare cost, increasing workload and disease burden, unpredictable circumstances such as pandemic and crisis, we shall persevere and optimise our resources. We must make way for innovative solutions including using appropriate technologies to improve our efficiency and effectiveness in our work. I also urge stronger collaboration between all agencies under the Ministry and closer inter-ministerial relationship in all efforts to achieve our goals. Such collaboration shall be encouraged to promote resource optimisation and

sustainability. I would like to also emphasise the importance of constant and regular monitoring and evaluation to ensure that this document is a living document. All strategies and plans shall be followed through and achievements shall be acknowledged. Similarly, unachieved goals and objectives shall be carefully analysed and reassessed. The Ministry will continue to do its best to facilitate initiatives to improve our healthcare system.

To end this note, I would like to extend my congratulations to the Medical Programme for developing the Strategic Framework of the Medical Programme 2021 - 2025. I am sure that, with the cooperation and collaboration of all relevant stakeholders, the goals we aspire to accomplish will in time translate into milestones of which we can be proud of.



Dato' Seri Dr Chen Chaw Min
Secretary-General to the Ministry of Health
Malaysia

FOREWORD BY
THE DIRECTOR-GENERAL OF HEALTH MALAYSIA



As we embark into the year 2021 - 2025, Ministry of Health continues to strive to work tirelessly to stay on course towards achieving WHO's Universal Health Coverage, Sustainable Development Goals and stay true to the Astana Declaration. Although we have been making progress in transforming the healthcare system to be more relevant, efficient, effective, and responsive, nevertheless, the journey to a stronger, more robust, accessible, affordable, high quality and sustainable healthcare is still very much an uphill course.

Our efforts in maintaining and improving health gains during the 11th Malaysia Plan were not without obstacles, both existing as well as new ones. These challenges are increasingly complex, often spurred by changing demographics and epidemiological profiles, emerging and re-emerging diseases, economic volatility and increasing healthcare cost, among other factors. At the same time, with rapid socioeconomic development, comes a corresponding rise in people's expectations and demands for more and higher quality health services.

The answer to address these challenges is one where Ministry of Health envision a future in which new business and care value-based delivery models, aided by digital technologies, may help to solve today's problems and to build a sustainable foundation for affordable, accessible, high quality healthcare. This vision requires a philosophical shift in focus away from one of patient-centred care (sick care) to one of person-centred care, which supports

wellbeing, prevention and early intervention, with integration of all health sectors, into "clusters" of public-private healthcare service providers, could collectively drive innovation, increase access and affordability, improve quality, and lower costs through more efficient delivery models.

Hence, I commend the Medical Programme in taking the initiative to develop this strategic framework that takes a comprehensive, whole-of-system approach, incorporating the national and MoH's vision, aligned with the direction and national strategy for the 12th Malaysia Plan, as well as that of WHO.

Together as one Ministry of Health, we continue our journey in our commitment in making UHC a reality. Equity to quality healthcare is at the forefront of any decision we make. Working together, we can ensure every Malaysian has equitable access to quality and affordable health services and enjoy the highest attainable standard of health as a basic human right for all.



Datuk Dr Noor Hisham Abdullah
Director-General of Health Malaysia

FOREWORD BY
THE DEPUTY DIRECTOR-GENERAL OF HEALTH (MEDICAL)

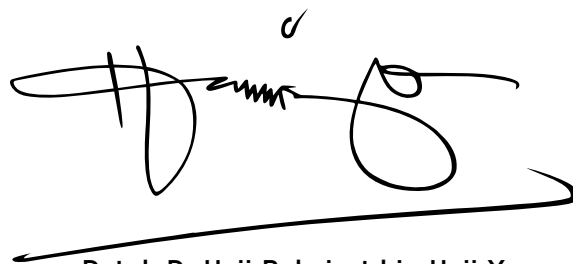


I am delighted to share with you Strategic Framework of the Medical Programme, 2021 - 2025. The strategic framework was developed with the aim to further strengthen the delivery of secondary and tertiary care. This framework supports the principles and objectives of existing strategic direction including the current Malaysia's Plan, Sustainable Development Goals, Universal Health Coverage and the vision and mission of the Ministry of Health.

This framework sets the Medical Programme's direction for the next five years and serves as a guide and roadmap in our journey to make hospital services more effective, responsive, high quality, technology-driven, equitable and affordable. In developing the Strategic Framework, we took serious considerations of our past achievements and shortcomings in 11th Malaysia Plan. Moving forward, in the light of present and new challenges ahead, we put forward strategies based on three (3) principles. First, maintaining and enhancing initiatives that have yielded successful outcomes in addressing major issues. Second, reviewing, refining and even innovating on-going initiatives that might have not revealed desired outcomes. Third, developing new strategies to deal with new issues and challenges. We also give due attention to

monitoring and evaluation mechanism to promote effective implementation of these strategies.

My sincere gratitude to all the Programme officers and staffs for their active participation and commitment in the development of the strategic framework. Let us continue to work together as a team in implementing the Strategic Framework of the Medical Programme 2021 - 2025. With the full cooperation and dedication at all levels including our colleagues in other Programmes in the Ministry of Health and with the support of our partners from government agencies, private sectors, non-governmental organisations as well as the community, together we can make significant progress and deliver outcomes that will benefit the people and the nation.



Datuk Dr Haji Rohaizat bin Haji Yon
Deputy Director-General of Health (Medical)



LIST OF TABLES

13	Table 1	Facilities Development under the Eleventh Malaysia Plan for the Secondary and Tertiary Care Services
44	Table 2	Implementation Plan and Activities for Programme Strategy 1
55	Table 3	Implementation Plan and Activities for Programme Strategy 2
59	Table 4	Implementation Plan and Activities for Programme Strategy 3
65	Table 5	Implementation Plan and Activities for Programme Strategy 4
73	Table 6	Implementation Plan and Activities for Programme Strategy 5
77	Table 7	Implementation Plan and Activities for Programme Strategy 6
81	Table 8	Implementation Plan and Activities for Programme Strategy 7



LIST OF FIGURES

xii	.....	Figure 1	Development of Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021 - 2025)
2	.....	Figure 2	List of Services with Dedicated Code of Financial Activities under the Medical Programme, Ministry of Health Malaysia
9	.....	Figure 3	Organisational Chart of the Medical Programme, Ministry of Health Malaysia
25	.....	Figure 4	Public Sector Health Expenditure by Functions of Health Care, 2017 (percentage, MYR in million)
26	.....	Figure 5	Prevalence of Diabetes Mellitus, Hypertension, Hypercholesterolemia (2019) and Common Causes of Death among Malaysian Adults (2018)
27	.....	Figure 6	Trends in Prevalence of Diabetes Mellitus among Adults in Malaysia, 2011 - 2019
28	.....	Figure 7	Major Crises and Disasters in Malaysia, 1996 - 2020
39	.....	Figure 8	Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021 - 2025)
40	.....	Figure 9	Relationship between Issues & Challenges and the Seven (7) Programme Strategies
43	.....	Figure 10	Focus Areas under Programme Strategy 1 — to Strengthen Healthcare Services Delivery
84	.....	Figure 11	Proposed Timeline for Monitoring & Evaluation of the Implementation of Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021 - 2025)
87	.....	Figure 12	Relationship between the Strategic Framework of the Medical Programme and Other Major Policy Directions and International Commitments



EXECUTIVE SUMMARY

As we move towards the next decade, there are many new issues and challenges that await us. The secondary and tertiary care will continue to play a pivotal role in the delivery of healthcare services in the country. The Medical Programme of the Ministry of Health shall continue to stay dynamic, effective, efficient and relevant especially in its approach and strategies to ensure these issues and challenges can be addressed accordingly, even though resources will continue to pose a challenge to materialising all implementation plans.

Prior to developing our strategies in the next coming years, the Medical Programme has identified key issues and challenges and from these listings, strategies and implementation plans were outlined and prioritised to guide us in our work for the next five years. Changing socio-demographic, increasing prevalence / incidence of non-communicable diseases and emergence and re-emergence of infectious diseases are among major challenges to be anticipated in the coming years. Increasing economic burden, scarce financial resources, rapid development of technology, old health facilities and equipment and unmet human resource needs are among important areas to be carefully addressed in managing resources in health. The pandemic of COVID-19 which occurred at the time of writing this document shall remind us on the importance of continuous effort to prepare the healthcare system including the hospital services as well as the private healthcare facilities and services, to be effectively responsive to any crisis or disaster. The Medical Programme will continue to play its roles in intersectoral

collaboration, international commitment, development of health industry and research. Stewardship and governance in healthcare will be enhanced and maintaining quality and safety will continue to be among the main agenda of this office.

Seven (7) strategies have been identified with a total of sixty-one (61) implementation plans; Strategy 1 — strengthen healthcare services delivery in hospitals, Strategy 2 — optimise resource management including facility, equipment and financing, Strategy 3 — enhance capacity and capability of human resource for health, Strategy 4 — strengthen governance and stewardship of healthcare system, Strategy 5 — strengthen safety and quality in delivery of healthcare system, Strategy 6 — leverage the use of information technology to improve efficiency and Strategy 7 — promote safe and quality practices of traditional and complementary medicine. Targets / indicators have also been identified for all implementation plans and these will be carefully monitored and audited.

The diagram illustrates the Strategic Framework for the National Health Service (NHS), structured as a series of concentric rings around a central core.

Central Core:

- PRINCIPLES & PHILOSOPHY
- OBJECTIVES OF STRATEGIC FRAMEWORK

First Ring (Inner):

- 7 STRATEGIES
- 61 IMPLEMENTATION PLANS
- 176 ACTIVITIES

Second Ring (Middle):

- ACHIEVEMENTS
- 14 ISSUES AND CHALLENGES
- MEDICAL PROGRAMME

Outer Ring (Outer):

- HEALTH SITUATION ANALYSIS
- LOCAL COMMITMENT
- INTERNATIONAL COMMITMENT
- MINISTRY OF HEALTH

Additional Labels:

- Mission, Vision and Objectives (associated with the Medical Programme)
- Mission and Vision (associated with the Ministry of Health)

Arrows indicate a clockwise flow from the center to the outer ring, suggesting a progression from core principles to implementation and finally to achievements and challenges.

- TWG papers of 11MP
- Malaysia Health System Research Report, MOH & Harvard School of Public Health, 2016
- National Health Morbidity Surveys (NHMS) 2016 - 2019
- Keynote speeches by Prime Minister/ Health Minister/ Director-General of Health
- Input from Ministry of Economic Affairs, Health Minister
- Input from State Health Offices, Hospitals
- Input from Heads of Services
- Input from other Programmes, Divisions
- Input from Private Health Sector

- TWG papers of 12MP
- 11MP Mid Term Review
- National Health Policy
- Government Policies eg. Wawasan Kemakmuran Bersama 2030

- Universal Health Coverage (UHC) 2030
- Sustainable Development Goals (SDG)
- Astana Declaration

xii | Strategic Framework of the Medical Programme, Ministry of Health Malaysia 2021 - 2025

Three (3) dimensions were identified, in mid 2019, as pillars to the country's Twelfth Malaysia Plan (12MP); economic empowerment, environmental sustainability and social re-engineering.

Health agenda was included under the dimension of social re-engineering. The then Ministry of Economic Affairs, currently known as Economic Planning Unit was the main secretariat for the country's 12MP, has identified and formed technical working groups (TWGs) and focus groups (FGs) comprising of key stakeholders from various Ministries, agencies and sectors including those from non-governmental organisations (NGOs) and private sectors in its course to developing the document of the 12MP.

The Planning Division of the Ministry of Health served as the main secretariat coordinating the development of the overall framework for healthcare. Several focus areas were identified, and the Medical Programme was tasked specifically to identify and develop a strategic framework for strengthening the healthcare services delivery. Other focus areas were, improving population health outcomes, environmental health and food safety and quality, sustainable healthcare financing, healthcare resources (human resource and facilities), innovation and technology in health,

public-private collaboration and health literacy, community empowerment and mobilisation. The Medical Programme participated in numerous meetings between the months of June – September 2019 organised by the Planning Division.

In its course to develop the strategic framework for strengthening the healthcare services delivery, the Medical Programme conducted several engagement sessions with all stakeholders throughout the month of July 2019. The sessions were attended by key representatives from the Public Health Programme, Dental Health Programme, Pharmaceutical Services Programme, all Divisions under Medical Programme and the Planning Division. External stakeholders were the university hospitals, the private sector and non-governmental organisations such as the Malaysian Medical Association (MMA), Association of Private Hospital Malaysia (APHM), Federation of Private Medical Practitioners' Association Malaysia (FPMPAM), Pertubuhan Doktor-doktor Islam Malaysia (PERDIM), Malaysian Pharmaceutical Society (MPS), Malaysian Dental Association (MDA) and Malaysian Private Dental Practitioners' Association (MPDPA) and other experts. It was during the initial engagement session held on 10 July 2019 that it was decided and agreed upon that the approach in developing the strategic framework for strengthening the healthcare services delivery would be based on diseases spectrum,

in view of the double diseases burden faced by our healthcare system. Several other meetings thereafter resulted in the drafting of outline of the framework in preparation of a workshop to develop a detailed plan of action.

At the end of the workshop which was conducted between 24 – 26 July 2019, a draft framework was developed and a refined draft was presented to the Planning Division in August 2019. The Planning Division then presented to the Health Minister on 5 September 2019 and the finalised approved draft of the healthcare framework was presented and submitted to the then Ministry of Economic Affairs in January 2020. Five (5) main strategies outlined in the main Ministry of Health's Twelfth Malaysia Plan preliminary framework for healthcare will be described further in the later section.

Realising the need for an inclusive, sound and comprehensive plan for the Medical Programme and to ensure the goals of the 12th Malaysia Plan can be achieved, the Medical Programme spearheaded an initiative to develop a strategic framework of its own under the guidance and leadership of the Deputy Director-General of Health (Medical). The Hospital Management Unit, Medical Development Division was appointed as the lead coordinator for the development of strategic framework in December 2019. Strategic framework of the Medical Programme gives more focus on the development of secondary and tertiary

PROCESS OF DRAFTING THE STRATEGIC FRAMEWORK

care services and other specific functions of the Medical Programme including professional development, enforcement and regulatory work, compared to the one initially presented to the Planning Division.

During the initial meetings chaired by the Head of the Hospital Management Unit, Medical Development Division between January and March 2020, seven (7) Programme Strategies were identified. Representatives of Divisions under the Medical Programme participated in a series of discussions. These strategies were further discussed and improved before they were subsequently approved by the Deputy Director-General of Health (Medical) for further deliberation. The strategies were developed in keeping with the overall preliminary strategies of the Ministry of Health for the 12MP. A Working Committee was formed, and permanent representatives were appointed as coordinators and liaison officers for each Division under the Medical Programme.

Subsequent weekly discussions were held, throughout the month of January-February 2020, to deliberate further the implementation plans, activities and indicators for each of the seven (7) strategies. We also solicited inputs from heads of clinical services and other relevant

stakeholders. Throughout the process of drafting the strategic framework, consultations and communications with all stakeholders were done.

With the draft of the strategic framework completed, refined and agreed upon by the Working Committee in early March 2020, it was then presented to the Director of Medical Development Division and Deputy Director-General of Health (Medical) in mid-March 2020 (11 and 13 March 2020, respectively). A meeting with all the Heads of Divisions was to be held on the 16 March 2020 to obtain feedback for improvement. Due to the COVID-19 outbreak and the enforcement of Movement Control Order, subsequent correspondences were done through emails. Additional feedback from the Planning Division and heads of clinical services were further sought to ensure all stakeholders have been informed and given opportunity to provide feedbacks and suggestions before the framework was finalised and published. The final draft of the strategic framework was finally approved on 19 May 2020, in a meeting chaired by the Deputy Director-General of Health (Medical) and attended by the Directors and senior Deputy Directors of all Divisions.

Footnote Ministry of Economic Affairs, now known as Economic Planning Unit (EPU) of the Prime Minister's Department



OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

GLOSSARY OF TERMS, ACRONYMS AND ABBREVIATIONS

ACP	Advanced Competency Programme
AHP	Allied Health Profession
AIDS	Acquired Immune Deficiency Syndrome
AMO	Assistant Medical Officer
AMS	Antimicrobial Stewardship
ART	Assisted Reproductive Technology
BBIS	Blood Bank Information System
BPH	Benign Prostatic Hypertrophy / Hyperplasia
CABG	Coronary Artery Bypass Graft
CBBP	Cuti Belajar Bergaji Penuh (fully paid study leave)
CCIS	Critical Care Information System
CDH	Communicable Diseases Hospital
CENSSIS	Centralised Sterilisation Supply Information System
CHD	Congenital Heart Disease
CMI	Casemix Index
COVID-19	Corona virus disease 2019
CPD	Continuous Professional Development
CPG	Clinical Practice Guideline
CT	Computerised tomography scan
DG	Director-General
DRG	Diagnosis Related Group
EIS	Executive Information System
EMR	Electronic Medical Report
EMRS	Emergency Medical Response System
ERCP	Endoscopic retrograde cholangio-pancreatography
FG	Focus Group
FMIS	Forensic Management Information System
FPP	Full Paying Patient
GDP	Gross Domestic Product
HIRARC	Hazard Identification, Risk Assessment and Risk Control
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HHR	Health Human Resource
HPIA	Hospital Performance Indicator for Accountability
HTA	Health Technology Assessment
ICT	Information, Communication Technology
ICU	Intensive Care Unit
IT	Information Technology
IoT	Internet of Things
LEAN	Is a set of operating philosophies and methods that help create a maximum value for patients by reducing waste and waits. It emphasizes the consideration of the customer's needs, employee involvement and continuous improvement.
LIS	Laboratory Information System

MaHTAS	Malaysian Health Technology Assessment Section
MECC	Medical Emergency Coordination Centre
MENTARI	Community Mental Health Centre
MERS	Middle East Respiratory Syndrome
MERS-CoV	Middle East respiratory syndrome coronavirus
MO	Medical Officer
MPC	Malaysia Productivity Corporation
MPSG	Malaysian Patient Safety Goals
MS ISO 9001	Is defined as the international standard that specifies requirements for a quality management system
MoH	Ministry of Health
MSQH	Malaysian Society for Quality in Health
MYR	Malaysian Ringgit
NAT	Nucleic Acid Amplification Testing
NCD	Non Communicable Disease
NGO	Non Government Organisation
NHMS	National Health and Morbidity Survey
OECD	Organisation for Economic Cooperation and Development
OHCIS	Oral Health Care Information System
OOP	Out-of-pocket
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Act
OTMS	Operating Theatre Management System
PACS	Picture Archiving Communication System
PHCAS	Pre Hospital Care and Ambulance Services
PPC	Paediatric Palliative Care
QMS	Quality Management System
RIS	Radiology Information System
RM	Ringgit Malaysia
SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goal
SE-IPS	Supported Employment - Individual Placement and Support
SME	Subject Matter Expert
TB	Tuberculosis
TechBrief	Technical Brief
TechScan	Technical Scan report
T&CM	Traditional and Complementary Medicine
THE	Total Health Expenditure
TPC	Tele Primary Care
TWG	Technical Working Group
UHC	Universal Health Coverage
WHO	World Health Organisation
11MP	Eleventh Malaysia Plan
12MP	Twelfth Malaysia Plan



WHO WE ARE





INTRODUCTION

The Medical Programme is by far the largest Programme under the technical arms of the Ministry of Health Malaysia, complimenting the functions of other five (5) Programmes namely the Public Health, Research and Technical Support, Dental, Pharmacy and Food Safety and Quality.

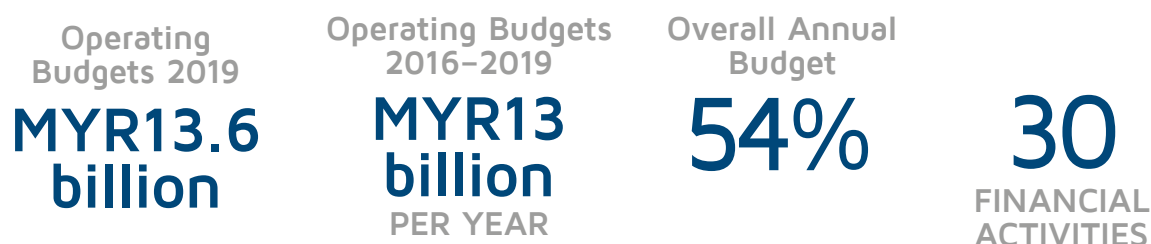
The Medical Programme received MYR13.62 billion of operating budgets in 2019 or an average of MYR13 billion per year between 2016 and 2019. This constitutes 54% of overall annual budget received by the Ministry of Health. The budget of the Medical Programme was distributed to 30 Financial Activities as listed in Figure 1, covering a wide range of clinical specialties, subspecialties and other supporting services. 64% of doctors (including medical specialists), 56% of pharmacists and 70% of nurses in the Ministry of Health (Kementerian Kesihatan Malaysia, 2019) were placed under the Medical Programme. The 146 hospitals including eleven (11) special medical institutions under the Medical Programme saw more than 2.6 million admissions in 2018 with 22 million outpatients’ attendances and 1.5 million daycare attendances (Ministry of Health Malaysia, 2019a).

- | | | |
|---|---------------------------|------------------------------|
| ■ Management of headquarters & state health departments | ■ Ophthalmology | ■ Pharmacy & supply |
| ■ Hospital management | ■ Otorhinolaryngology | ■ Dietetic & food |
| ■ Emergency & outpatient | ■ Dermatology | ■ Cardiothoracic |
| ■ General inpatient | ■ Neurology | ■ Nuclear medicine |
| ■ General medicine | ■ Nephrology | ■ Respiratory medicine |
| ■ General surgery | ■ Neurosurgery | ■ Psychiatry & mental health |
| ■ Obstetrics & gynaecology | ■ Urology | ■ Rehabilitative medicine, |
| ■ Paediatric | ■ Plastic surgery | Traditional & complementary |
| ■ Orthopaedic | ■ Radiotherapy & oncology | medicine |
| ■ Anaesthesia & intensive care | ■ Diagnostic imaging | ■ Transfusion medicine |
| | ■ Pathology | ■ Forensic medicine |

Figure 2 List of Services with Dedicated Code of Financial Activities under the Medical Programme, Ministry of Health Malaysia.
Source: Ministry of Finance Malaysia

Secondary and tertiary care serves as an important component in the delivery of healthcare services in this country. More than 70% of total health expenditure by the public sector were spent on curative care (Ministry of Health Malaysia, 2019b) compared to other functions of healthcare system such as public health services (including health promotion / prevention), health personnel education, ancillary services and research in health. As the largest provider of the country's healthcare services, the role of the Medical Programme of the Ministry of Health in shaping the development of secondary and tertiary services in Malaysia is pivotal. The services have gone through much consolidation over the last decades with the development of new hospitals and special medical institutions, expansion of specialty and subspecialty services, upgrading of facilities including the use of current and appropriate technologies, incentive package to healthcare workforce and increase in budget allocation.

Changes in sociodemographic profile, increasing disease burden, limited resources including human capital and higher public expectations are among factors that will pose a great challenge to the development of secondary and tertiary services in the future. Strategies to further enhance the services shall remain relevant to ensure future investments in health especially during the Twelfth Malaysia Plan (2021 – 2025) will yield optimal outcome with meaningful impact. This document will highlight significant achievements of Medical Programme during the 11th MP and will further elaborate issues and challenges faced by the Medical Programme. A few strategies have been identified to address those issues and challenges that will become a basis of setting priority areas in developing services in the coming years.



Percentage of MoH medical personnel in Medical Programme (2019)



FUNCTIONS AND SCOPE OF THE MEDICAL PROGRAMME

The scope of functions of the Medical Programme are focused primarily on provision and development of secondary and tertiary care services in the Ministry of Health hospitals. However, it is important to note that there are many important elements in the core functions of some Divisions under the Programme that extend beyond the boundaries of hospital services. Medical Programme also has a huge role in facilitating the private health sector to grow and maintain its standards through regulating the private healthcare facilities and services.

Secondary and tertiary care services

The secondary and tertiary level of care in hospitals encompasses a spectrum of services from pre-hospital care, emergency, ambulatory, diagnostic, therapeutic including surgical-based and medical-based services, intensive care, rehabilitative care to palliative care. The Medical Programme envisions delivery of efficient, effective and quality healthcare with fundamental intentions to provide the patients with early recovery, reducing disability and preventing premature death. The development of secondary and tertiary healthcare is ever more crucial in the coming years as the growing population ages and the burden of disease continues to increase with a shift toward double burden of non-communicable and communicable diseases (Boutayeb, 2010). While the health system is under

pressure due to both changing contextual and structural factors tied to health system functions such as financing, service delivery and governance, the Medical Programme will continue to steer a course towards developing a better secondary and tertiary services.

The scope of specialty and subspecialty services provided by the Ministry's hospitals extends beyond what was listed in Figure 2. There were more than 70 services listed under the Ministry of Health's Specialty and Subspecialty Framework for the Ministry of Health's Hospitals under the Eleventh Malaysia Plan (Ministry of Health Malaysia, 2016) and the Medical Programme will continue to consolidate the provision and development plan for these services in the upcoming Twelfth Malaysia Plan (2021 – 2025).

The Medical Programme will shift towards giving more emphasis on person-centred care in its effort to improve the services. One of the examples would be reorienting health service delivery

away from hospital-centric acute care to a model that emphasise on accessibility, promotion of health, disease prevention and effective management of chronic debilitating illness, through comprehensive community based / outreach programme. This partly involves better integration with our primary care counterparts.

Medical profession

The Medical Programme is responsible for the development and implementation of policies, guidelines, recommendations and regulations related to profession of medical doctors. This include training programmes for housemen and medical officers and continuous professional development programmes (CPD) for the medical doctors serving the Ministry of Health hospitals. The Programme is also responsible for medical specialty and subspecialty training, gazettement of medical specialists and other related matters such as collaboration with the public and private universities. The Programme is



also involved in the planning of placement of housemen, medical officers and specialists to ensure the distribution of doctors are in accordance with planning and framework of services. The Medical Programme will continue to play its advocate roles to enhance career development of the medical profession within the Ministry of Health through various initiatives and incentives which will then help to address the issue of inadequate supply of skilled workforce in the country's healthcare system.

Nursing profession

Medical Programme is responsible for the development of the nursing profession in the Ministry through various means including formulating training programmes, standards for practice, policies and also planning for human resource supply and distribution to cater the needs of healthcare services delivery. The Programme is also a lead agency for regulatory and enforcement activities relating to nursing profession. With regards

to this, it is important to note that the scope of the Medical Programme extends beyond the hospital services and covers other sectors in the healthcare system as well. For example, regulating the practice of nursing profession in the Public Health Programme also falls under the responsibility of the Nursing Division under the Medical Programme.

Allied health profession

Medical Programme is also responsible for the governance and professional development of 28 categories of allied health professions (AHP) within the Ministry of Health, covering a broad range of clinical, laboratory and public health services. The Programme develops and implements strategies, policies, guidelines, recommendations related to service delivery and regulations for AHP. The Programme also oversees the credentialing process, training and competency evaluation, human resources planning and career development pathway to ensure AHP deliver

safe, effective, efficient and high quality healthcare. The Programme enforces the Allied Health Professions Act 2016 [Act 774] and serves as the secretariat for the Malaysian Allied Health Professions Act Council (MAHPC).

Medical care quality

Healthcare quality and safety is one of the fundamental cornerstones of our healthcare services. Progressing towards achieving Universal Health Coverage, an improved access must be accompanied by efforts to improve the quality and safety of healthcare services. Medical Programme plays a pivotal role in ensuring a safe healthcare system is attained through implementation of appropriate quality improvement and clinical risk management activities.

Health technology assessment

The Medical Programme is currently driving not just evidence-based but also value-

FUNCTIONS AND SCOPE OF THE MEDICAL PROGRAMME

based practices. The Medical Programme produces health technology assessment (HTA) reports through a rigorous, multidisciplinary and systematic evaluation of properties, effects and / or other impacts of health technologies or healthcare interventions, which are then used to inform and guide the policy and decision-making process of the Ministry as well as for public consumption. The Programme also coordinates the development and implementation of clinical practice guidelines through a systematic method and evidence-driven process, which ultimately serve the clinicians and healthcare providers, with the goal of optimizing and improving the quality of patient care. It also identifies and assesses new and emerging health technologies or healthcare interventions that will likely have a significant impact through its horizon scanning activities and disseminates relevant information to the relevant authorities providing an early awareness and alert system which are crucial to ensure an efficient, responsive and dynamic healthcare system.

Medical practice

The Medical Programme is heavily involved in regulating the private healthcare facilities and services in Malaysia in accordance with the Private Healthcare Facilities and Services Act 1998 [Act 586]. Apart from that, it also regulates the psychiatric services and facilities under Mental Health Act 2001 and regulates the practices of assistant medical officers, optometrists, opticians and medical practitioners practicing medical aesthetics. The Programme is also responsible

for drafting new laws and amending the existing laws related to healthcare services and medical practices in the country. Regulating the private healthcare facilities and services is also done through drafting and enforcement of various Minister's directives and Director-General's directives issued under the Act 586. The Programme also manages potential medico legal cases involving government healthcare facilities, including coordinating and mitigating medico legal litigation cases between MoH's facilities and Attorney-General Chamber as well as organising trainings and courses on medico legal awareness for personnel in MoH's facilities. Taking into account the government's call for encouraging foreign investment, medical tourism and public-private partnership, the Medical Programme also provides technical input and advisory to the policymakers on matters related to liberalisation of healthcare services.

Traditional and complementary medicine

Malaysia is one of the few countries to regulate the diverse practices of traditional and complementary medicine (T&CM) through the enforcement and implementation of the Traditional and Complementary Medicine Act 2016 [Act 775]. The Medical Programme oversees the integration of traditional and complementary medicine practices into the national healthcare system in effort to deliver holistic and comprehensive healthcare to all Malaysians. The programme will continue to spearhead efforts to ensure safe and quality T&CM is

practiced in a professional and ethical manner. The programme will also continue to establish collaborative networks with local and international organisations to enhance the development of T&CM in the country.

Medical Aid Fund

The Medical Programme evaluates, from the technical point of view, all applications by the general public to obtain financial assistance from the Government's Medical Aid Fund for purchasing of medical equipment, rehabilitation equipment and medicine which are not provided by government hospitals. The Fund may also consider giving financial assistance on certain medical services not provided by the government hospitals. The Medical Programme also evaluates all applications from government employees on financing and reimbursement of expenses related to medication, medical equipment, treatment of kidney disease, infertility treatment, treatment at the National Heart Institution, specialists treatment at private hospitals, emergency treatment and medical treatment at overseas hospitals and other services not provided by government clinics / hospitals.

VISION STATEMENT

The vision of the Medical Programme is towards strengthening a healthcare system that is equitable, affordable, efficient, utilising appropriate technology, ensuring environmental sustainability and customer-friendly with due emphasis on quality, innovation, improved health status and respect as well as to encourage individual responsibility and involvement to improve quality of life.

MISSION STATEMENT

The Medical Programme will strive to ensure services delivered by our healthcare providers are of high quality, efficient, effective, comprehensive and fulfils the customers' expectations. This will be achieved through a structured planning, monitoring, coordination, evaluation and regulation, coupled with continuous measures of improvement relevant to the current developments in the medical field. The Programme will also ensure that services are provided by committed, compassionate, ethical, skilled and professional personnel through implementation of continuous professional development activities. Patient safety and quality care will always be a priority.



ORGANISATIONAL STRUCTURE

The Medical Programme is led by the Deputy Director-General of Health (Medical). There are five (5) divisions and one (1) unit under the Medical Programme, namely:



Medical Development Division



Medical Practice Division



Nursing Division



Allied Health Sciences Division



Traditional and Complementary Medicine Division



Medical Aid Fund (Unit)

Each Division is led by a Director to assist the Deputy Director-General to carry out all his functions as mentioned in Section 2. At the level of State Health Departments, the Deputy State Health Directors (Medical) are responsible to carry out most of the functions of the Medical Programme and are accountable for the operational matters of all hospitals and special medical institutions in the state. There are 146 hospitals (including eleven (11) special medical institutions) and one (1) special institution (National Blood Centre) under the management of the Medical Programme of the Ministry of Health. Each of these hospitals and institutions is headed by a hospital / institution director.

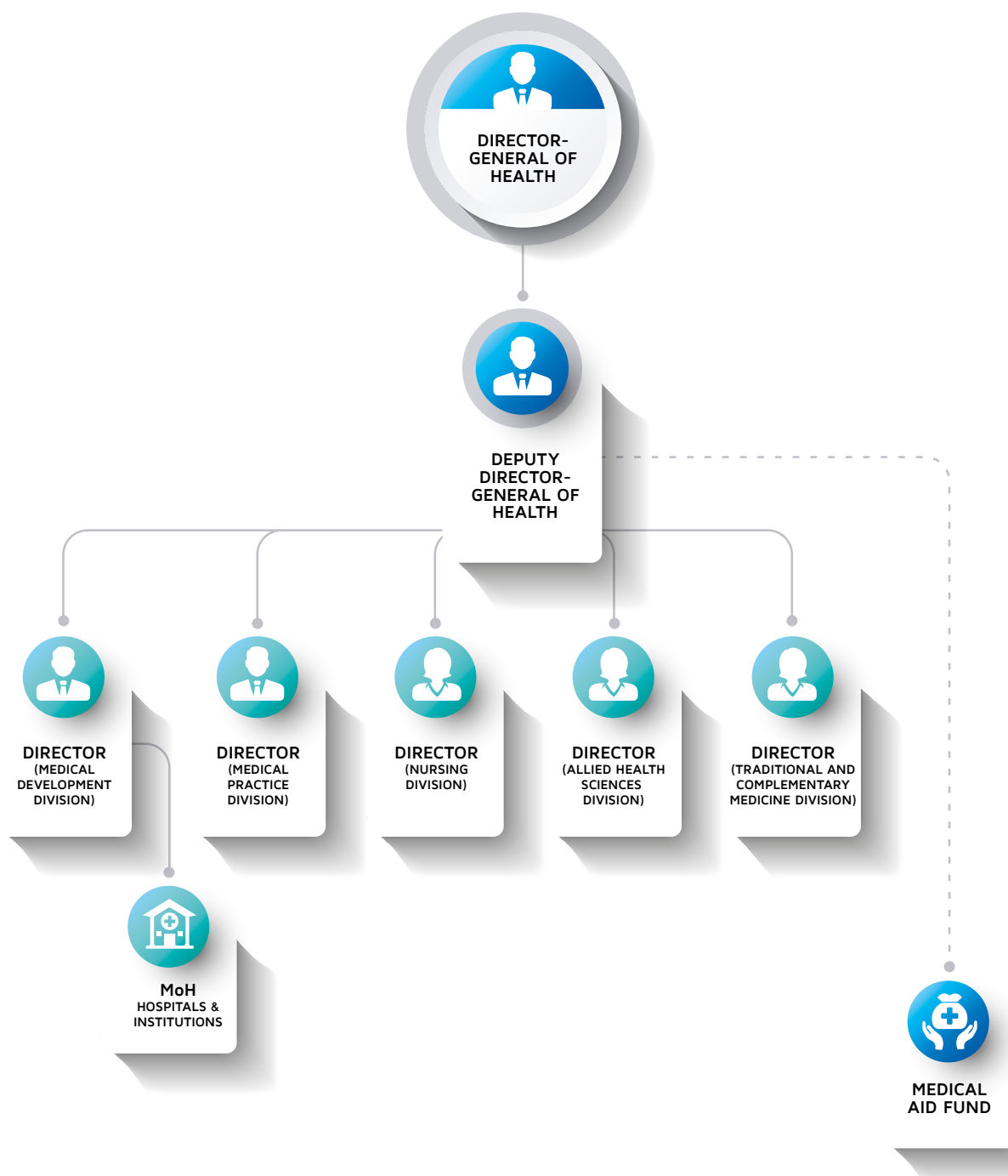


Figure 3 Organisational Chart of the Medical Programme, Ministry of Health Malaysia



WHAT WE HAVE ACHIEVED



ACHIEVEMENTS DURING THE ELEVENTH MALAYSIA PLAN (2016 – 2020)

The Medical Programme has played a major role in developing hospital services and that includes developing the human resource for health and ensuring quality and standards of care through various initiatives, enforcement and regulatory activities. The Programme continues to embrace evidence-based and value-based practices with an aim to improve efficiency and effectiveness of service delivery. The Programme has also played a leading role in preparing the healthcare system for future reform.

The Malaysian Government introduced six (6) thrusts in the Eleventh Malaysia Plan (11MP) whereby improving wellbeing (Thrust 2) for all, that include addressing the need to create a healthy nation. During the mid-term review of 11MP, health agenda was again given an emphasis under Pillar II on enhancing inclusive development and wellbeing. Under this pillar, enhancing the healthcare delivery system (B3) and promoting noble values and active lifestyle (B5) were identified as strategies for Priority Area B on improving wellbeing for all. Three (3) main indicators were used to reflect achievements under B3 which were bed to population ratio of 2.0 beds per 100,000 population, doctor to population ratio of 450 doctor population per doctor and emergency response time of less than eight (8) minutes (Ministry of Economic Affairs, 2018). These indicators were reviewed from the initial 11MP targets; 2.3 beds per 100,000 population, one (1) doctor per 400 population (Ministry of Economic Affairs, 2018).

Expansion and development of hospital services

During the Eleventh Malaysia Plan (11MP) 2016 - 2020, the secondary and tertiary care services in the Ministry of Health have continued to expand. This is a result of continuous support received by the Medical Programme to further develop the hospital services. **Number of MoH hospital beds have increased by 3.3%, from 41,089 in 2015 to 42,424 in 2018. The same also applies for beds in intensive care units where the number have increased by 11%, from 703 in 2015 to 780 in 2018 (Anesthesia and Intensive Care Services, 2019).** Currently there are 1.9 beds to every 1,000 Malaysian populations, below than the target determined during the mid-term review of 11MP. The Ministry of Health contributes 67% of total hospitals beds in the country.

There are currently 146 hospitals and one (1) special institution (National Blood Centre) under the management of the Medical Programme. The hospitals are categorised into state hospitals (14), major specialist hospitals (27), minor specialist hospitals (18), special medical institution (11) and non-specialist hospitals (76). Hospital Rembau and Women & Children Hospital Kuala Lumpur or currently known as Hospital Tunku Azizah were the new hospitals completed and have started their services under the 11MP. Hospital Kuala Krai is another new hospital built under 11MP as a replacement of the old hospital. Hospital Cyberjaya which is currently under construction is expected to be completed by end of 2020. In addition to these new hospitals, there were other new complexes developed in the existing hospitals such as Hospital Putrajaya, Hospital Tengku Ampuan Rahimah Klang and Hospital Raja Permaisuri Bainun Ipoh. The development of these complexes has allowed expansion of services such as

 Project	 Type of project	 Number of new beds	 Date of completion
Obstetrics & Neonatology Block, Hospital Putrajaya	New complex	61	February 2017
Hospital Kuala Krai	Replacement hospital	268	May 2018
Woman & Child Complex, Hospital Tengku Ampuan Rahimah Klang	New complex	354	December 2018
Hospital Tunku Azizah	New complex	600	December 2018
Woman & Child Hospital and Cardiology Centre, Hospital Raja Permaisuri Bainun Ipoh	New complex	404	August 2019
Hospital Rembau	New hospital	76	October 2019
Endocrine Complex, Hospital Putrajaya	New complex	220	December 2020
Hospital Cyberjaya	New hospital	228	December 2020

Table 1 Facilities Development under the Eleventh Malaysia Plan for the Secondary and Tertiary Care Services

obstetrics, gynaecology, infertility, neonatology, paediatrics, cardiology and endocrinology. The development of these hospitals and complexes were consistent with the aspiration of the mid-term review of 11MP to improve access to healthcare services through development of new facilities (Ministry of Economic Affairs, 2018).

During the 11MP, our hospitals were further equipped with high impact medical equipment to

meet the needs for advanced and complex management of diseases. These include computerised tomography (CT) scan machine, magnetic resonance imaging (MRI) machine, invasive cardiac laboratory, angiography machine, fluoroscopy machine, brachytherapy machine and full field digital mammography machine with total cost implication of MYR112.7 million (over a period of 2016 – 2019). These equipment has facilitated

screening, detection, diagnoses and treatment of various diseases especially cancers, cardiovascular diseases, cerebrovascular accidents, neurological, spinal pathologies and many others.

In the 11MP, daycare services have been expanded to 135 MoH hospital. Daycare procedures (surgical or non-surgical) are performed at either eight (8) dedicated or centralised ambulatory care centre or 127 other non-dedicated facilities.

ACHIEVEMENTS DURING THE ELEVENTH MALAYSIA PLAN (2016 – 2020)

Number of hospitals providing daycare surgical services in 2019 has increased to seventy-one (71) hospitals as compared to fifty-six (56) hospitals in 2015. **Total number of surgical and non-surgical procedures performed in eight (8) ambulatory care centre has significantly increased by 39% from 137,253 in 2015 to 191,015 in 2019.** The services expansion can be seen in other specialised services such as ophthalmology, nephrology, psychiatry, infectious diseases, palliative, obstetrics and haematology. Mobile cataract clinic which is an outreach cataract service has been expanded to a wider coverage especially the rural areas. The mobile clinics have benefited many patients with an increase of number cataract surgery by 56%, from 4,996 in 2016 compared 7,775 in 2019. At the moment, there are three (3) buses currently being used to provide the outreach services. The Medical Programme has also supported the expansion of dialysis programme for the treatment of patients with end-stage renal failure. **A total of 134 MoH hospitals and seventeen (17) primary health clinics are providing haemodialysis services while thirty-seven (37) hospitals have continuous ambulatory peritoneal dialysis services with 15% of dialysis patients being on home dialysis.** Ministry of Health is committed to reducing maternal mortality. With the current maternal mortality rate of 26 per 100,000

deliveries in 2010, Malaysia is working towards achieving the target set by WHO Sustainable Development Goals to 8.7 per 100,000 deliveries by 2030. One of the strategies carried out by the Medical Programme is to establish pre-pregnancy clinics at specialist hospitals. This is to ensure health intervention services such as access to sexual and reproductive health services and family planning are provided. During the 11MP, all state and major specialist hospitals and more than 50% of minor specialist hospital have started providing the service.

Hepatitis C has become a major public health concern in Malaysia. Current and future disease burden of hepatitis C infection and its complications has been projected to continue to rise and it is anticipated that the number of chronic hepatitis C will continue to rise to reach 523,500 in 2039 if preventive, control, treatment and care measures are not enhanced (Ministry of Health Malaysia, 2019c). Progression to Hepatitis C complications such as liver cirrhosis and hepatocellular carcinoma not only incur greater costs for treatment and care but also leads to premature mortality. By exploiting the patented invention of Sofosbuvir tablet 400mg via the provision of Rights of Government under Patent Act 1983 [Act 291], the cost of Hepatitis C treatment has significantly reduced (RM1,164 - RM1,225 for a 12-week treatment, an almost 100 per cent drop from existing treatment prices in Malaysia) through the use of generic version of sofosbuvir. **Currently,**

a total of eighty-eight (88) MoH hospitals including sixty-seven (67) hospitals in Peninsular Malaysia, eleven (11) hospitals in Sarawak, nine (9) hospitals in Sabah offer free Hepatitis C treatment services as compared to only twelve (12) hospitals in 2017. These services are also delivered through health clinics within the hospitals' locality and vicinity. A total of 146 health clinics across Malaysia are now providing this service compared to 25 clinics back in 2018.

Palliative care services have also been expanded through the provision of the Domiciliary Healthcare Program (home care services of palliative patients) piloted at four (4) states with resident palliative specialists residing in Kedah, Penang, Perak and Selangor. The domiciliary services involved 26 health clinics in Selangor, ten (10) in Kedah, one (1) in Penang and two (2) in Perak. The Medical Programme in collaboration with our partners such as primary care, NGOs and the community have spearheaded the Community Mental Health Centre (MENTARI) platform and Supported Employment - Individual Placement and Support (SE-IPS) programme nationwide. During the 11MP, the MENTARI Centres have expanded from twelve (12) centres in 2015 to twenty-six (26) centres in 2019. Since its implementation, the SE-IPS program has achieved more than 65% participation and successful employment.

With the establishment of two (2) new stem cell transplantation services in 2016 in Hospital Queen Elizabeth I, Kota Kinabalu and Hospital Sultanah Aminah, Johor Bharu, besides Hospital Ampang and Hospital Pulau Pinang, number of haematopoietic stem cell transplantation has improved. Since the establishment of stem cell transplant services in 1999, a total of 2,551 patients had undergone transplantations (both autologous and allogenic) of which 36% were done during the 11th Malaysia Plan.

Pre-hospital care and ambulance service was one of the top priority areas in the 11MP. The Emergency and Trauma Services Unit aims for a better ambulance response time whereby target ambulance response time for a priority 1 case is less than 15 minutes, for at least 50% of these cases. Collaboration with non-governmental organisations was established such as with St. John Ambulance and Red Crescent Society to place ambulances in strategic hotspots especially during office hours to achieve better response time. On top of that, twenty-one (21) Medical Emergency Coordination Centres (MECC) were developed in collaboration with the Fire and Rescue Department (JBPM) and Malaysian Civil Defence Force (APM); of these, seven (7) centres were developed in the Klang Valley. During the 11MP, a total of 500 new ambulances were purchased to strengthen the service, of which 250 ambulances were equipped with Advanced Cardiac Care equipment (Manual Defibrillator and Portable

ventilator) while the other 250 units were equipped with Automated External Defibrillator and Patient Monitor. Out of these 500 ambulances, 325 units were allocated to hospitals and 175 units for health clinics. However, at the end of 2019, we have yet to achieve the response time of 15 minutes for 50% of the cases, largely due to the lack of manpower especially Assistant Medical Officers, among other factors. Nevertheless, in the next five years, Medical Programme will further strengthen the pre-hospital care and ambulance service delivery. At present, 43% of priority 1 cases achieved response time of less than 15 minutes, below the target of 11MP. The Medical Programme will continue to lead the way to improve and rectify issues as we move to the 12MP and this includes addressing the issue of lack of manpower in pre-hospital care services especially the assistant medical officers.

Development of medical professions

Development of the medical professions has been an utmost priority to the Medical Programme. We believe that the quality and standards of healthcare services is very much dependent on level of competencies of our workforce at all levels. During the 11MP, we have seen some significant progress made in developing medical profession including in increasing opportunities for specialty and subspecialty training for medical doctors. The number

of training slots for the master programme has been increased from 926 in 2015 to 1,220 in 2020, whereas the slots for the subspecialty training programme has increased from 146 in 2015 to 368 in 2020. Number of medical specialists serving the Ministry of Health has increased from 4,319 in 2015 to 5,649 in 2019. The Medical Programme has continued to spearhead initiatives to retain the medical specialists.

This includes expansion of the Full Paying Patients (FPP) Scheme from two (2) hospitals to ten (10) hospitals during the 11MP.

More hospitals are expected to implement the FPP Scheme in the upcoming 12MP as the Medical Programme works closely with the Finance Division to revise the Fees (Medical)(Full Paying Patient)(Amendment) Order 2015. Since the introduction of the FPP scheme, the number of specialists enrolled for it has increased, reflecting the specialists' receptiveness towards the scheme. **A new higher grade UD56 was created to provide a better salary scheme for medical specialists.**

A flexi working hours was also introduced during the 11MP to allow medical specialists to take one day off per week and provide opportunities for them to work in private practice or conduct research or teaching. A special allowance was also created for medical specialists who work in Sabah and Sarawak. Challenges of specialist attrition, mal distribution and public – private integration needs to be addressed in the upcoming 12MP. This is to ensure the projected number

ACHIEVEMENTS DURING THE ELEVENTH MALAYSIA PLAN (2016 – 2020)

of specialists and subspecialists for the next five (5) years can be achieved within the public sector. As of 2019, there were a total of 106,373 registered nurses where 71,499 are in the govt sector (MoH and non-MoH) and 34,874 in the private health sector. The total number of registered assistant medical officers has increased since 2015, with an increase of almost 7000, with 25,185 registered AMOs in 2019 as compared to 18,538 in 2015. With the public health sector being the main healthcare provider in Malaysia, majority of the AMOs were in MoH, triple the number than those in private sector. Allied health professionals with over 28 categories of professions in MoH had a cumulative number of 23,380 in 2015, and there was a gradual increase over the years to reach 24,196 in 2019. Strategies on profession development shall be revisited and re-evaluated thoroughly to ensure strategies can be improved in the upcoming Malaysia Plan.

Improving quality of services

At the end of 2019, a total of seventy-one (71) out of 144 hospitals have been accredited by the Malaysian Society for Quality in Health (MSQH). Accreditation Unit also initiated the Training of Trainers for 5th Edition MSQH standards nationwide to spread the awareness and facilitate the

implementation of accreditation standards at the healthcare facilities. The Medical Programme has undergone three (3) cycles of QMS MS ISO 9001 certification and Medical Programme was the first program in MoH that has been certified with MS ISO 9001:2015 through an audit by Standard and Industrial Research Institute of Malaysia (SIRIM) in 2019. Forty-eight (48) MoH hospitals maintained their QMS MS ISO 9001 certifications. Increasing number of public feedbacks indicate that there is greater awareness of the public towards the quality of services provided in government hospitals. Data showed that both inpatient and outpatient customers are satisfied with the service received across all type of MoH hospitals. During the year 2019, 100% of hospitals and medical institutions have displayed the updated Ministry of Health's Safety & Health Policy and established the Safety & Health Committee. Whereas for the implementation of Hazard Identification, Risk Assessment and Risk Control (HIRARC) which require at least two (2) working activities implementing it, 110 (76%) hospitals and medical institutions were successful in accomplishing HIRARC. Surveillance via Key Performance Indicator too has been a culture in the MoH hospitals. It is directly seen as a positive impact on ensuring quality healthcare services based on monitoring of chosen standards. Clinical Audit activities too have seen a rapid growth since 2017. At the end of 2019, a total of 31 MoH Specialist Hospitals have been certified as a Pain Free Hospital status. Pain as the 5th Vital Sign (P5VS) initiative

has been implemented not just at the hospitals, but also at the MoH health and dental clinics.

Recognising the implications and the need to address both antimicrobial resistance and infection control, several new initiatives were implemented during 11MP, in addition to ongoing surveillance activities. As of 2019, 65 hospitals including State, Major Specialist and Minor Specialist hospitals have established the Antimicrobial Stewardship (AMS) team aimed to ensure the rational use of antimicrobials among the healthcare personnel. In 2019, Antimicrobial Resistance and Infection Control programmes were audited by the Joint External Evaluation (JEE) from the WHO and international expert team and the infection control component was rated as excellent, whereas for the "One Health" antimicrobial resistance component, was rated satisfactory.

Making patients' safety as priority

The Medical Programme has established the Malaysian Patient Safety Goals (MPSG) in 2013 as part of its important initiatives to promote patient safety. The main aim of the Goals was to outline key priority areas of patient safety in Malaysia and to monitor the status of patient safety in the country. Thirteen (13) goals were identified for hospitals and four (4) goals for the health clinics and the Medical Programme will be monitoring all MPSGs in the upcoming Malaysia Plan,

including in the private sector. This is consistent with the global commitment to patient safety as discussed in the 72nd World Health Assembly Resolution 2019 (WHA 72.6 resolution) entitled "Global Action on Patient Safety". The 1st World Patient Safety Day and Seminar was conducted on 17th September 2019 in Kuala Lumpur following World WHA 72.6 resolution. Since its establishment in 2013, there has been tremendous increase in awareness of patient safety and in 2019, 94.2% of government healthcare facilities in Malaysia had reported their Malaysian Patient Safety Goals (MPSG) Performance. In addition, to improve the awareness and knowledge of patient safety among junior healthcare professionals, a Mandatory Patient Safety Awareness Course for House Officers in Malaysia was established in 2017 and as of 2019, a total of 15,348 house officers in Malaysia had undergone the course. An internal action plan of emergency and disaster for the Ministry's hospitals was launched in August 2019 to ensure the preparedness of the healthcare facilities in the event of emergency and disaster. The Medical Programme has also conducted patient safety project using the LEAN methodology in eight (8) hospitals with aim to improve safety in the process of services delivery. At the global platform, Medical Programme was involved as part of a global expert panel to formulate a guiding principle in measuring patient safety that took place in Salzburg, Austria.

As part of an initiative to increase quality of service and patient safety, the Medical Practice Division also published the "Guidelines On The Management Of Medico Legal Complaints in the Ministry of Health 2nd edition" to help guide the medical personnel on how to manage medico legal complaints against the government healthcare facilities. In addition to that, regular meetings and workshops were also conducted for MoH's staffs to increase their awareness and competency with regards to becoming expert witness, preparation of inquiry report and handling of ex-gratia cases.

Embracing evidence-based and value-based practices

In the year 2015, collaborative work on economic evaluation for health technologies has been initiated between Ministry of Health and various local academic institutions such as Universiti Malaya, Universiti Sains Malaysia, Universiti Kebangsaan Malaysia and Monash University of Malaysia to strengthen the component of economic evaluation for health technologies. Among the earliest roles of this collaborative network was to come up with recommendations on the acceptable cost effectiveness threshold value for health technologies which is deemed pivotal to promote the use of cost-effective intervention, to improve allocation of the healthcare resources, to promote transparency and consistency in decision making and to facilitate the price negotiation of health

technologies. Following this, MaHTAS, Medical Programme started to conduct local economic evaluation through decision analytic modelling and the first economic evaluation conducted was on Tyrosine Kinase Inhibitors as first line treatment for advanced non-small cell lung cancer. Following with, twelve economic evaluation, three (3) budget impact analysis and four (4) financial implication reports have been produced. Moving forward in supporting value-based healthcare, health technology assessment with economic evaluations will be able to assist in the holistic approach of healthcare policy and decision making by providing systematic information based on scientific evidence and patients' values.

With the rapid pace of health technology innovations and inadequacy in its evaluation before introduction into the market, horizon scanning of new and emerging health technologies and healthcare innovations was introduced as part of MaHTAS, Medical Programme activities in 2014. It was preceded by an exploratory survey on its needs and expectations in 2013, followed by the development of a manual and pilot project from 2015 to 2016. To date, sixty-six (66) reports have been produced (22 TechBriefs and 44 TechScan) which looked into various fields of healthcare innovations, from pharmaceutical products to medical devices, which potentially have a significant impact on the system. Various potential impacts of the said technologies and innovations were assessed systematically including effectiveness, economical,

ACHIEVEMENTS DURING THE ELEVENTH MALAYSIA PLAN (2016 – 2020)

organizational, societal, ethical and safety aspects. With its aim to provide timely advice to allow appropriate implementation and / or adoption of health technologies as well as to facilitate budgetary planning, this will facilitate better informed and evidence-based decisions among policymakers in the face of the scarcity of resources and the complexity of issues and challenges.

Since 2016, MaHTAS, Medical Programme has been conducting Impact Monitoring Surveys on its Health Technology Assessment and Technology Review reports to determine the specific impact and the level of this impact of those reports towards the various aspects of the decision-making process of those surveyed. These are done twice yearly and based on the recommendation put forth by the report; recommended, research purpose and not recommended. The response rate was excellent. For all types of recommendations, each Health Technology Assessment and Technology Review reports exert its influence on the different aspects of the decision-making process which leads to further action being done based on the recommendation forwarded by those reports. As for CPG, the first CPG adherence study was carried out between 2014 and 2015 on the Malaysian Clinical Practice Guideline on Management of Dengue Infection in Adults (second edition). The result showed that the overall proportion of adherence for the eight (8) components of the CPG varied across all settings; the highest being in the 'investigation' component compared to

other components namely history, physical examination, assessment for warning sign, hemodynamic status, diagnosis, notification and monitoring. This and future similar CPG adherence studies provide valuable input with regards to the strengths and weaknesses of our CPG development as well its implementation thus enabling us to improve and fulfil its main objective that is to improve the quality of patient care.

In response to COVID-19 pandemic, timely rapid assessments were conducted to inform decisions on management of COVID-19.

Ensuring quality of private healthcare through regulatory activities

Number of private healthcare facilities and services licensed under the Private Healthcare Facilities and Services Act have increased by 17% during the 11MP, from 9,705 in 2015 to 11,388. Private medical clinics tops the list with the highest number of centres (72%), followed by private dental clinics (20%), private haemodialysis centres (4.2%), private hospitals (1.9%) and ambulatory care centres (0.9%). Other categories of facilities licensed by the Medical Programme include maternity homes, nursing homes, psychiatric nursing homes, psychiatric hospitals, blood banks, mental health community

centres and hospice. To ensure these private healthcare facilities adhere and comply with the Act 586, regular monitoring and surveillance activities were carried out in the form of visits, checks and audits.

"Handbook on Setting Up of Private Hospitals in Malaysia: Submission Process & Harmonisation of Technical Requirements" was developed in collaboration with the Malaysia Productivity Corporation. It outlines requirements and mechanisms in submitting applications for establishment of private hospital and was highly beneficial for the stakeholders, particularly the healthcare facility consultants, medical planners, private hospital operators and investors. The Programme's efforts in engaging all stakeholders prior to amending or drafting new legislation were recognised by Malaysia Productivity Corporation and for that, the MoH was awarded with these recognitions; Completion of Regulatory Impact Assessment (RIA) (2018), Active Participation in Unified Public Consultation (2019), and Adoption of National Policy on the Development and Implementation of Regulations (NPDIR) (2019).

Various workshops were also organized under the "Dealing with Construction Permits (DCP)" series throughout the countries during 11MP which received overwhelming response from attendees, comprising of private hospitals operators, engineers, architects, medical planners and investors. The outcome of these workshops is reflected in higher

quantity of applications received with increased compliance to Act 586, resulting in shorter duration to process the applications and approvals / licenses are obtained faster.

On the other hand, private hospitals also pressured the MoH to allow high-rise hospitals to be set up in Malaysia. In response to that, the representatives from the Medical Practice Division, together with MPC, Association of Private Hospitals Malaysia and Jabatan Bomba dan Penyelamat Malaysia went on Fact Finding Mission On The Process Of Setting Up Private Hospitals (High Rise Development): Technical Specifications, Safety & Disaster Management System and Permit Approval in Hong Kong on 8-12 April 2019. Subsequently, approvals have been issued to several high-rise hospitals after considering the aspects of patient safety, as well as emergency management plan.

Safeguarding medical practices through legislation

The Medical Programme has continued its role in safeguarding the medical practices. During the 11MP, the Allied Health Profession Act was gazetted in 2016, the amended Medical Act 1971 came into force in 2017 and the Private Aged Healthcare Facilities and Services Act 2018 [Act 802] was gazetted in 2018. A number of existing laws related to healthcare professionals and medical practices are being reviewed in order to keep pace

with the advancement of medical practice and technologies. In addition, Medical Programme had completed two (2) Regulatory Impact Analysis with few more in the pipeline. This is a new requirement by the government to ensure new legislation is justified and will not cause unnecessary burden.

Ensuring safe and quality practices of traditional and complementary medicine

Under the auspices of the 11th Malaysia Plan (Strategy 3 in Strategy Paper 18G), [the T&CM Blueprint 2018-2027 \(Economic and Socio-Cultural\), as well as a preliminary Regulatory Framework and Guidelines for T&CM Private Health Care Facilities and Services, were developed based on the ambitions and aspirations of the T&CM industry and the World Health Organisation \(WHO\) Traditional Medicine Strategy 2014-2023](#). These documents will further catalyse the development of the T&CM industry in Malaysia. It shall create an environment conducive for capacity and capability building, enhance business competitiveness and encourage favourable investments within T&CM industry.

The T&CM Blueprint embarks on a 10-year ambition to enable T&CM in becoming a meaningful contributor to Malaysia's healthcare system and create

positive economic and socio-cultural environmental impact by 2027. The growth of T&CM industry may create revenue worth RM 20 billion by 2027. The T&CM Act 2016 [Act 775] was enforced on 1 August 2016 and is currently being implemented in phases. The Traditional and Complementary Medicine Council was established and convened its very first meeting on the 16 January 2017. Three (3) orders were successfully established under the Act 775: The Traditional and Complementary Medicine Order (Recognized Practice Area) 2017 and the Traditional and Complementary Medicine Order (Designated Practitioner Body) 2017 & 2020. The first two (2) orders were enforced on the 1 August 2017 and the third on 11 February 2020. Two (2) working committees have also been formed under the Council for accreditation assessment of T&CM education programs and regulation of Islamic Medical Practice.

During the 11MP, two (2) bilateral technical meetings with the Government of the People's Republic of China and three (3) bilateral technical meetings with the Government of the Republic of India on matters related to the field of traditional systems of medicine were conducted to date. The strategic collaboration with China and India has assisted Malaysia in the enhancement of T&CM service provision at MoH hospitals and has provided opportunities for education and training, sharing expertise in regulatory matters and enhanced opportunities for collaborative

ACHIEVEMENTS DURING THE ELEVENTH MALAYSIA PLAN (2016 – 2020)

research. As part of the efforts to ensure safe and quality T&CM practices, the Medical Programme has developed and revised a total of six (6) T&CM practice guidelines and has been involved in eleven (11) research projects during the 11MP.

Preparing the healthcare system for future reform to improve access to healthcare coverage

In preparing the healthcare system for future reform, the Medical Programme has taken the lead to re-engineer the processes in managing hospital and patients flow. These include the implementation of hospital cluster, lean organization and the use of case-mix system in performance and financial management. Cluster Hospital involves restructuring of MoH hospitals from one (1) hospital as one (1) entity to Cluster Hospital as one (1) entity. Each Cluster Hospital is formed through a combination of several hospitals in the same geographical location by involving at least one (1) specialist hospital. Through the establishment of a cluster hospital, all resources including human resources, expertise, equipment, facilities and other resources can be optimized and shared by these hospitals. During the 11MP, hospital cluster initiative has been expanded from three (3) pilot clusters to currently twenty-five (25) clusters involving eighty-eight (88) MoH hospitals nationwide. Of these, fifty-three (53) were non specialist hospitals, while the remaining

were specialist hospitals. By end of 2020, a total of forty-two (42) Clusters involving 145 of MoH hospitals would be established nationwide. Through hospital clusters, the number of patients treated at specialist clinics at non specialist hospitals has increased from 50,000 to 70,000 in 2013 compared to 2016 at pilot cluster hospital (Central Pahang Cluster Hospital, Melaka Cluster Hospital and Tawau Cluster Hospital) and has increased bed occupancy rate (BOR) in underutilized hospitals by 13%.

The intention of introducing lean management practices in public hospitals was mainly to release latent capacity. Lean management practices have facilitated hospitals to streamline work processes and procedures to enhance effectiveness and efficiency. This include optimising bed management, robust operation theatre scheduling, and promoting best practice treatment. Lean Healthcare initiative has been introduced to MoH hospitals in 2013 and during the 11th Malaysia Plan, fifty-two (52) hospitals have implemented Lean Healthcare Programme in various departments. Since its implementation, hospitals have seen reduction in patients' waiting time in specialists' outpatient clinics, during admission and discharge time.

Casemix or Malaysian Diagnosis Related Group (MalaysianDRG) was developed by the Medical Programme with an aim to provide a patient classification based on cost of treatment. The Diagnosis Related Group (DRG) also provides a mechanism for

comparison and benchmarking of quality and performance of health service delivery that will consequently improve operating efficiency and optimize utilization of resources in patient care. The treatment cost estimation generated from this DRG helps policy makers to plan necessary funding for hospitals. Seventy-one (71) hospitals have implemented DRG for inpatient and daycare services under the 11MP. Outputs from the MalaysianDRG application are currently retrievable from its Executive Information System (EIS module) including list of DRG, severity of illness, average cost per disease according to DRG, and Casemix Index (CMI). Casemix system will be an important platform to prepare the healthcare system towards evidence-based budget allocation system especially for hospitals.

Cluster and lean management in MoH hospitals were identified as key result areas for the 11MP and as measures to create a sustainable healthcare system under the mid-term review of 11MP. Seven (7) clusters and thirty-six (36) hospitals were targeted for the implementation of cluster hospitals and lean organisation under the 11MP (Ministry of Economic Affairs, 2018). Through hospital clusters, the non specialist hospitals have seen a significantly higher outpatients clinics attendance by an average of 12%-16%, and some have observed up to 80% increase via regular specialists' visits. This was in line with the aspiration of the mid-term review of 11MP.

Management of COVID-19 pandemic

At the time of writing, Malaysia's effort to control the transmission of COVID-19 has shown favourable result. Cases stood at 21 per 100,000 Malaysian population, lower than other developed countries such as the US, UK, Italy, France, Spain and Singapore. Mortality rate COVID-19 was 1.6% of total cases compared to countries like France (15%), UK (14.3%) and Italy (14%). At the time of writing, the pandemic was still ongoing and statistics mentioned here may change towards the end of 2020 or even after the implementation of the Movement Control Order. The Medical Programme has played a pivotal role to complement the role of the Public Health Programme in controlling the pandemic. The Crisis Preparedness and Response Centre (CPRC), Hospital Services was established in March 2020 at Medical Programme Headquarters at Level 7, Block E1 Putrajaya. The "war room" was equipped with latest communication technology to assist the Programme in its daily response to the pandemic. The Centre establish to facilitate decision making during crisis as well as to move its machineries at the state level especially in preparing hospitals to deal with surge of cases. An IT platform was developed to facilitate data collection and analysis was presented on a special dashboard. **Forty (40) hospitals including two (2) university hospitals were identified as COVID-19 hospitals, of which seven (7)**

were running as full COVID-19 hospitals and the rest were in hybrid model. Twenty-six (26) Low Risk Quarantine and Treatment for step down care centres for asymptomatic and mild cases were also established including a centralised temporary facility at Malaysia Agro Exposition Park Serdang (MAEPS). The establishment of MAEPS Centre was headed by National Disaster Management Agency (NADMA). The Medical Programme played an important role in planning and running the facility with support by various agencies especially the Malaysian Armed Forces. The total capacity of all COVID-19 hospitals and the Quarantine and Treatment Centres was more than 9,200 beds in April 2020.

The Medical Programme managed to increase the capacity of our hospital laboratories and contributed significantly to improve turn around time for COVID-19 diagnostics. Capacity of intensive care units was also enhanced during COVID-19 which included repurposing areas within the hospital to accommodate patients requiring intensive care, for example in Hospital Sungai Buloh and Hospital Kluang Johor. The Medical Programme has also played an important role in strengthening physical capacity through central purchasing of various equipment for the pandemic such as ventilator, isopod, mobile digital x-ray machine, video laryngoscope, ICU beds, hospital beds, patient monitor and many other items. This has helped the State Health Departments and hospitals to be better prepared their facilities to respond to the pandemic.



WHAT WE ARE FACING





ISSUES AND CHALLENGES



Increasing economic burden and scarce financial resources

There is concern regarding the sustainability of Malaysia's healthcare system and its ability to meet the needs of the population; given the demands on the healthcare services due to changing socio-demographic, economics as well as evolving disease burden. The country faces several issues and challenges in ensuring the financial sustainability of the healthcare system. Malaysia's total health expenditure (THE) stood at 4.24% of GDP in 2017, of which 2.2% came from the government's expenditure (Ministry of Health Malaysia, 2019b). World average of THE is between 9.4 – 10.0% of GDP (2010 – 2016) (The World Bank, 2018). The public sector contributed 51%

of THE and private sector contribution was 49% of THE. Out-of-pocket (OOP) spending accounted for a significantly high proportion of 38% of THE. Even though 70% of THE were spent on curative services, the largest component compared to other functions of healthcare such as public health services, administration and research (Ministry of Health Malaysia, 2019b), the secondary and tertiary care services continue to face challenges to maintain its services to the people. Under-utilised or unutilised facilities due to lack of staff and equipment, hospital congestions, brain drain of medical specialist to the private sectors are hereditary issues that require sustainable strategies and investments. The rise of NCDs is a long-term economic threat to the

country's healthcare. The annual economic burden of diabetes to the public healthcare system for example was estimated to be around MYR2billion (Idzwan Mustapha et al., 2017) while the burden of end-stage renal failure was estimated to be MYR1.12billion per year (Ismail et al., 2019). With the rapid increase of incidence and prevalence of NCDs as demonstrated in the National Health and Morbidity Survey, the cost of treating these conditions and other NCD-related complications will continue to dominate the health expenditure and put pressure on the country's healthcare system. The escalating private healthcare cost is also a major concern. Lack of regulation of fee and cost of healthcare at the private sector could potentially burden the people and healthcare system.

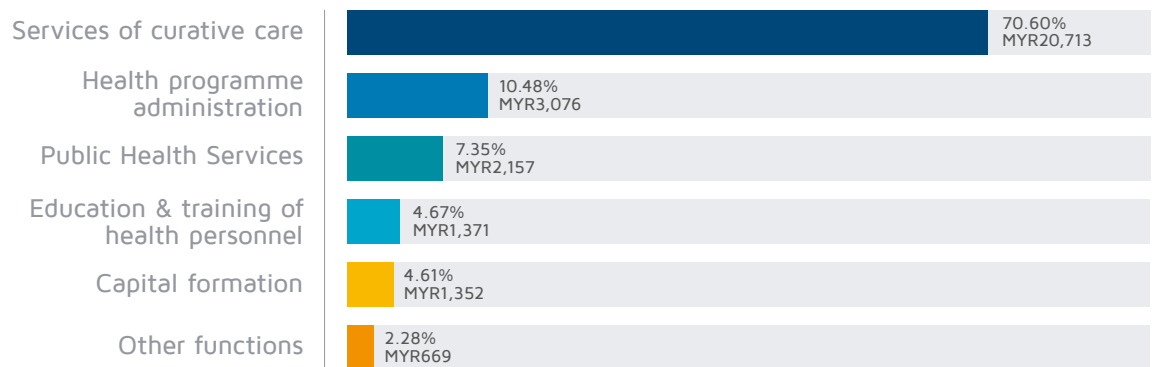


Figure 4 Public Sector Health Expenditure by Functions of Health Care, 2017 (percentage, MYR in million)
Source: Malaysia National Health Accounts

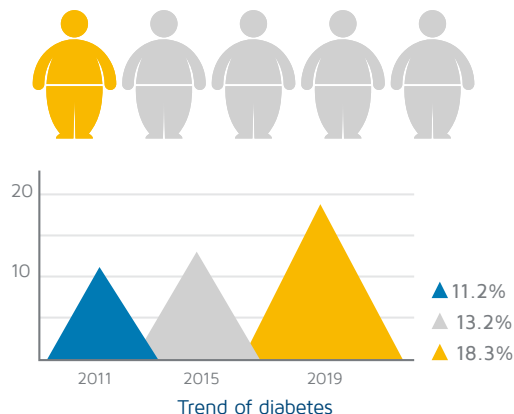
ISSUES AND CHALLENGES



Increasing burden of non-communicable diseases

The prevalence of non-communicable diseases continue to rise in Malaysia, and it is among the highest in ASEAN countries. It has been found that 1 in 5 adults in Malaysia has diabetes or equivalent to 3.9 million population. The 2019 National Health and Morbidity Survey (NHMS) reported that the trend of diabetes has increased from 11.2% (2011) to 13.4% in 2015, and 18.3% in 2019. Also, 3 in 10 adults or 6.4 million people in Malaysia have hypertension and only half of them are aware they have the disease. While 4 in 10 adults or 8 million adult Malaysians have hypercholesterolemia, 1 in 4 of them are not aware of their disease. Cardiovascular diseases such as stroke and coronary heart diseases, are the leading causes of death in Malaysia and 1.7 million Malaysians are currently living with three (3) major risk factors which are diabetes, hypertension and hypercholesterolemia (Ministry of Health Malaysia, 2019d). Neoplasms are also top five (5) causes of death in MoH and private hospitals. In Malaysia, injuries, including road traffic injuries, are one of the top ten causes of hospitalisation and death in MoH and private hospitals. In MoH hospitals, diseases of the circulatory system were the most common cause of death in 2018 (21.65%), followed by diseases of the respiratory system (21.06%), infectious diseases (12.80%), neoplasm (11.82%) and others (Ministry of Health Malaysia, 2019a). NCDs also account for the cause for most premature death in Malaysia. The WHO predicts that by 2020 depression (a mental illness) will be the second leading cause of disease worldwide. The National Health Morbidity Survey 2015 revealed 29.2% of Malaysian adults 16 years and above as having mental health problems (Ministry of Health Malaysia, 2015). The various risk factors related to NCDs is an increasing challenge. The National Health Morbidity Survey 2019 reported, 1 in 2 Malaysian adults are either overweight or obese, 26% of Malaysians are smokers, 25% of adult population in Malaysia are not physically active, alcohol consumption is at 11.8% while the national prevalence for depression is 2.3% which is about half a million people in Malaysia. (Ministry of Health Malaysia, 2019).

1 in 5 Malaysian adults has diabetes



3 in 10 Malaysian adults have hypertension



4 in 10 Malaysian adults have hypercholesterolemia



7.1 million Malaysians living with diabetes, hypertension & hypercholesterolemia

Common causes of death in 2018

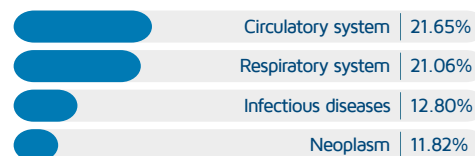


Figure 5 Prevalence of Diabetes Mellitus, Hypertension, Hypercholesterolemia (2019) and Common Causes of Death among Malaysian Adults (2018)
Source: National Health and Morbidity Survey 2019 (NHMS 2019)

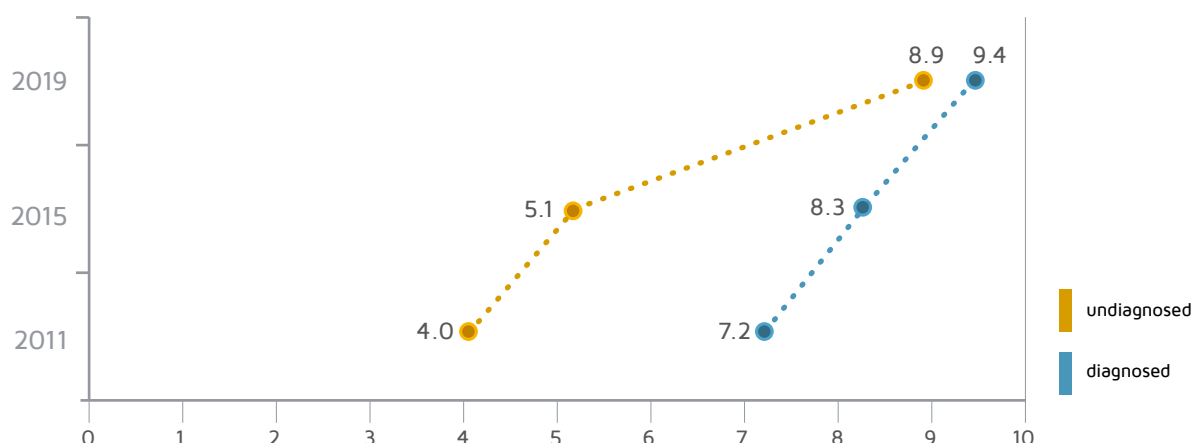


Figure 6 Trends in Prevalence of Diabetes Mellitus among Adults in Malaysia, 2011-2019
Source: National Health and Morbidity Survey 2019 (NHMS 2019)



Emergence and re-emergence of infectious diseases

Malaysia is facing a double disease burden challenge where communicable diseases co-exist with NCDs. The incidence of selected communicable diseases such as dengue, tuberculosis, HIV / AIDS, malaria and food poisoning and selected vaccine-preventable diseases in particular measles, polio, diphtheria is also on the rise. Threats from new emerging infectious disease require vigilance. Constant surveillance is required, bearing in mind, the large immigrant population. National capacity in disease surveillance, prevention, control and response system still need to be further strengthened to meet the challenges brought by changing disease patterns. This shall include the preparedness of hospital services in facing the emergence and re-emergence of infectious diseases in the Malaysian population. Our hospitals shall be equipped with the necessary support to respond to national and global outbreak such as COVID-19 and SARS.

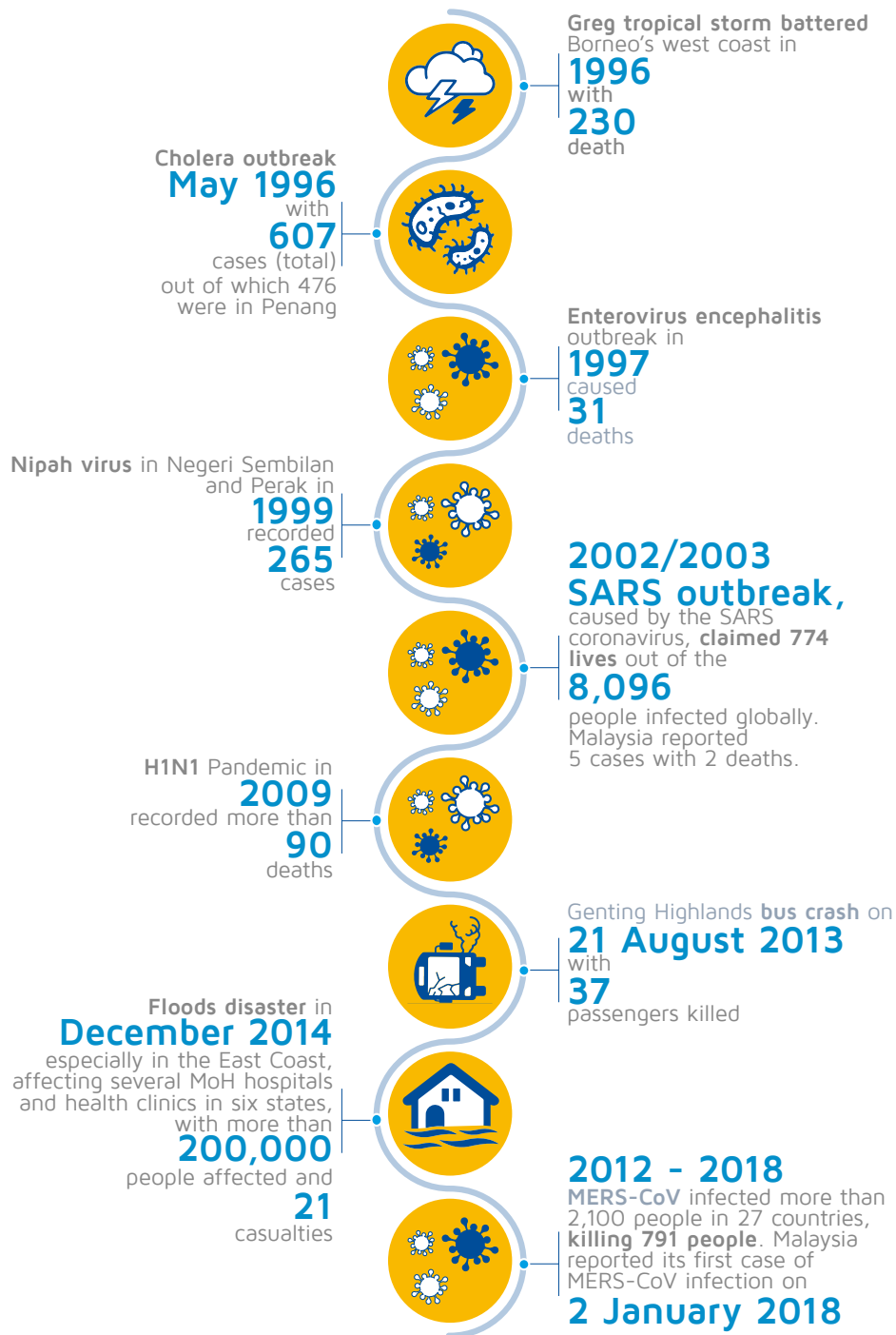


Disaster and crisis management

Over the years, there have been major disasters and crises that affected our nation which have claimed lives and have had significant socioeconomic and health impacts. These include natural disasters, environmental crises and disease outbreaks. The Ministry of Health Malaysia will always remain vigilant and will further intensify efforts to strengthen and enhance our preparedness and response capacity.

- Greg tropical storm battered Borneo's west coast in 1996 with 230 death.
- Cholera outbreak May 1996 with 607 cases (total) out of which 476 were in Penang.
- Enterovirus encephalitis outbreak in 1997 caused 31 deaths.
- Nipah virus in Negeri Sembilan and Perak in 1998-1999 recorded 265 cases with 105 deaths
- The 2002/03 SARS (Severe Acute Respiratory Syndrome) outbreak, caused by the SARS coronavirus, claimed 774 lives out of the 8,096

ISSUES AND CHALLENGES



people infected globally after it was first detected in Beijing. Malaysia reported five (5) cases with two (2) deaths.

- H1N1 Pandemic in 2009 recorded more than 90 deaths.
- Genting Highlands bus crash on 21 August 2013 with 37 passengers killed.
- Floods disaster in December 2014 especially in the East Coast, affecting several MoH hospitals and health clinics in six (6) states, with more than

200,000 people affected and 21 casualties.

- The Middle East Respiratory Syndrome (MERS), a viral respiratory disease caused by a novel coronavirus (Middle East respiratory syndrome coronavirus, or MERS-CoV) was first identified in Saudi Arabia in 2012. It infected more than 2,100 people in 27 countries, killing 791 people. Malaysia reported its first case of MERS-CoV infection on 2 January 2018.
- Zika virus outbreak in 2015 - 2016.

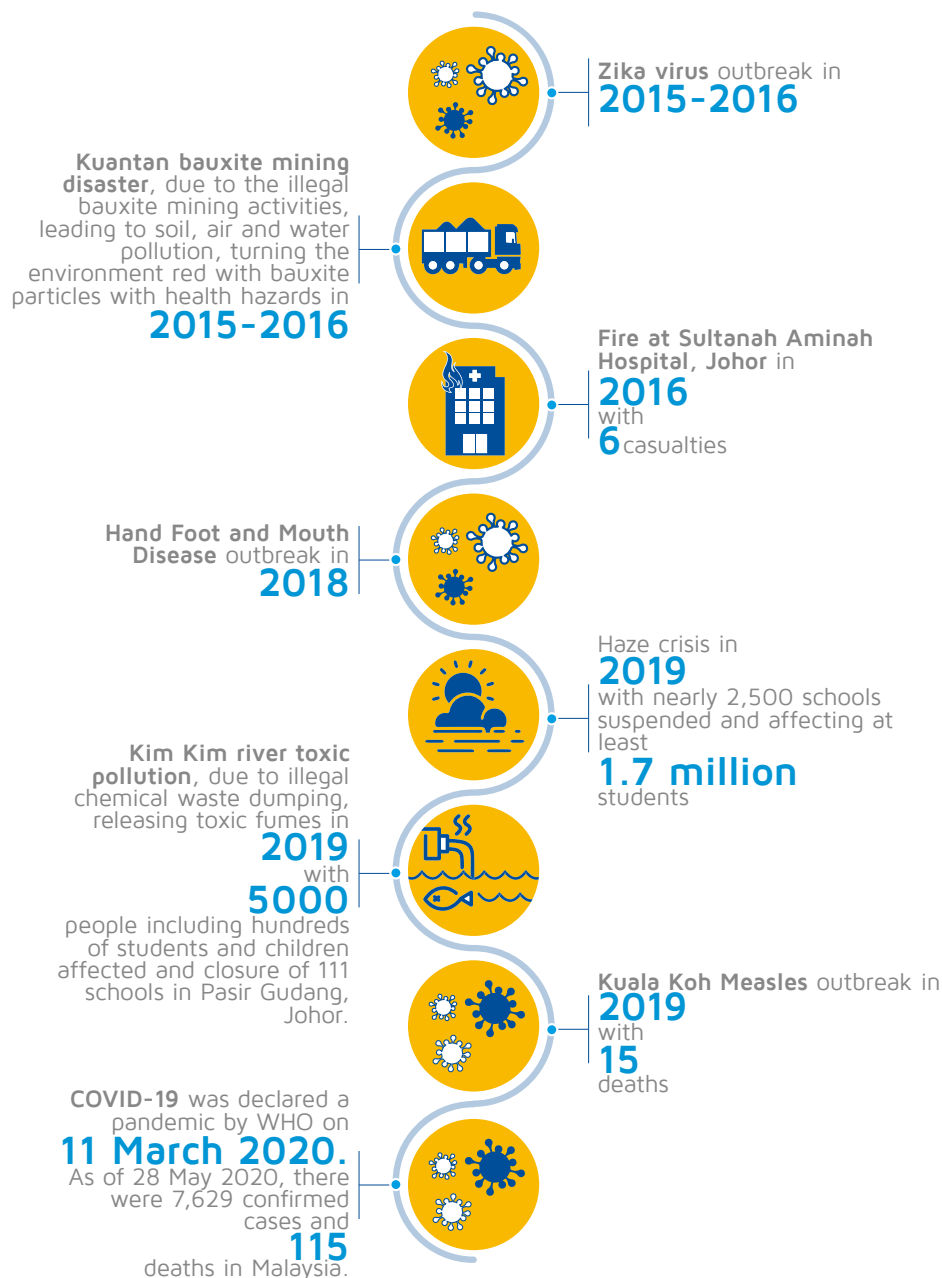


Figure 7 Major Crises and Disasters in Malaysia, 1996-2020

- Kuantan bauxite mining disaster, due to the illegal bauxite mining activities, leading to soil, air and water pollution, turning the environment red with bauxite particles with health hazards in 2015 - 2016.
- Fire at Sultanah Aminah Hospital, Johor in 2016 with six (6) casualties.
- Hand Foot and Mouth Disease outbreak in 2018
- Haze crisis in 2019 with nearly 2,500 schools suspended and affecting at least 1.7 million students.
- Kim Kim river toxic pollution, due to illegal chemical waste dumping, releasing toxic fumes in 2019 with 5000 people including hundreds of students and children affected and closure of 111 schools in Pasir Gudang, Johor.
- Kuala Koh Measles outbreak in 2019 with fifteen (15) deaths.
- COVID-19 was declared a pandemic by WHO on 11 March 2020. As of 28 May 2020, there were 7,629 confirmed cases and 115 deaths in Malaysia.

ISSUES AND CHALLENGES



Sustaining national health indicators

There has been slow or static progress in the health status of the population. For example, life expectancy for female and male have remained static at 77.6 and 72.7 years old, below the average of the developed countries (Atun et al., 2016). The rate of mortality from avoidable causes in Malaysia was at 219.7 mortality per 100,000 population, way higher compared to average of OECD countries at 95.1 mortality per 100,000 population (Atun et al., 2016). There has also been a slowing or static improvement of infant, neonatal and toddler mortality rates as well as crude death rate over the last two decades.



Changing socio-demographic

Malaysia is moving towards an aging population by 2040, where 14.5% of total population would be more than 60 years old. This change in socio-demographic is expected to put greater demand on the healthcare resources to treat chronic diseases and often associated with multiple morbidities. NCDs such as cardiovascular diseases, cancers, diabetes, mental health disorders,

obesity, injuries and accidents, which are costly to treat have emerged as leading causes of morbidity and mortality.

Despite being a highly vulnerable group, very limited attention is given to the elderly person's healthcare and quality of life, in particular the old folks home. Majority of the residences housing elderly persons are unable to comply to the standards, neither the Care Centre Act 1993 nor Act 586, leaving most of the residents living in suboptimal environment. On the other extreme, oversea investors are flocking to set up retirement villages here due to the harmonious environment and political stability as well as geographical safety in the country. With COVID-19 expected to persist in the country, it is now an opportune time that more focus and resources be allocated to these long-neglected citizens of Malaysia.



Old health facilities and equipment

Physical infrastructures such as buildings, medical equipment and to some extent non-medical equipment are essential to ensuring safe, quality and effective delivery of healthcare services. The unfortunate incident of fire at the intensive care unit in Hospital Sultanah Aminah Johor Bahru in 2016 (Shah and Ahmad, 2016) is an important

case study and a wake-up call for everyone to pay serious attention to the maintenance of buildings and safety measures in our health facilities. There are 78 hospitals in the Ministry of Health aged more than 30 years old and therefore, proper maintenance and upgrading is needed to make sure the state of our infrastructure stay relevant with continuous expansion of services. Similarly, old medical equipment especially those beyond economic repair, including ambulances shall be replaced to keep with the latest development of technology. Appropriate investment in medical equipment will not only promote patients' safety and better clinical outcome, it will also promote cost effectiveness in medical treatment or interventions. Obsolete infrastructure in information technology shall also be addressed to enhance efficiency in clinical management and administration. Replacement and investment in non-medical equipment shall also be regarded as important as medical equipment and require proper planning. Replacement or upgrading of chairs at waiting areas in hospitals for example, is an important component to enhance patients' or clients' experience and improve satisfaction. It is no doubt that scarce resources are a stumbling block but proper planning and execution will enable us to address the issue of old facilities and equipment. This requires concerted efforts and collaboration by various divisions under the Ministry of Health.



Unmet human resource needs with increasing workload and complexity

There is insufficient and unequal distribution of human resources particularly specialists between public and private sectors. Increasing workload associated with growing population, rapid urbanisation and greater complexity of diseases has put the healthcare system especially its workforce under pressure in meeting with the needs of the population and their expectations. The National Audit Department report in 2018 recognised that the MoH hospitals were understaffed, underfunded and overcrowded especially in certain clinical departments (Aliman, 2019). Insufficient posts, stagnant career pathways especially for highly skilled specialist doctors and uncertainties on scholarship opportunities for contract doctors are among important challenges that need to be addressed in the upcoming 12MP. As the size of the clinical services continue to grow especially with the development of new health facilities, these challenges are expected to be more complex to be addressed. Issues related to contract doctors shall be further deliberated and studied in terms of its long-term implications including on supply of specialists in the public sector in the future. Similarly, to meet the increasing demand for specialists and advance medical care,

the specialty and subspecialty training programmes shall be enhanced. Disparity of specialist remuneration between the private and public sectors will continue to become a limiting factor in retaining highly skilled workforce in the Ministry of Health hospitals. Innovative solutions and incentive packages shall be further deliberated to encourage doctors to continue serving the public sector. In parallel to that, the existing workforce especially senior doctors and nurses shall be empowered with extended skills to optimise resources. Implementation of Global Surgery Initiatives and Hospital Cluster initiatives for example, requires trained medical officers to perform certain essential surgeries at more district or rural areas. Improving competencies through more structured training programmes shall be given better emphasis in the coming years.

There is a need to look into having adequate number of trained personnel in medical law. This is to promote efficient regulatory and enforcement activities within the Medical Programme. Implementation and enforcement of new laws and statutes such as the Private Aged Healthcare Facilities and Services Act 2018 and Pathology Laboratory Act 2007 require competent and well-trained personnel to ensure the laws serve their primary objectives. There is also an urgent need to improve competencies of medical doctors in clinical governance and public health practices. Management of healthcare, health policy and hospitals are

expected to be more complex as we embrace evidence-based and value-based medicine in our professional practices. Health economics, health technology assessment and occupational health are among niche areas of specialty required to ensure the running of the Medical Programme continues to be at par with global standards and practices.



Rapid development of technology

There is an increase in demand for e-commerce, e-government services and virtual health services such as home doctor services through apps, internet pharmacy, teleconsultation and others. This is because patients find it convenient, cost efficient and time saving. However, currently there is no mechanism to ensure that clients obtain quality services from qualified practitioners and issues related to patient's confidentiality and ethics. Social media are at risk of being abused to spread false claims and negativity on usage of western medicine, vaccination and other treatments. With the proliferation of devices (smartphones, wearables, drones) and Internet of Things (IoT), big data analytics and artificial intelligence, issues pertaining to safety, privacy and confidentiality, data governance and expertise need to be given attention.

ISSUES AND CHALLENGES

Apart from that, a small percentage of MoH hospitals and health / dental clinics in the country are equipped with electronic medical records. The systems include Health Information System (HIS), Tele Primary Care (TPC) and Oral Health Care Information System (OHCIS). Vertical and horizontal integration is yet to be achieved fully, including public-private data sharing platforms. Moving forward, Malaysia must benchmark against best practices in other countries (e.g. Public Health England / Scottish registry). Big data and real-world evidence are transforming healthcare in this era and the country needs an integrative system that can capture and manage data for purposes of developing registries, disease surveillance, health economics, etc. Numerous health facilities including health clinics, stores, pharmacies and kitchens need to be maintained and refurbished optimally. ICT equipment and systems that are obsolete needs to undergo technology refreshment and system upgrades. Approximately 75% of MoH hospitals and more than 90% of medical and dental clinics are manual.

Similarly, there is a need for digitalisation of registration and licensing process of private healthcare facilities and services. This would enable the applicants to submit applications easier and faster while ensuring transparency of the procedures. Since time is of the essence for the private sector, fast approval and accessibility to data would definitely reduce the regulatory burdens, increase efficiency and prevent corruption.



Intersectoral / Multisectoral collaboration and international commitment

Health is a responsibility of all. Health sector cuts across various sectors and requires proactive participation. It is apt to mention that delivery of health services is not merely a responsibility of the Ministry of Health but many parties in the public and private sectors and non-governmental organisations. It would be a great challenge for the Medical Programme in the coming years to lead the way to engage and promote participation of various sectors in providing healthcare services. Close relationship with the armed forces is a good example of how different sectors can come together to deliver more to the people. Establishment of the Malaysia field hospital in Cox's Bazar (Bernama, 2019) for example has provided various opportunities for many not just in the Ministry of Health but also the health division of the armed forces to learn and enhance skills and knowledge in clinical management during crisis, public health intervention, crisis management and others. COVID-19 pandemic 2020 has also brought together many agencies in the public and private sectors to manage the outbreak. The establishment of COVID-19 Low Risk Quarantine and Treatment Centres MAEPS in Serdang (Khairulrijal, 2020) in April 2020 lead by the National Disaster Management Agency (NADMA) was a reflection of

the importance of multisectoral collaboration in services delivery.

The Medical Programme is bound to support the Ministry's commitment to various international agenda. These include supporting the United Nation's Sustainable Development Goals (SDG) (Economic Planning Unit, 2017) especially in addressing the need to improve life expectancy and to reduce children and maternal mortality and also premature death due to NCDs. Furthermore, Malaysia is committed to attaining universal health coverage by 2030 and future strategies and plan of action of the Medical Programme shall align with these agenda and others including the World Health Assembly resolutions. The Medical Programme will continue to strive for better access to quality and affordable curative care services towards achieving universal health coverage.

Apart from the above, trade in healthcare services is gaining importance as a potential income generator for the country. This is reflected in various international multilateral, regional and bilateral free trade agreements which had listed healthcare services as one of the sectors for liberalisation.



Increasing needs for better stewardship and governance in healthcare

Stewardship is one (1) of four (4) functions of a health system, apart from other functions such as financing, resource generation

and service delivery (World Health Organization, 2013). As envisaged by the WHO, stewardship focuses primarily on "the state's role in taking responsibility for the health and well-being of the population and guiding the health system as a whole" (Travis et al., 2002). Ensuring good governance and stewardship will continue to pose a major challenge in the national health system and to the Medical Programme specifically.

Debate surrounding technological advancement and medical ethics can be challenging. Assisted reproductive technology, for instance, has brought about arguments and differences in opinion that complicate the process of drafting legislation on the issue. Drafting the bill on assisted reproductive technology requires firm policy direction that shall consider the differences of perspectives by the various stakeholders such as religious groups. Adequate understanding of the issue is essence to ensure effective implementation of the bill in the future. This bill is intended to address public concerns for example, the legality of surrogacy, genetic modification as well as usage of embryonic stem cells for research.

Minimum standard for the private ambulance services is needed to ensure quality and affordability of services. It is imperative that ambulances shall be equipped with adequate equipment and manned by trained personnel. To ensure this, the Medical Programme is drafting a regulation to control stand-alone private ambulances in Malaysia through Private Healthcare Facilities and Services Act 1998 [Act 586] and this will be given

due emphasis within the next five years.

The rapid expansion or development of laboratories in Malaysia shall be regulated to protect the public at large. Uncontrolled and unguided services will expose the public at risk of unethical practices such as inappropriate or unindicated laboratory investigations and also risk of unverified accuracy of test. Despite being gazetted in 2007, Pathology Laboratory Act 2007 has yet to be enforced. The Medical Programme will continue to strengthen the regulatory framework of this Act, in hope that it can be enforced with the next five years.

Stem cell therapy and aesthetics are among examples of issues related to new technologies to be addressed by the Medical Programme in the coming years. Safety of the patients and personnel will always be a priority. The Medical Programme also continues to address challenges with regards to drafting a new bill on organ and tissue transplantation. Ethical considerations on living organ donation, brain death, tissue banking, organ allocation and commercialisation of organ transplantation will continue to pose challenges to the drafting process.

Advancement of information technology in the new millennium has opened doors to innovative and different modes of practices such as online advertising of healthcare services especially through social media, video consultation, artificial intelligence and cloud-based medical records. Such practices shall be carefully

deliberated as to optimise the use of technology, without compromising on confidentiality and professionalism. The Medical Programme will continue to keep abreast with the latest development on international commitments and agreements to safeguard the interest of the profession, our country and its people.

Technology has enabled patients to obtain massive information pertaining to medical care. Patients are becoming more aware of their rights and have more tendency to make complaints or even take legal action against the government. The increasing trend in medico legal litigation with high payouts by the courts, both involving the government and private sectors is worrying. In return, doctors have started to practice defensive medicine and this has increased indemnity cost. Without strategy and control measures, such practices and arrangements may increase healthcare cost in Malaysia in the long run.

There is a tendency for the courts to accept the statements of the expert witnesses indiscriminately. The Medical Programme is working to establish an Academy of Expert Witnesses to assist the court in medico legal litigations. High clinical workload and no additional incentives to the government specialists has resulted in many of our doctors refusing to become expert witnesses.

Diverse and wide range of traditional and complementary medicine practices in Malaysia is one of the main challenges in regulating and integrating

ISSUES AND CHALLENGES

traditional and complementary medicine practices into our healthcare system. Lack of governance and oversight over traditional and complementary medicine may risk patients especially those visiting traditional and complementary medicine premises with suboptimal safety and quality standards, resulting in poor health outcomes and even endangering lives in some instances. The Medical Programme acknowledges these issues and challenges in stewardship and will continue its commitment to take a leading role in safeguarding the interest of all.



Maintaining quality and safety of services

Attaining excellence in quality and safety within our healthcare services requires a multi-pronged approach to improve its structures and processes to achieve better patient outcomes. The WHO has also highlighted that apart from accessibility, the quality of healthcare services is another important element in our endeavour to achieve Universal Health Coverage (UHC). Ensuring safety and maintaining quality in healthcare will continue to be a major challenge to the Medical Programme. Hospital congestion, waiting time, prevention of adverse events, healthcare-associated infection, antimicrobial resistance, complaints, and medico legal cases are among important issues to be addressed

in safety and quality. Wider access to information including through social media, more educated society and higher public expectations need to be acknowledged as some factors that will determine the way we deal with our customers in the coming years.

Healthcare leaders at all levels need to rise to the challenge of becoming good role models that are committed to the attainment and improvement of quality and safety. Quality and safety must also be made a key strategy as well as operational priority in healthcare services. Professionalism, creativity as well as innovation should be the prime movers for quality and safety, especially in the situation where the requisite resources are limited. Human factors such as the quality of work life of staff, stress and fatigue, communication issues and teamwork need to be effectively addressed if we are to deliver better healthcare. Quality and safety need to be “institutionalised” as an integral part of the organisation, which cuts across each individual within all categories of staff.

The existing quality and safety programmes established by the Medical Programme need to be critically reviewed, analysed, strengthened and improved on a regular basis so as to make them more user-friendly, practical, implementable and effective. Policies, guidelines and safe operating procedures need to be widely disseminated and made known to leaders and staff. Various training modalities

need to be done to facilitate understanding and increase in knowledge of staff, followed by positive changes in attitude as well as improvement in skillsets and practices. Accreditation and ISO are essential in monitoring compliance to quality and safety standards. A complete “PDCA (Plan-Do-Check-Act) Cycle” with effective risk reduction strategies is a must to continue to achieve better quality and safer care. We must endeavour to institutionalise quality by ensuring that “Quality is everybody’s business”.



Rapid development of healthcare industry

With the healthcare industry being among the most dynamic and rapidly growing industries in the world economy, it has become a powerful engine of economic growth. Looking at the local context, all three (3) key sub-sectors of the larger healthcare ecosystem, pharmaceuticals and biotechnology, medical technology and health travel, have delivered stronger performances relative to the larger, more traditional economic sectors such as automotive, agriculture and electronics. The growth of the healthcare industry in Malaysia has been organic in nature and is primarily driven by domestic consumption of healthcare products and services. However, medical / health tourism is currently one

of the areas given importance by the Government especially in the promotion for oncology, cardiology and fertility treatment. Malaysia has become one of the popular destinations for medical tourists seeking medical treatment and wellness services including aesthetic procedures over the recent years. As such, in tandem with the promotion of medical tourism and the concept of private sector as a partner, the number of registered and licensed private healthcare facilities or services (PHFS) has and is steadily increasing.



Research

Research in healthcare has high value to society as it can provide important information about disease trends and risk factors, outcomes of treatment or public health interventions, functional abilities, patterns of care, and healthcare costs and use. Collectively, all forms of health research have led to significant discoveries, the development of new therapies, and a remarkable improvement in healthcare and public health with resulting increased productivity of the population contributes greatly to the national economy (Johnson et al., 2015; Nass et al., 2009). The notion of a continuously learning healthcare system is gaining traction as a way to advance the objectives of high quality, patient-centred care at reasonable cost by integrating research into clinical care, healthcare service delivery

and management (Cosgrove et al., 2013; Alexander et al., 2007). It has also been recommended that research agenda should have three (3) core characteristics to ensure that research delivers actionable knowledge which are meaning, utility and innovation (Leslie et al., 2018), which many current researches are still lacking. In the local context, there is a need for more trained local researchers, increased collaborations

between public / government and private health sectors to achieve effective sample size and strengthening monitoring, tracking and follow up of patients involved in medical research especially those in clinical trials. With the strengthening of Institute of Clinical Research Malaysia, Malaysia aims to increase and promote more local and international research collaborations and strengthen its application in healthcare.

“These challenges are increasingly complex, often spurred by changing demographic and epidemiological profiles, emerging and re-emerging diseases, economic volatility, reduced funding, and the ever-increasing healthcare cost, among other factors. At the same time, with rapid socioeconomic development, comes a corresponding rise in people’s expectations and demands for more and higher quality health services”

Director-General of Health Malaysia



OUR PLAN



WAY FORWARD

Principles and Philosophy

In developing of this strategic framework, we put forth strategies based on three (3) broad principles and philosophy; 1) to sustain successful implementations and to replicate to other areas; 2) to review and revise previous strategies which were ineffective to address unresolved issues and, 3) to develop new initiatives to address new or emerging issues.

Objectives

Based upon our international commitments, general objectives of this strategic framework are to improve population health, in line with the United Nations' Sustainable Development Goals (SDG) and Universal Health Coverage (UHC) by the year 2030, and to stay true and committed to the Astana Declaration.

While, in the local context, specific objectives were established to be in line with major government's policy direction including the Shared Prosperity Vision 2030, the national health reform agenda, the previous 11th Malaysia's plan and preliminary strategies of the 12th Malaysia Plan. The Ministry has given emphasis to various reform agendas in healthcare system including restructuring the system, creating a robust financing system, better public-private partnership, and seamless integration between primary and secondary care. The Ministry has also given emphasis not only on evidence-based medicine but also on value-based medicine and opened for more innovative solutions including digital technology.

Taking into consideration international commitments and various local policy direction, the overall objective of the Strategic Framework of the Medical Programme (2021 – 2025), is to improve access to medical care, leaving no one behind, through strengthening, enhancement and consolidation of medical services.

Strategies and priority areas

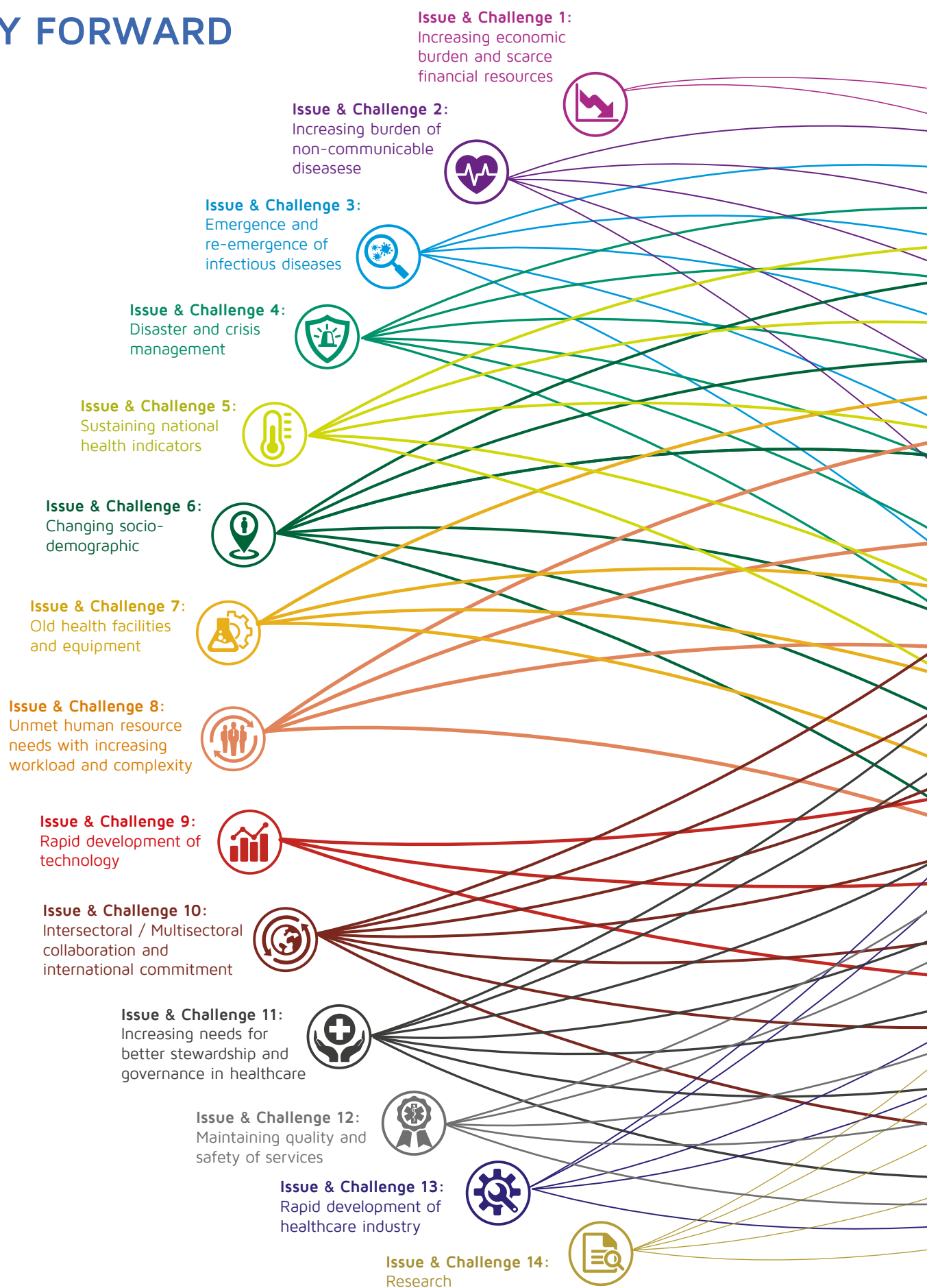
Formulation of Strategic Framework of the Medical Programme is streamlined with the principles and philosophy of the main strategies of the Ministry of Health Malaysia. The Ministry of Health has identified four (4) main outcomes for Twelfth Malaysia Plan; 1. sustainable, equitable and affordable healthcare, 2. reduced preventable mortality and morbidity, 3. person-centred integrated care and 4. enhanced adoption of healthy lifestyle. With the theme "Invigorating Healthcare Towards A Progressive Nation", MoH has outlined five (5) preliminary strategies to achieve the outcome and the strategies are S1: restructuring healthcare delivery system, S2: strengthening governance and stewardship, S3: reforming health financing, S4: enhancing digital trajectory and value-based innovations and S5: empowering individuals, families and communities.

With primary aim to further develop the hospital services and also to better execute its functions as described in the earlier sections, the Medical Programme has identified seven (7) strategies for the upcoming five years (2021 – 2025), following which a total of sixty-one (61) implementation plans and 176 activities will be carried out in phases.



Figure 8 Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021-2025)

WAY FORWARD



Strategies and implementation plans are described in summary in the following sections and details of other implementation plans and activities identified under each strategy are also outlined. These strategies with the implementation plans and activities will address issues and challenges identified and the relationship between them is shown in the diagram below.

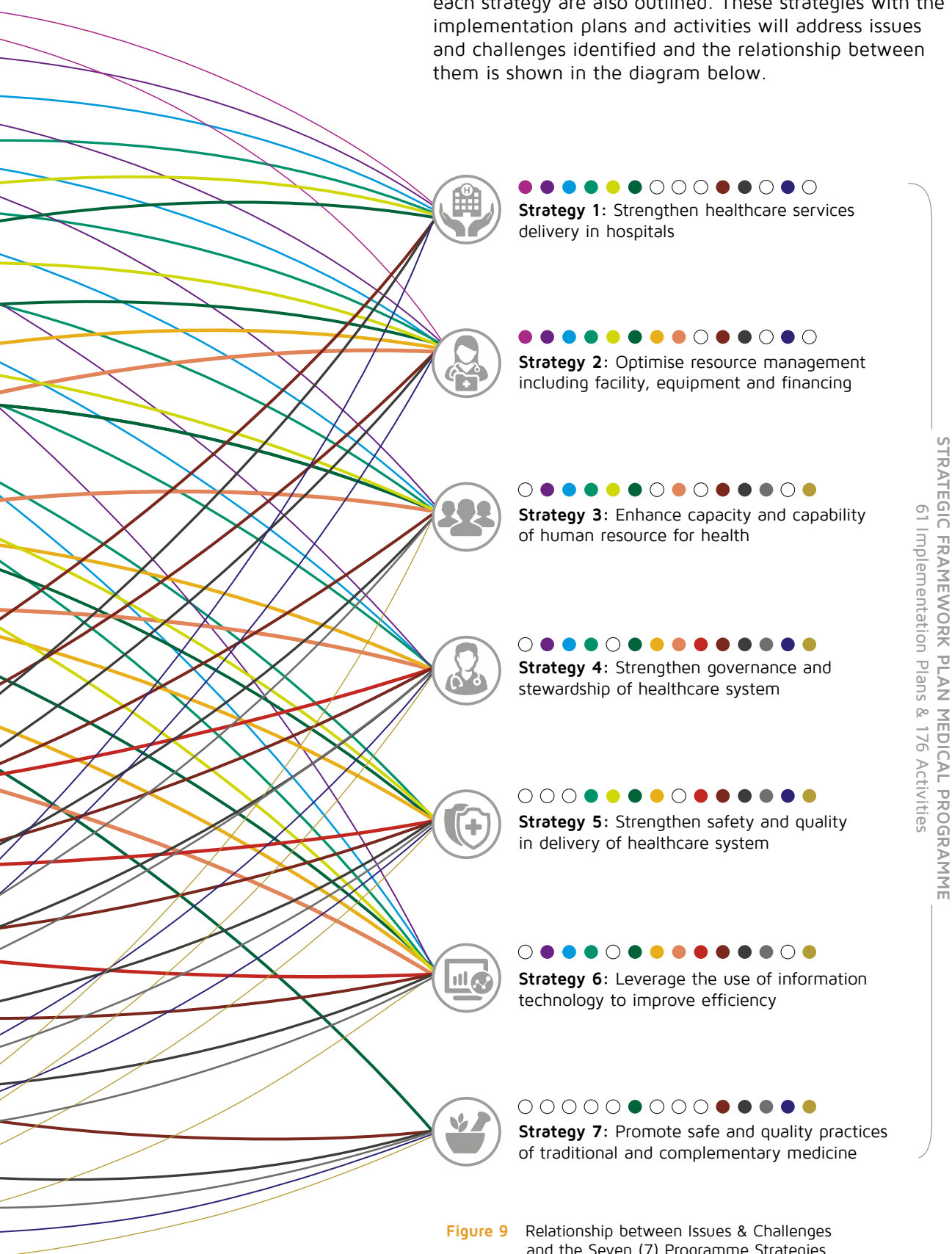


Figure 9 Relationship between Issues & Challenges and the Seven (7) Programme Strategies

IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

1



Strengthen healthcare services delivery in hospitals

Development and delivery of secondary and tertiary care services shall remain relevant to address the current issues and challenges of the country's healthcare system. Strengthening healthcare services delivery in hospitals will involve preparing the existing facilities and services to address the increasing double burden of non-communicable and communicable diseases. Prevention and control of diabetes mellitus, hypertension, coronary heart disease, cerebrovascular disease, chronic kidney disease and other common complications of non-communicable diseases will be given emphasis in the Twelfth Malaysia Plan. Improving access to acute care for ischaemic stroke through thrombolytic therapy, increasing capacity of interventional cardiology services, promoting peritoneal dialysis and improving the rate of kidney transplantation are among measures to address the non-communicable diseases. Management of diabetics and hypertensive patients seen in hospitals will be improved and this include establishing a better networking with the primary care counterparts through the Enhanced Primary Healthcare Initiative (World Health Organization, 2019) and the future hospital cluster framework. The Medical Programme envisions a seamless care of patients between health clinics and hospitals to promote better outcomes in secondary and tertiary prevention of diseases. A comprehensive strategic framework to enhance the clinical management of patients with diabetes and hypertension will be proposed that will involve various experts and stakeholders, working together to achieve better clinical outcomes. Mental health and cancer treatment will be given special focus in our effort to address non-communicable diseases. MENTARI community outreach programme for psychiatric patients will be expanded. Access to cancer treatment especially for various diagnostics and therapeutic procedures is an important issue to be further addressed to ensure patients receive appropriate interventions timely.

At the time of writing, the health system at all levels were occupied with the global outbreak of COVID-19 for which Malaysia was praised by WHO for its preparedness and public health interventions to contain the virus (Bernama, 2020; The Star Online, 2020). The Medical Programme will continue to play its part in ensuring the hospital services are prepared to manage potential emergence of new infectious diseases in the future. Hospitals shall be equipped with appropriate level of isolation and quarantine facilities and the healthcare workers shall be protected through adequate supply of personal protective equipment when dealing with such incidences.

With current new world scenario on COVID-19, currently, MoH is converting existing hospitals to be treating hospitals for COVID-19. We managed to transformed these hospitals to cater for this pandemic. However, it is timely that Malaysia needs at least one (1) centre for communicable diseases like a National Cancer Institute. This centre - Communicable Disease Hospital (CDH) is dedicated to the diagnosis, treatment and prevention, as well as education and research on infectious diseases, focusing on tuberculosis (TB), respiratory diseases and other infectious diseases including leprosy, MERS, influenza, measles, hepatitis, HIV, other complicated communicable diseases and any emerging and re-emerging infections especially the present COVID-19. The CDH can be set up either by using existing suitable hospital through refurbishing or setting up a new building.

In our effort to improve response time to emergency situations, the pre-hospital care and ambulance services will be strengthened especially in terms of its capacity and coverage. Women and children health will continue to be part of our priority with focus on improving access to critical care for the paediatric patients and enhancing the reproductive assistive technology services. The Medical



Figure 10 Focus Areas under Programme Strategy 1 — to Strengthen Healthcare Services Delivery

Programme will also look into improving access to care for special paediatric groups such as patients with rare diseases and newborns with hearing problems. The hospital services will be prepared for an aging population. Strengthening the geriatric services will involve addressing the need of specific problems related to aging including osteoporotic related injuries, dementia, cataract, rehabilitation and urinary issues.

Clinical support services are integral components of the hospital services. The laboratory services will be consolidated, and better networking of the existing services will be encouraged to optimise the use of resources. Safety and quality of blood products will be improved through strengthening of the transfusion medicine services. Capacity of forensic laboratory service will also be addressed through regionalisation of the services.

Table 2

Implementation Plan and Activities for Programme Strategy 1

Programme
Strategy

1



Strengthen healthcare services
delivery in hospitals

Implementation Plan	Activity / Initiative	Target / Indicator	Division
1 To enhance the delivery of cardiac services	Establishment of new centres to improve accessibility to treatment	At least 2 interventional cardiac laboratories in each region.	Medical Development Division
	To enhance effectiveness of cardiac services	Mortality rate of elective CABG less or equal 2%	Medical Development Division
		At least 70% of urgent CHD cases undergo intervention / surgery in less than 2 weeks	
		At least 70% of semi-urgent CHD cases undergo intervention / surgery in less than 1 month	
		At least 90% high risk acute coronary syndrome cases undergo cardiac catheterization within the same admission	
2 Increasing accessibility and quality of care for stroke patient	To strengthen management of ischaemic stroke patient by improving thrombolysis treatment services in MoH hospitals	Percentage of ischaemic stroke patients receiving IV thrombolytic therapy (IV rt-PA), ≤35 minutes of CT brain initiation	Medical Development Division
	Establishing stroke rehabilitation program to reduce complication in stroke patient	Stroke Stepdown Care Programme to be established in 2 state hospitals per year	Medical Development Division Allied Health Sciences Division Nursing Division



	Implementation Plan	Activity / Initiative	Target / Indicator	Division
3	Optimizing care of patients with end-stage renal failure	To promote peritoneal dialysis preferred policy to outweigh the burden on haemodialysis i.e. home-based dialysis	Increase home dialysis from 15% to 30% by 2025	Medical Development Division
		Expansion of services by number of nephrologist and haemodialysis centre for better access	Number of new haemodialysis centres in government facilities	
		Increase number of new kidney transplant patients per year	5 new transplant cases per million population	
4	Increasing accessibility and quality of care for cancer patient (adult & paediatric population)	To optimise the existing centres providing Radiotherapy, Nuclear Medicine and PET Oncology services	Reduce waiting time between diagnosis and initiation of therapy	Medical Development Division
			Increase in survival rate of cancer	
		To shorten waiting time for diagnostic / therapeutic procedures for cancer patients through public-private partnership	Percentage of patients who were started on radical radiotherapy for nasopharyngeal cancer within (<) 4 weeks from the date of CT-simulation	
5	Improving accessibility, effectiveness and quality of the psychiatric services in Medical Programme	To improve accessibility to rural areas in Sabah and Sarawak through Cluster initiative	Establishment of new MENTARI centres in Sabah & Sarawak	Medical Development Division
		To enhance mental health service delivery and strengthen current community psychiatric outreach programme (MENTARI) through multiagency collaboration including NGOs	Number of collaboration for each psychiatric unit / MENTARI	
		To enhance service delivery through improving waiting time and defaulter tracing	Defaulter rate among psychiatric outpatient less than 10%	Medical Development Division
			More than 90% of patients with waiting time < 90 min	

Table 2
Implementation Plan and Activities
for Programme Strategy 1

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
6	To provide comprehensive palliative care to terminal cancer and non-cancer patients	To enhance the capacity by establishing palliative care services in State Hospitals	Number of State Hospitals with palliative care services	Medical Development Division
7	To improve the quality and effectiveness of diabetic control for patients seen in hospitals	To establish National Plan of Action to enhance clinical management of diabetic patients at primary and secondary level	Development of the National Action Plan	Medical Development Division Nursing Division Allied Health Sciences Division
		To enhance glycaemic control in patients receiving insulin therapy	Percentage of insulin treated inpatients experiencing hypoglycaemia	Medical Development Division
		To expand the use of Continuous Glucose Monitoring in endocrinology service	Percentage of new diabetic cases referred for education within (\leq) 8 weeks from first consultation	
			Percentage of Diabetic Ketoacidosis (DKA) Mortality Rate	
		To enhance collaboration with primary care to reduce diabetic-associated complications	Rate of diabetic retinopathy detection	
			Rate of amputation	
8	To strengthen Pre-hospital Care and Ambulance services (PHCAS)	To strengthen the collaboration with EMRS, Fire and Rescue Department and also other relevant NGOs nationwide	All states in Malaysia (14 states) will collaborate / activate EMRS by 2025 Five new hotspots/year Total 25 new hotspots by 2025.	Medical Development Division
		To increase capacity of PHCAS Team	Establishment of 1 dedicated PHCAS team in all hospitals by phases	



Implementation Plan	Activity / Initiative	Target / Indicator	Division
	To provide appropriate infrastructures for PHCAS (ambulances, Patient Transport Vehicles, Rapid Response Vehicle)	Numbers of ambulances, Patient Transport Vehicles, Rapid Response Vehicles	
9	Enhance preparedness and response capacity of healthcare system and hospital in emergence and re-emergence of communicable/infectious diseases, disaster & crisis management	To improve the surveillance and public health activities in secondary care	Medical Development Division
		Review the surveillance and response system time	
		To establish a National communication and risk communication strategies for secondary care	
		Establishment of multidisciplinary and multisectoral technical committee	
		To ensure the availability of supply and readiness of facilities for the preparedness and response capacity	
		Adequate supply of medicine, personal protective equipment (PPE), laboratory sampling kits	
		Number of isolation facilities established/reviewed based on standard	
		Improve readiness of facilities and equipment	
		Decontamination facility upgraded in 2 designated hospitals per year	
		Isolation room upgraded in 2 designated hospitals per year	
		5 mobile decontamination within 5 years	
		5 mobile isolation within 5 years	
		Negative Pressure ICU Rooms upgrade for 4 Hospitals per year	
		ICU equipment upgrade for 4 hospitals per year	
		Procurement of standardized uniform and PPE for emergency medical teams in all state hospitals (3 states per year)	

Table 2
Implementation Plan and Activities
for Programme Strategy 1

Implementation Plan		Activity / Initiative	Target / Indicator	Division
		To enhance personnel preparedness and response capacity	Regional Basic Medical Emergency Response Team training once a year	Medical Development Division
		To increase response capacity of the healthcare personnel for disaster and crisis management	Review and implementation of employment / hiring of contract healthcare personnel	
			Increase in number of posts for healthcare personnel	
		To review / develop relevant policy and guidelines on disaster and crisis management in hospitals	Number of policy and guidelines published	
10	To strengthen the management and treatment capacity of emergence and re-emergence of communicable diseases through evidence-based clinical management policies	Develop a systematic approach based on the accepted national and regional guidelines and standards of treatment	Reduction in morbidity / mortality associated with communicable disease	Medical Development Division
		Implement and review the SOPs related to management and treatment of communicable diseases.	Development and review of the Standard Operating Procedures	
11	To enhance critical care services for neonatal and paediatric population	To establish retrieval services in hospitals	To establish one retrieval service in Klang Valley based at Hospital Tunku Azizah and one in the northern region based at Hospital Pulau Pinang	Medical Development Division
		To increase the numbers of PICU beds	To achieve total of 200 PICU beds by 2025	
		To increase the number of stepdown wards for neonates	To increase the level 2 and level 3 bed numbers	
		To establish human milk bank	To establish 1 human milk bank in Hospital Tunku Azizah by 2025	
12	To enhance existing paediatric ambulatory care centre services	To provide effective and safe paediatric care to avoid unnecessary admissions (medical & surgical) to Hospital Tunku Azizah and to cater for paediatric palliative service	To refurbish Institut Pediatrik Hospital Kuala Lumpur by 2025	Medical Development Division



Implementation Plan	Activity / Initiative	Target / Indicator	Division
13 To enhance existing paediatric services to cater to the needs of special groups of paediatric population	To provide comprehensive paediatric palliative care (PPC) for children and adolescent with life limiting conditions	To establish dedicated PPC services / Unit in Hospital Tunku Azizah and Hospital Pulau Pinang	Medical Development Division
		Formation of PPC services technical committee at district and state level	
		Establishment of essential medication list and drug dosage references	
	To provide a holistic rare disease management programme in Malaysia	Establishment of definition of terminologies in rare disease	Medical Development Division
		Establishment Malaysian list of rare diseases	
		Establishment of expert group committee of various rare diseases	
	To strengthen newborn hearing screening programme	Percentage of all newborn infants who complete screening by one month of age	Medical Development Division
		Percentage of infants who complete a comprehensive audiology evaluation by 3 months of age	
		Percentage of deaf and hard of hearing infants receiving amplification devices within one month of confirmation of hearing status	
	To strengthen speech language therapy for children with speech language delay through empowerment of families, NGOs and community and home care service	At least 1 family member trained in speech delay therapy	Allied Health Sciences Division

Table 2
Implementation Plan and Activities
for Programme Strategy 1

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
14	To expand existing assisted reproductive technology (ART) services	To established ART Centre in Sarawak Zone and Southern Zone	To establish ART centre in Sarawak Zone by 2023 and Southern Zone by 2025	Medical Development Division
15	To provide seamless care for the aging population in the current healthcare settings	Improving access to urological / urogynaecology services to geriatric population	To increase the number of urology clinic at MoH hospitals Establishment of urogynae services from regional to all state hospitals Expansion of urology clinic at MoH hospitals Number of Prostate Cancer and BPH detected and treated	Medical Development Division
		To increase accessibility for elderly in MoH hospital by increasing hospitals for geriatric care	Number of hospitals providing geriatric services	
		To strengthen post-hospitalization care for elderly in the community through collaboration with primary care services	Development of National Action Plan for Aging Population 2021-2025	
		To improve the quality of care and effectiveness of management in dementia patient by non-pharmacological approach through cognitive stimulation therapy programme	Number of centres providing cognitive stimulation therapy programme Development of National Dementia Action Plan 2021-2025	Medical Development Division Allied Health Sciences Division Medical Development Division



Implementation Plan	Activity / Initiative	Target / Indicator	Division
	To establish geriatric rehabilitation services in selected MoH hospital in phases	Number of hospitals providing geriatric rehabilitation services	Medical Development Division
	To improve management of geriatric osteoporotic related injuries	Rate of fall related surgery performed	
	To improve management of fall / osteoporotic related injuries through enhanced collaboration between geriatric, orthopaedic, rehabilitation and allied health services.	Collaboration with primary care	Medical Development Division
		Fall Implementation Plan	Allied Health Sciences Division
	To improve detection and management of age-related blindness	Increase in cataract surgery	Medical Development Division
		Increase detection in age-related macular degeneration detection	
To strengthen radiological service	To improve waiting time for appointment through prioritization of cases by expanding Extended Radiology Service to more MoH Hospitals in phases.	Reduction of waiting time to 30% by 2025 from current (2020) standard	Medical Development Division
To consolidate and integrate laboratory service delivery in MoH facilities	To establish good networking of services within MoH medical laboratories through harmonisation and standardisation of technical policies; service scope and function, test menu and methodology.	Consolidation of lab service in 80% of state	Medical Development Division
	To enhance specimen service delivery management by means of efficient network between pathology laboratories in MoH supported by integrated pathology transportation system.	Integration of specimen service delivery in 70% of state	

Table 2
Implementation Plan and Activities
for Programme Strategy 1

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
18	To increase the availability of safe, quality and accessible blood, labile blood components and plasma derived medicinal products	To increase the availability of safe and regular voluntary non remunerated blood donor through community and inter sectoral partnership	Increase blood collection to 2.5-3% / 1000 population by 2025 (35,0000- 50,000/year)	Medical Development Division
		To ensure the safety and quality of blood, labile components and plasma derived medicinal products and improve blood supply management through nationwide strengthening of quality testing by having 3 regional Nucleic Acid Amplification Testing (NAT) centres.	Percentage of Nucleic Acid Amplification Testing tested blood to 100% by 2025	
		To improve patient safety and outcome by strengthening Good Clinical Transfusion Practice and Patient Blood Management Initiative	Involvement of all MoH Hospitals (100%) by 2025	
19	To strengthen Forensic Medicine service	To strengthen Forensic Medicine Laboratory Service in selected 6 centres by region	All 6 centres shall be able to provide Forensic Medicine Laboratory Service	Medical Development Division
20	To optimise the delivery of existing T&CM services at MoH hospitals	To study and evaluate the role of T&CM in health management and health promotion at tertiary healthcare level	An appropriate study report to be ready by 2022	Traditional & Complementary Medicine Division
		To study and evaluate the potential contributions of T&CM in the prevention and treatment of the country's top disease burden	An appropriate study report to be ready by 2022	



OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT



IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

2



Optimise resource management including facility, equipment and financing

In enhancing services delivery in the Ministry of Health's hospitals, the Medical Programme will continue to optimise the utilisation of its existing resources. This includes optimising the use of underutilised facilities for example beds and operation theatres at smaller hospitals through the implementation of hospital cluster and Global Surgery initiatives. Through this, access and waiting time of surgery and other types of procedures or treatment can be reduced, decongest the bigger and busier hospitals and improve patients' experience. The existing hospital cluster platform will be improved through long term and sustained strategic framework. Daycare services will also be further encouraged to minimise the need for admissions especially for simpler procedures. Through this, the inpatient beds can be fully optimised for the use of acute cases and promote cost-saving. The Programme will also enhance the use of health technology assessment as a tool for value-based practices. Reassessment of health technologies will also be introduced so that underutilised technologies can be optimised, and obsolete technologies can be disengaged. New and innovative measures in managing medical equipment such as refurbishment and leasing initiatives will be further evaluated in the Twelfth Malaysia Plan.

Table 3

Implementation Plan and Activities for Programme Strategy 2

Programme
Strategy

2



Optimise resource management including facility, equipment and financing

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
21	Enhancing capacity of hospital facilities	Optimise the use of existing ICU / OT by providing optimal resources	Increase in functioning ICU / OTs	Medical Development Division
		Increase ICU bed capacity	Increase in number of ICU beds	
22	To optimise utilisation of existing underutilised/ unused facilities via Hospital Cluster platform	To integrate or coordinate healthcare service delivery that provide comprehensive and seamless care	Number of services provided in non specialist hospital	Medical Development Division
				Allied Health Sciences Division
		To enhance integration / coordination of primary care with secondary and tertiary care.	Number of collaborations / integrations with Primary Care Clinics and Hospital	Medical Development Division
				Allied Health Sciences Division
				Nursing Division
		To establish integration / coordination system within clusters which include the management, clinical support, allied health services and concession / contract services	Cost saving in Cluster procurement	Medical Development Division
				Allied Health Sciences Division
			Evaluation of the need for refurbishment of facility / equipment	Allied Health Sciences Division
			Implementation of hospital food service management within cluster hospital	Medical Development Division
		Number of clusters with integration / coordination system		Allied Health Sciences Division
				Nursing Division

Table 3
Implementation Plan and Activities
for Programme Strategy 2

Implementation Plan	Activity / Initiative	Target / Indicator	Division
	To establish integration / coordination of with other healthcare providers including university hospitals and private healthcare service.	Number of engagement sessions with stakeholders	Medical Development Division
		Implementation Framework	
	To enhance the Global Surgery Framework implementation	Number of non specialist hospitals providing essential surgical, O&G and anaesthesia procedures	Medical Development Division
		Number of general anaesthesia procedures done in non specialist hospital	
		Number of specialist hospital providing neuro-trauma and ERCP procedures	
	Improving patient's accessibility to surgical services through the enhancement of the current daycare services	For Daycare Surgery: At least 1 Target Index Procedure done as Daycare achieve > 60%	Medical Development Division
		For Daycare Medical: At least 1 Target Index Procedure done as daycare achieve > 60%	
		Number of new Ambulatory Care Centre	
23 To improve efficiency and effectiveness through management reform and process re-engineering	Establishment of LEAN Organisation	Number of LEAN Organisations	Medical Development Division
	Proposal and development of Diagnosis-Related Group (DRG) based budgeting system (or equivalent)	Development of system	
	Introduction of financial incentives or penalties system that encourage hospitals to consolidate, merge or decentralise	Development of system	



	Implementation Plan	Activity / Initiative	Target / Indicator	Division
24	To encourage the use of health technology assessment as a tool for decision / policy-making process towards value-based healthcare	To develop a policy document on the use of health technology assessment on health technologies and innovation	Policy document development completed and presented (Reassessment framework, Mapping Analysis)	Medical Development Division
		To develop reassessment framework / manual for health technologies and innovation		
		To advocate and support the process of price setting, reimbursement and benefit package development within the health financing structure of the country		
		To strengthen the utilisation of HTA in priority setting (specifically with regards to procurement and programme initiation decisions)	Percentage of technology assessment reports being utilised for decisions / policy	
		To support strategy in using refurbished medical devices by conducting assessment on those devices	Systematic review for refurbishment of medical devices completed and presented	
25	To re-evaluate the need for refurbishment of equipment under the leasing pilot project	Establish Specification Committee at the end of leasing tenure (CT scan / MRI / Xray)	Evaluation report for need of refurbishment by late 2023	Medical Development Division
26	To optimise healthcare resources through interagency collaboration in service delivery	To further strengthen existing collaboration on various allied health services	Number of collaborations / percentages of target group	Allied Health Sciences Division



IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

3



**Enhance capacity and capability
of human resource for health**

The Medical Programme will continue its commitment in developing capacity and capability of human resource for health. Health services are heavily driven by skilled workers. Without a competent, knowledgeable, motivated and well distributed workforce, the ability of a country to meet its health goals will be compromised. Houseman training programmes will be further improved through revision of guidelines and expanded list of hospitals accredited as houseman training hospitals. Post-graduate training for medical doctors will be enhanced through continuous improvement on curricular, standards and development of the parallel pathways. This is to ensure future medical specialists are highly competent and knowledgeable in line with the current development in medical practice. The Medical Programme will continue to play its advocate role to promote appropriate incentives to medical doctors through better promotion and retention packages such as expansion of the full paying patient scheme. Continuous training for the in-service medical officers and specialists will be given special attention through various initiatives such as Advanced Competency Programme (ACP) and development of clinical skill labs. Training of medical doctors and other relevant health professionals on clinical governance and other public health areas will be further enhanced to meet the needs of hospital services and the Medical Programme. This include continuous professional development programmes for hospital directors and training on hospital / health management, occupational health, enforcement, health technology assessment, health economics, medical law and other areas of special interest (SME).

Nurses, assistant medical officers and allied health professionals have been an important backbone of the country's healthcare workforce. Strengthening the post-basic training and post-graduate study and developing a better career pathway for the highly skilful will be re-emphasised.

Table 4

Implementation Plan and Activities for Programme Strategy 3

Programme
Strategy

3



Enhance capacity and capability
of human resource for health

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
27	To enhance houseman training programme	Revision of guidelines on extension of houseman training	Standardise houseman assessment tool by 2021	Medical Development Division
		Revision of guideline on implementation of houseman training	New guideline empowered by 2021	
		Continuation of current moratorium (will end in April 2021) for next 5 years	Proposal for continuation of moratorium submitted to MoHE before fourth quarter 2020	
		Accreditation of more hospitals for houseman training	Minimum 1 new hospital per year accredited for houseman training	
28	To enhance houseman training programme	Proposal for better service term for the contract house officers upon completion of houseman training	Proposal to Public Service Department before January 2021	Medical Development Division
		To create new post	1000 new posts per year for specialist	Medical Development Division
			5% increment of total numbers of AHP per year	Allied Health Sciences Division
			4000 new posts per year for nurses	Nursing Division
		To appoint AHP as sessional/ contract	Minimum 2 person per profession per specialist hospital	Allied Health Sciences Division

OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

Table 4
Implementation Plan and Activities
for Programme Strategy 3

Implementation Plan		Activity / Initiative	Target / Indicator	Division
		To continue employment of foreign clinical specialist in highly needed critical areas	Sustainability of cardiac service in 11 cardiac centres	Medical Development Division
		To enhance competency of MOs via Cluster platform	Engagement with University Establish training framework in Cluster Hospital	
29	To enhance retention and remuneration package for medical personnel	To further expand full paying patient scheme	Expansion to all state hospitals within 5 years	Medical Development Division
		To create more premier grade (Khas C) post for clinical specialist	500 new posts created within 5 years	
		To create premier grade TURUS post for specialist with outstanding achievement	5 Turus III post within 5 years	
		To propose a better allowance for post basic nurses	Approval by Public Service Department by 2025	Nursing Division
		To propose new allowances for AHP	Proposal to be submitted to Public Service Department by 2021	Allied Health Sciences Division
30	To advance clinical competencies of in-service medical personnel	Establishment of national skill lab	Skill lab operationalise by 2025	Medical Development Division
		Serial course on relevant clinical topics including training programmes to upskill senior MOs	Number of medical personnel trained per year	
		Advanced Competency Programme (ACP)	Increment of slots for medical specialists to 5 per year by 2025	
		To develop a framework for credentialing, competency and capability for allied health, streamlined with the medical / public health specialty and subspecialty framework	Framework for Credentialing, Competency and Capability for allied health approved and implemented by 2025 Revised Training Need Plan for AHP post-graduate training and Continuous Professional Development (CPD) by 2021	Allied Health Sciences Division



Implementation Plan	Activity / Initiative	Target / Indicator	Division
	To create new post basic courses	Three of new post-basic courses approved in 5 years	Nursing Division
	Upgrading of existing post-basic courses to advanced post-basic diploma	5 new advanced post-basic diploma by 2025	
	Streamlining post-basic training with medical specialty and subspecialty framework	At least 60% of post-basic trained nurses placed according to their specialty	Nursing Division Medical Development Division
	To increase number of assistant medical officer with post-basic training	Number of enrolments per year	Medical Practice Division
	To increase number of assistant medical officers with degree in medical and health sciences	Number of enrolments per year	
	Streamlining post-basic training with medical specialty and subspecialty framework	Percentage of post-basic training compatible with framework	
31	To strengthen clinical post-graduate training programme for medical doctors	Establishment of Specialty Training Guideline in Ministry of Health Malaysia (incorporated with supervisor guidelines)	Medical Development Division
		Review of subspecialty training curriculum and standards	
		To strengthen the Parallel Pathway training programme	
32	To improve competencies and provide incentives for medical doctors involved in clinical governance, public health practice, enforcement and other areas of special interest	Continuing professional development including through structured courses on hospital management, health policy (clinical governance) and subject matter (health technology assessment, clinical practice guidelines, epidemiology, biostatistics, and other relevant areas)	Medical Development Division

Table 4
Implementation Plan and Activities
for Programme Strategy 3

Implementation Plan		Activity / Initiative	Target / Indicator	Division
33		Continuing professional development including through short courses and seminars on enforcement and regulatory activities	Number of courses a year	Medical Practice Division
		To create more premier grade JUSA post for Deputy State Health Directors (Medical)	JUSA C post for 5 Deputy State Health Directors (Medical), 8 cluster lead hospital directors and 3 medical institutions directors by 2025	Medical Development Division
	To improve career pathway for medical personnel	To produce a proposal paper on career pathway for nurses with nursing degree	Submission to Public Service Department by 2025	Nursing Division
		To increase slots for government sponsorship for critical areas in nursing	Minimum of 2 scholarship slots per year	
		To create post for nurses as subject matter expert at clinical settings	Submission of proposal paper to Public Service Department by 2025	
	To establish career pathway framework for AHP		Career Pathway Framework for allied health developed by 2023	Allied Health Sciences Division
			Number of areas of specialization recognized by Malaysian Allied Health Professional Council (MAHPC)	
			Number of experts appointed as SME	
	To develop assistant medical officer technical expert (AMOTeX) registration		Development of guideline	Medical Practice Division
			Establishment of registry	
	To develop policies and framework to retain assistant medical officer technical expert in their clinical role according to their post-basic training		Number of posts with flexi grades created	



	Implementation Plan	Activity / Initiative	Target / Indicator	Division
34	To strengthen and professionalise T&CM health human resources (HHR)	To study the demand and supply of T&CM HHR and formulate strategies that support T&CM HHR planning	An appropriate study report to be ready by 2022	Traditional & Complementary Medicine Division
35	To equip and strengthen the capacity and competency among regulators, administrators and related professionals	To develop appropriate in-house training programmes conducted by T&CM professionals to equip public officers in work positions related to T&CM with the relevant skills and knowledge	Increase in number of officers trained	Traditional & Complementary Medicine Division
		To explore training opportunities with local / international institutions to equip public officers in work positions related to T&CM with the relevant skills and knowledge	Increase in number of officers trained	



IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

4



**Strengthen governance and stewardship
of healthcare system**

The Medical Programme has identified several plans to strengthen its governance and stewardship role in the national healthcare system. These include improving awareness of various stakeholders about legal requirements in setting up private healthcare facilities including virtual clinics, reducing regulatory burden through review of current legislations, strengthening management of medico legal cases and disciplinary proceeding litigations and strengthening the enforcement of existing legislations. The Medical Programme will also improve its mechanism to control the practices of aesthetic medicine, liberalisation of healthcare services and private healthcare fee regulations. The Programme will spearhead amendment of existing legislations and drafting of new legislations to ensure our regulatory framework are relevant to the current needs. Malaysian Health Technology Assessment Section, Medical Programme will be further strengthened to enhance its role, not only in informing policy and clinical decisions but also in matters related to other major policies such as health financing, cost, benefit package and reimbursement decisions. On top of that, the role of the Private Medical Practice Control Section will also be consolidated to ensure that it will continue to remain efficient and effective to cope with the rapid growth of the private health industry. Measures to strengthen organisations such as corporatisation of Private Medical Practice Control Section and institutionalisation of Malaysian Health Technology Assessment Section will be further studied.

Table 5

Implementation Plan and Activities for Programme Strategy 4

Programme
Strategy

4



Strengthen governance and stewardship of healthcare system

Implementation Plan	Activity / Initiative	Target / Indicator	Division
36 To improve awareness regarding legal requirements in setting up private healthcare facilities	Engagement with general practitioners and private clinic owners	Numbers of engagements conducted	Medical Practice Division
	Engagement with allied health professionals / stakeholders providing services at standalone facilities	Numbers of engagements conducted	Medical Practice Division Allied Health Sciences Division
	Development of training modules for trainers dealing with construction permits workshop	Modules completed	Medical Practice Division
	Development of structured modules for architects, engineers and medical planners pertaining to healthcare design	Modules completed	
	Development / Publication of guidelines and handbooks on how to set up and run private healthcare facilities and services, including allied health related services.	Handbooks and guidelines published	Medical Practice Division Allied Health Sciences Division
	Workshop with structured modules for architects, engineers and medical planners pertaining to healthcare design	Workshops conducted	Medical Practice Division

OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

Table 5
Implementation Plan and Activities
for Programme Strategy 4

Implementation Plan		Activity / Initiative	Target / Indicator	Division
		Development of proposal on outsourcing of floor plan reading	Completion of proposal	Medical Practice Division
37	To corporatise Private Medical Practice Control Section to improve process efficiency and optimise resources	To give inputs for corporatisation exercise of Private Medical Practice Control Section to improve process efficiency and optimise resources	Input prepared	Medical Practice Division
38	To reduce regulatory burden through review of the current legislations	Amendments of Private Healthcare Facilities and Services Act [Act 586] and Regulations	Percentage of drafting completed	Medical Practice Division
			Approval by the Attorney-General Chamber	
			Tabling of the amendments at the Parliament	
39	To strengthen management of medico legal cases and disciplinary proceeding litigation at all levels in the MoH facilities	Establishment of Medico legal Units at State Health Departments and other facilities	All State Health Departments to establish Medico legal Units by 2025	Medical Practice Division
			All lead hospitals in each hospital cluster to establish Medico legal Units by 2025	
		To improve knowledge and skills of clinical specialist as expert witnesses in medico legal litigation	20% specialists trained by 2025	Medical Practice Division
		To improve knowledge and skills of the expert witnesses in disciplinary proceeding litigation	At least 2 Expert Witness Trainings every year	
			At least 10% of Expert witness trained by 2025	
			At least 2 Trainings per year	Allied Health Sciences Division
		Establishment of Academy of Expert Witness to assist the court in medico legal litigation	Proposal paper for establishment of the Academy	Medical Practice Division



Implementation Plan	Activity / Initiative	Target / Indicator	Division
	To conduct clinical audit on medico legal cases by Medico Legal Section with Head of Services four monthly	Clinical Audit on medico legal cases by Medico Legal Section with Head of Services four monthly	Medical Practice Division
		Reduction in numbers of medico legal cases at all level of MoH facilities	
40	To strengthen control on medical aesthetics practices in the country	To make letter of privileging and credentialing as a compulsory requirement for practicing medical aesthetics	Medical Practice Division
41	To establish guidance document for strategic planning on liberalisation of healthcare services	To upgrade the current guideline to Director-General of Health Directive under Act 586	Medical Practice Division
42	To prepare or strengthen enforcement of the existing / new legislations	Guidance document completed	Medical Practice Division
	Private Aged Healthcare Facilities and Services Act 2018 [Act 802]	Establishment of team to implement and enforce the Act and its Regulations	Medical Practice Division
	Pathology Laboratory Act 2007 [Act 674]	Establishment of team to implement and enforce the Act and its Regulations	
	Private Healthcare Facilities and Services Act 1998 [Act 586] – ambulance services and home nursing services	Establishment of team to implement and enforce new provisions	
	Allied Health Profession Act 2016 [Act 774]	Integrated online registration system for healthcare professionals	Allied Health Sciences Division
		Regulation & Guidelines for allied health professionals	
	Traditional and Complementary Medicine Act 2016 [Act 775] and its orders	The registration of T&CM practitioners to commence upon the enforcement of the second phase of the T&CM Act 2016	Traditional & Complementary Medicine Division
		Criteria for New Recognised T&CM Practices to be developed	

Table 5
Implementation Plan and Activities
for Programme Strategy 4

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
43	Continue to spearhead drafting of new legislation and amendment of existing legislation in line with the advancement of healthcare services	Development of standards of services, personnel, and facilities for standalone private ambulance services under Act 586	Draft documents on standards completed	Medical Practice Division
		Human Organ and Tissue Transplantation Bill	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	
		Assisted Reproductive Technology Bill	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	
		Amendment of Human Tissues Act 1974 [Act 130]	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	
		Assistant Medical Practitioner Bill	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	
		Private Aged Healthcare Facilities and Services Act 2018 [Act 802]	Approval of regulations and guidelines by Legal Advisor Office and the Attorney-General Chamber	
		Pathology Laboratory Act 2007 [Act 674]	Approval of regulations and guidelines by Legal Advisor Office and the Attorney-General Chamber	
		Amendment of Nurses Act 1950 [Act 14] and Midwives Act 1966 [Act 436]	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	Nursing Division
		Optical Bill	Submission of Bill to Legal Advisor Office and Attorney-General Chamber	Medical Practice Division
			Number of personnel trained for enforcement of the law	



Implementation Plan	Activity / Initiative	Target / Indicator	Division
	Development of framework, standards, guidelines and policies pertaining to allied health professional registration, practice and services in accordance to Allied Health Profession Act 2016 [Act 774]	Code of Ethics and Professional Conduct for allied health professionals	Allied Health Sciences Division
		Standing Order for allied health professionals	
		Practice Guidelines for allied health professionals	
		Recognised Qualifications for allied health professionals	
		Governance framework (regulated, self-regulate, stand-alone facility etc.)	
		Criteria for regulatory evaluation for allied health professionals	
	Amendments of fee schedule under Private Healthcare Facilities and Services Act for deregulation of consultation fee and revision for new procedures.	Submission of amended Regulation and Schedules to Legal Advisor Office and Attorney-General Chamber	Medical Practice Division
	To develop in-house fee schedule for private healthcare facilities under Act 586 to reduce dependency on external references	New fee schedule developed	
	To develop an appropriate regulatory framework to regulate and monitor private T&CM facilities and services	Regulatory Impact Statement to be developed by 2021	Traditional & Complementary Medicine Division
		Draft Private T&CM Facilities and Services Bill to be developed by 2025	
	Revision of T&CM Policy	National T&CM Policy to be revised by 2025	Traditional & Complementary Medicine Division

Table 5
Implementation Plan and Activities
for Programme Strategy 4

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
44	To strengthen the role of Malaysian Healthcare Technology Assessment Section through restructuring and institutionalisation	To propose the restructuring of Malaysian Healthcare Technology Assessment Section as a division under Medical Programme	Proposal of restructuring of MaHTAS under Medical Programme drafted and presented	Medical Development Division
		Development of a legal framework to institutionalise Health Technology Assessment in support for value based & evidence-based decision / policy making process	Framework developed	



OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT



IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

5



**Strengthen safety and quality in delivery
of healthcare system**

Strengthening the implementation of a global action plan on patient safety would be among the important plans to optimise safety and quality in delivery of healthcare system apart from other initiatives such as improving clinical audit and clinical performance surveillance at the Ministry's hospitals. Accreditations of hospitals will be further supported and initiatives to prevent infection and antimicrobial resistance will be enhanced. Safe practices of traditional and complementary medicine will be promoted through compliance to accreditation requirements. Adherence to Clinical Practice Guidelines will also be further emphasised to reduce variation in practice and improve quality of care.

Table 6

Implementation Plan and Activities for Programme Strategy 5

Programme
Strategy

5



Strengthen safety and quality in delivery of healthcare system

OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
45	To implement Global Action Plan on Patient Safety	To implement Malaysia Patient Safety Goals 2.0 through Patient Safety Council Malaysia	Annual increment of 5% of Malaysian Patient Safety Goals 2.0 performance reporting from baseline set for each type of health care facilities, both public and private	Medical Development Division
46	To strengthen the infection prevention and control programmes	To enhance the existing surveillance programme on effective sanitation, hygiene and infection prevention measures	Reduction of Incidence of Healthcare Associated Infection	Medical Development Division
		Establishment of surgical site infection (SSI) surveillance in hospitals	Development of protocol Implementation of training programme at state and specialist hospitals	
47	To prevent and delay the emergence of antimicrobial resistance	To strengthen antimicrobial resistance containment programme	Reduction of incidence rate of Methicillin Resistant Staphylococcus Aureus Bacteraemia (MRSA Bacteraemia)	Medical Development Division
48	To strengthen clinical audit activities at the MoH facilities	Pain as 5th vital signs & pain free programme	Number of specialist hospitals with pain free status Number of MoH facilities with the implementation of Pain as the 5th Vital Sign	Medical Development Division
		Perioperative Mortality Review (POMR) according to Global Surgery 2030	Perioperative Mortality Review reporting rate	

Table 6
Implementation Plan and Activities
for Programme Strategy 5

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
49	To strengthen accreditation system in MoH facilities	Accreditation of lead hospitals in clusters	100% Lead Hospitals for cluster accredited by 2025	Medical Development Division
50	To strengthen occupational safety and health adherence to the Occupational Safety & Health (OSHA) 1994 [Act 514]	Establishment of Occupational Safety and Health Unit (UKKP) in hospitals & medical institutions	100% Lead Hospitals for cluster & special medical institutions establish OSH Unit (UKKP)	Medical Development Division
51	To optimise the Cluster Performance Indicator for Accountability	To review all quality & safety initiatives to be put under CPIA (Cluster Performance Indicator for Accountability)	To establish the indicators by 2021	Medical Development Division
52	To optimise the integration and improve the quality of T&CM services offered in public sector	To ensure all T&CM practitioners working in T&CM Units are registered with the T&CM Council when registration commences	100% of T&CM practitioners contracted to work in MoH hospitals are registered under the T&CM Act	Traditional & Complementary Medicine Division
		To introduce an appropriate medical record keeping system for T&CM services	An appropriate system to be developed by 2024.	
		To ensure T&CM Units comply with the accreditation requirements of the respective hospitals	100% of T&CM Units to achieve compliance by 2023	
		To propose an appropriate service scheme for T&CM practitioners in the public sector	To submit proposal for service scheme by 2025	



	Implementation Plan	Activity / Initiative	Target / Indicator	Division
53	To improve safety and quality in delivery of private healthcare services	Masterclass workshop with private healthcare facilities	Workshop organised	Medical Practice Division
		Publication of Technical Reference for Disaster Management Plan for High Rise Hospital	Technical reference published	



IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

6



Leverage the use of information technology to improve efficiency

The Medical Programme will continue to give special emphasis on the development of hospital information system to improve effectiveness and efficiency of our hospitals nationwide. The Programme will work towards creating electronic medical records that will capitalise on the already developing platforms in our pipeline. The Programme will continue to play its role as subject and business matter experts in the expansion of the system. On top of clinical documentation modules, the existing modules currently being developed include Laboratory Information System (LIS), Operating Theatre Management System (OTMS), Centralised Sterilisation Supply Information System (CENSSIS), Blood Bank Information System (BBIS), Radiology Information System (RIS), Picture Archiving Communication System (PACS), Forensic Management Information System (FMIS) and Critical Care Information System (CCIS). The Medical Programme will also draw plans on how to address the obsolete hospital information systems of existing IT hospitals. We will also enhance our processes of approving licenses and certificates of registrations of private healthcare facilities, application of financial assistance and medical claims reimbursement through digitalisation of the procedures.

Table 7

Implementation Plan and Activities for Programme Strategy 6

Programme
Strategy

6



Leverage the use of information technology to improve efficiency

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
54	To implement Electronic Medical Record (Hospital Information System) in MoH Hospitals	Roll out of Electronic Medical Record (EMR) (including Laboratory Information System, Operating Theatre Management System, Centralised Sterilisation Supply Information System, Blood Bank Information System, Radiology Information System, Picture Archiving Communication System, Forensic Management Information System and Critical Care Information System) by Central Design Office (CDO) where Medical Programme as Subject Matter Expert (SME) in business process	Percentage of roll out	Medical Development Division
		To upgrade obsolete Hospital Information System under Managed Service Provider	Number of hospitals upgraded	
55	To improve enforcement and regulatory mechanism through use of technology	Upgrading the Medical Practice System (MedPCs) to further enhance registration and licensing process of private healthcare facilities	System completed	Medical Practice Division

OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

Table 7
Implementation Plan and Activities
for Programme Strategy 6

Implementation Plan	Activity / Initiative	Target / Indicator	Division	
	To establish online registry of registered practitioners, certification and renewal practicing certificate for allied health professionals, optometry practitioners, nurses, assistant medical officers and traditional and complementary medicine	Percentage of development of online system	Allied Health Sciences Division Nursing Division Medical Practice Division Traditional & Complementary Medicine Division	
56	To enhance quality and standard of care through use of technology	To establish framework on the incorporation of Clinical Practice Guidelines within the Electronic Medical Record	Development of Framework for CPG manager module for EMR established and accepted	Medical Development Division
		To establish quality activities and monitoring surveillance system of the MoH facilities.	80% establishment of e-HPIA (real time hospital performance) reporting and incident reporting (IR 2.0) in all MoH hospitals / institutes	
57	To improve / enhance application process for financial assistance and claim reimbursement mechanism as part of digital transformation of Public Service	Digitalisation of MoH Medical Aid Fund's claim processes by development of an integrated online application system and to establish automation of financial assistance medical aid claims via e-government service	Development of the system	Medical Development Division
58	To improve / enhance services delivery through use of technology	To initiate digital / virtual assisted allied health services (telerehabilitation virtual clinic, cerebral palsy therapy system, virtual dietetic clinic)	Number of digital / virtual assisted services	Allied Health Sciences Division Medical Development Division
59	To explore the use of 5G in service delivery	To study potential areas for development of 5G-related technology and its application in service delivery	Study on development and implementation	Medical Development Division





IMPLEMENTATION PLAN FOR EACH STRATEGY

Strategy

7



**Promote safe and quality practices of
traditional and complementary medicine**

With regards to this strategy, the Medical Programme aims to develop an appropriate integration model and plan for integration to optimise the contribution of traditional and complementary medicine in the delivery of healthcare and healthcare management. In our effort to ensure T&CM practices are safe and of quality, participation in traditional and complementary medicine-related research is encouraged by creating a conducive research environment and support system.

Table 8

Implementation Plan and Activities for Programme Strategy 7

Programme
Strategy

7



Promote safe and quality practices of traditional and complementary medicine

	Implementation Plan	Activity / Initiative	Target / Indicator	Division
60	To plan and develop appropriate integration models so as to optimise the contribution of Traditional & Complementary Medicine in health care management	To analyse the status of integration and develop a suitable strategic framework, model and plan for integration	To produce an analysis report with appropriate strategic framework for integration and its action plan	Traditional & Complementary Medicine Division
61	To encourage participation in Traditional & Complementary Medicine research by creating conducive research environment and support	To facilitate evidence-based research for Traditional & Complementary Medicine practices	Increased volume of Traditional & Complementary Medicine research	Traditional & Complementary Medicine Division



WHAT'S NEXT



MONITORING AND EVALUATIONS

Proposed timeline for the monitoring and evaluation (M&E) of the strategic framework

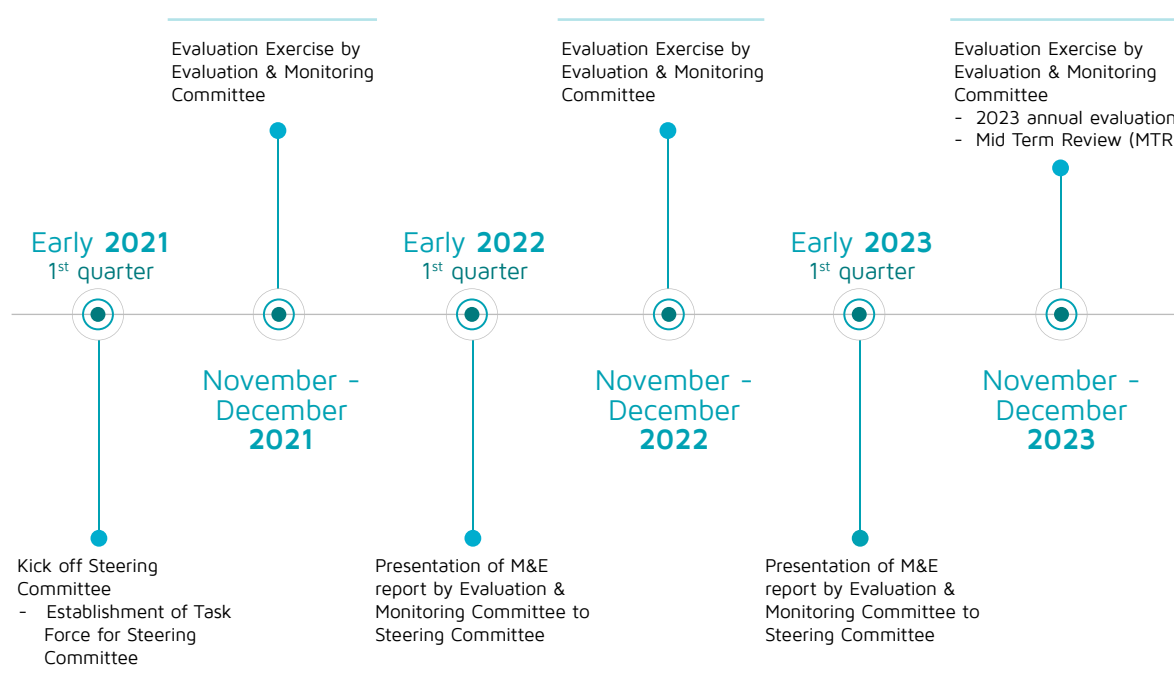
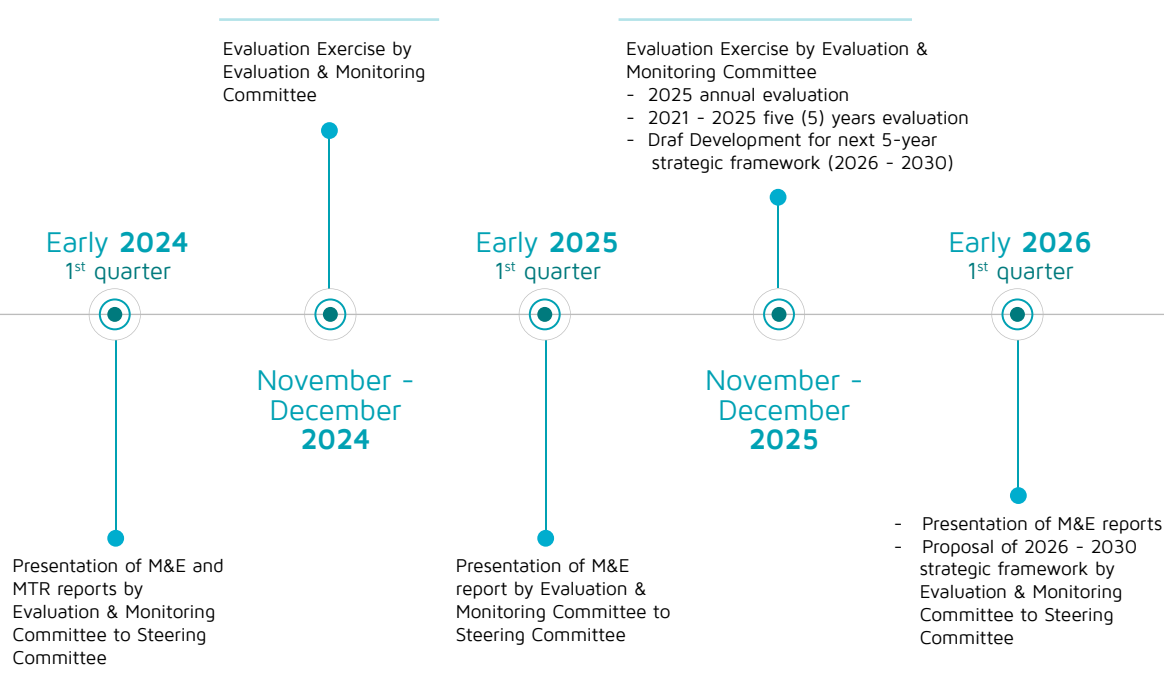


Figure 11 Proposed Timeline for Monitoring & Evaluation of the Implementation of Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021 - 2025)

The Medical Programme will take a few initiatives to follow through all implementation plans as stipulated in this document in our effort to ensure this strategic framework will be a living document. We will further study on the mechanisms already in place to monitor performance such as the Key Performance Indicators for the Director-General of Health and the Medical Programme itself and map accordingly with indicators proposed in this publication. Anchor or Division in charge of each implementation plan and activity as outlined in this document will be held accountable to spearhead the plan, monitor progress, re-evaluate, and re-strategise as we progress through the 12MP. The Medical Programme

will implement a monitoring and evaluation exercise for this strategic framework, but the anchors or owners of each implementation plan shall conduct a more regular monitoring.

An Evaluation and Monitoring Committee is proposed, to ensure that Medical Programme is on track towards achieving the framework's overall goals and objectives. The Evaluation and Monitoring Committee will comprise of a mix of internal and external memberships. External refers to individuals not within the headquarters office of the Medical Programme (such as State Health Directors or Hospital Directors) to be appointed by the Deputy Director-General of Health (Medical). External review will hope to



bring different and wider perspectives on how these plans shall be carried out and followed through in the next five (5) years. Chairman of the Evaluation and Monitoring Committee will be identified among the external and internal members. It is proposed that the Committee meet up annually (November - December) to conduct a year-end assessment and prepare an evaluation report (with recommended remedial measures / actions; if required) to be presented to the Steering Committee chaired by the Deputy Director-General of Health. The Steering Committee is an internal committee within the Medical Programme which consist of Directors and Deputy Directors and other senior members. The Steering Committee

will evaluate reports by the Evaluation and Monitoring Committee and to re-strategise, if required, any implementation plan. The Steering Committee is expected to meet at least annually, especially at the beginning of the year.

This monitoring, evaluation and review mechanism will be an annual exercise from 2021 until 2026. During the last cycle of valuation, the Evaluation and Monitoring Committee will also evaluate the overall performance from 2021 - 2025 (throughout the 5-year period of the 12MP) and propose measures for improvement in developing the next strategic framework of the Medical Programme.



CONCLUSION

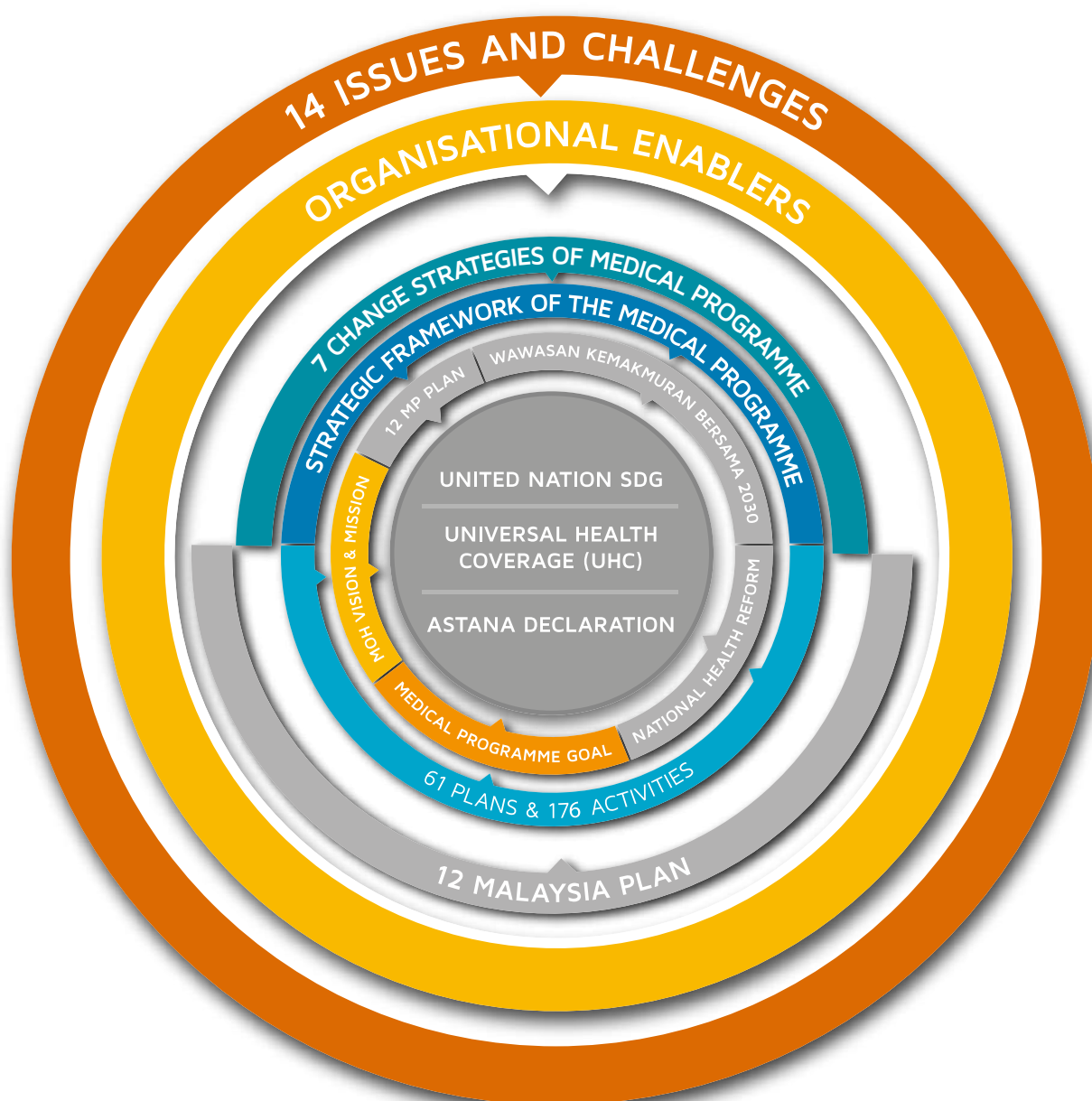


Figure 12 Relationship between the Strategic Framework of the Medical Programme and Other Major Policy Directions and International Commitments

This document will serve as a guide for the Medical Programme in our work for the next five years. While policy and priority setting may change over time for many reasons including dynamics in government policy, emergency, crisis and many other unforeseen circumstances, this document will help to align all efforts and initiatives to be implemented in the coming years. A close and systematic monitoring and evaluation system has been proposed to ensure the Strategic Framework of the Medical Programme, Ministry of Health Malaysia (2021 – 2025) is a living document. It is hoped that the primary intention of this document, which is to improve access to medical care through strengthening, enhancement and consolidation of medical services will be achieved.

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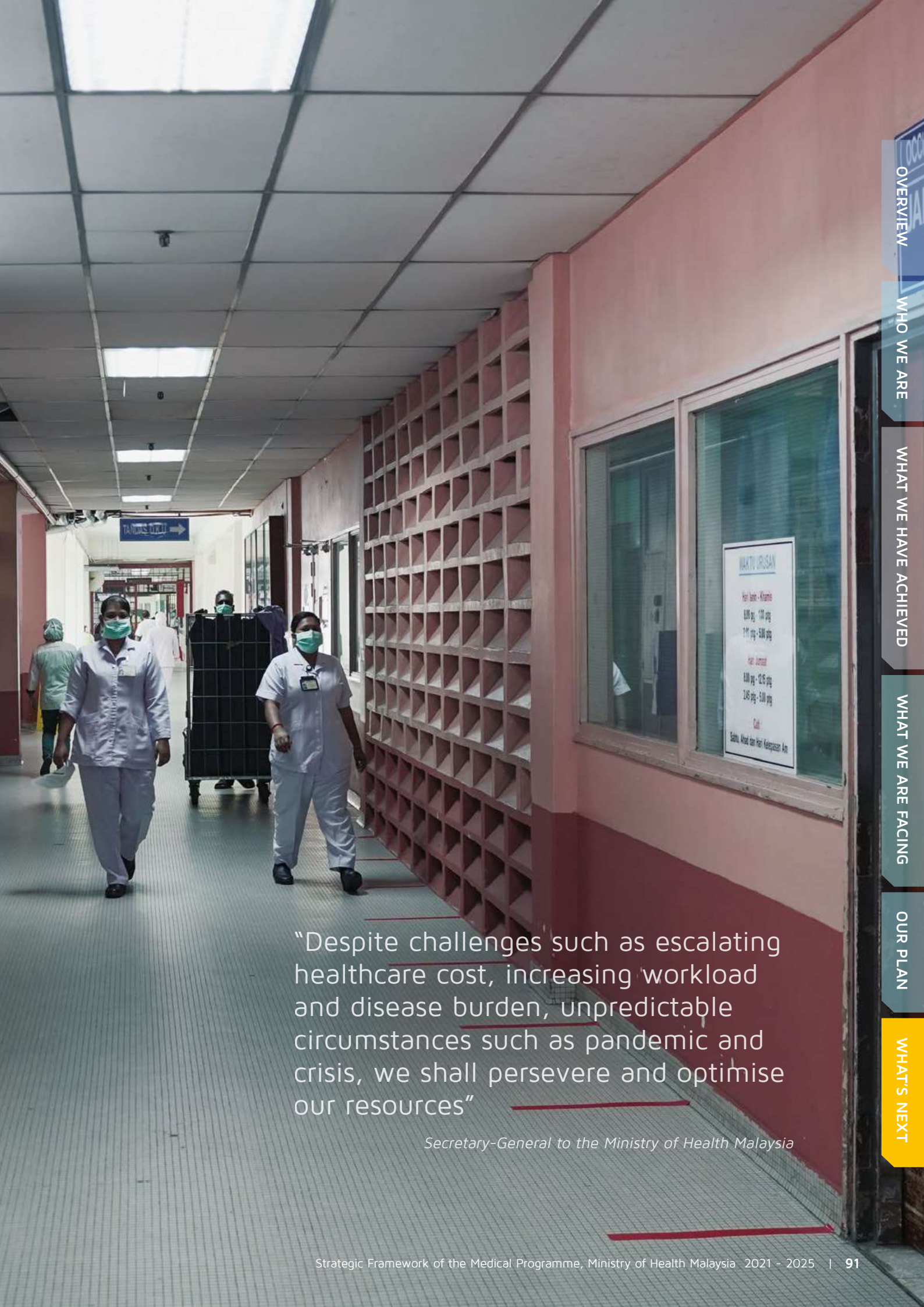
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“Despite challenges such as escalating healthcare cost, increasing workload and disease burden, unpredictable circumstances such as pandemic and crisis, we shall persevere and optimise our resources”

Secretary-General to the Ministry of Health Malaysia

ANNEX 1

List of Head of Division / Programme

Datuk Dr Rohaizat bin Yon
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Head of Medical Programme MoH

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Dato' Dr Norhizan bin Ismail
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Mustafah bin Md Nor
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Senior Principal Assistant Director
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OVERVIEW

WHO WE ARE

WHAT WE HAVE ACHIEVED

WHAT WE ARE FACING

OUR PLAN

WHAT'S NEXT

ANNEX 3

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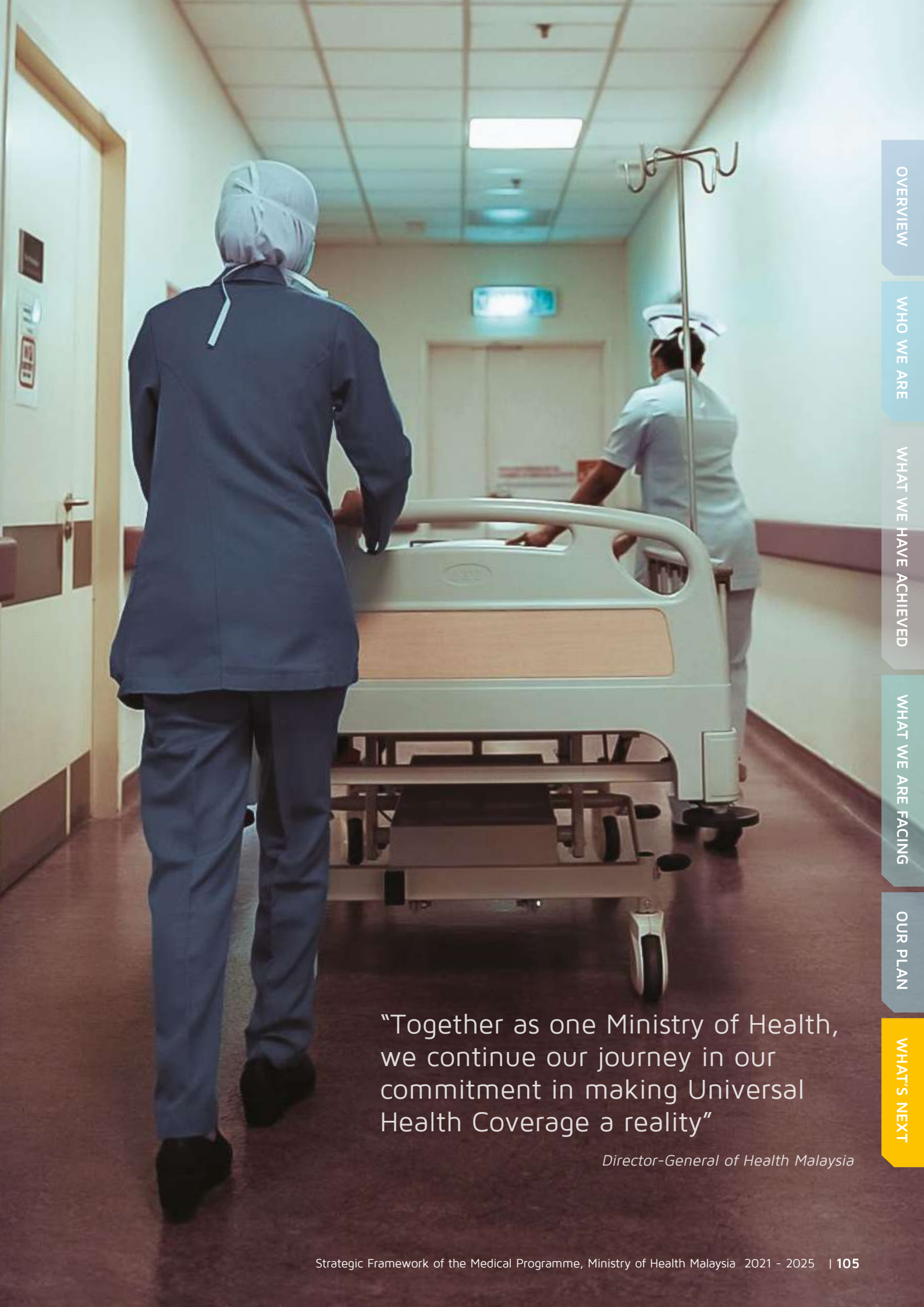
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“Together as one Ministry of Health,
we continue our journey in our
commitment in making Universal
Health Coverage a reality”

Director-General of Health Malaysia

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