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MINISTRY OF HEALTH
MALAYSIA

CHILD HEALTH 2021-2030

A NATIONAL FRAMEWORK TO REDUCE THE
UNDER-5 MORTALITY AND SUPPORT CHILD
GROWTH & DEVELOPMENT



KEMENTERIAN KESIHATAN MALAYSIA

CHILD HEALTH 2021-2030
A National Framework To Reduce The
Under-5 Mortality And Support Child
Growth & Development

CHILD HEALTH SECTOR
FAMILY HEALTH DEVELOPMENT DIVISION
MINISTRY OF HEALTH MALAYSIA

2021

FOREWORD FROM THE MINISTER OF HEALTH OF MALAYSIA

The National Framework for Child Health 2021-2030 expounds the strategies, actions, and activities which may be executed by the various divisions, ministries, and non-government agencies that are involved in child healthcare programs, with the Ministry of Health (MOH) being the key player. The primary aim of this framework is to reduce the under-five mortality rate in Malaysia and achieve the Sustainable Development Goal (SDG) targets pertaining to child mortality. This framework was also developed in accordance with the Convention on the Rights of the Child.



The objectives of this framework are as follows:

1. To reduce preventable deaths among children under 5 years.
2. To promote supportive environment for optimum child growth and development
3. To provide accessible, affordable, integrated, comprehensive and quality child health services irrespective of who the child is.

Malaysia has successfully reduced the under-five mortality rate by 50% (from 16.8 per 1000 live births (LB) in 1990 to 8.4 per 1000 LB in 2015) during the Millennium Development Goals (MDG) era, which is comparable to high income nations.

However, this rate has plateaued since the year 2000, thus the Family Health Development Division in MOH developed the Stillbirth and Under-Five Mortality Reporting (SU5MR) System to identify the main causes of under-five mortality and provide remedial measures. In addition to that, a national guideline was developed and implemented to standardise the classification of preventable and non-preventable under-five deaths.

The findings of this mortality reporting system showed that 30% of all under-five deaths are preventable. The most common causes of preventable deaths amongst toddlers are injuries and external causes (e.g. motor vehicle accident, drowning, and asphyxia); whilst deaths amongst infants were most commonly due to respiratory causes (e.g. pneumonia and aspiration pneumonia).

Moving forward, MOH Malaysia, along with other ministries and agencies, will focus on strategies to further reduce preventable under-five deaths, as well as promote child health and development through:

1. Inter-sectoral collaborations between government, non-governmental, and private organizations.
2. Empowering families and communities to provide supportive environments through health promotion and education.
3. Capacity building to improve quality of child healthcare services.

Prevention of under-five deaths requires collaborations between multiple stakeholders, as well as political commitment. Therefore, it is my fervent hope that this framework will be implemented with unwavering support and commitment from all relevant stakeholders.

Dato' Sri Dr. Adham Bin Baba
Minister of Health of Malaysia
Ministry of Health Malaysia

FOREWORD FROM THE DIRECTOR GENERAL OF HEALTH



Children under five years are vulnerable to the physical, mental and social environment including family structure, cultural practices, education, socioeconomic and accessibility to health services.

Globally, infectious diseases, including pneumonia, diarrhoea and malaria, is among the leading cause of under-five deaths. In addition, children in poor settings and those suffering from malnutrition are at a higher risk of death from these common childhood illnesses.

Malaysia, however has already achieved low under-five and neonatal mortality rates since early 2000, rates well below the Sustainable Development Goal targets set internationally. Child health and child survival has been part of the Malaysian Government development goals since the 1960s and with improvements in water and sanitation as well as access to health services, the infant and child mortality rates have declined dramatically and is now at par with developed countries.

Ending preventable deaths among children under 5 years will require targeted interventions based on age-specific causes of death. Interventions outside health sector will require strong support from government and non-government agencies involved in providing care and services for children.

The national framework, CHILD HEALTH 2021-2030 aims to further reduce the under-five mortality rates and improve the child health indicators monitored under the Sustainable Development Goals and Universal Health Coverage. It also aims to close gaps in equity and describes specific goals for reducing mortality, coverage targets and milestones by 2030.

Finally, I would like to congratulate the Family Health Development Division and everyone who contributed to the development of the CHILD HEALTH 2021-2030: A national framework to reduce the under-5 mortality and support child growth & development.

Tan Sri Dato' Seri Dr Noor Hisham bin Abdullah

Director General of Health
Ministry of Health Malaysia

No	Contents	Pages
1	Introduction	8
2	Background	8-9
3	Current Status	9
	3.1 Under-5, Infant and Neonatal Mortality Rates	9-14
	3.2 Immunisation	14
	3.3 New-born Screening	15
	3.4 Growth and Development	15
	3.5 Child Mental Health	16
	3.6 Dental Care	16
4	Issues and Challenges	17
5	CHILD HEALTH PROGRAMME FRAMEWORK	18
	5.1 Objective	18
	5.2 Strategies	18
	5.3 Activities	18
	5.4 Expected Outcomes	19
6	Plan of Action For Child Health Services 2021-2030	20
	Advocacy for health in all policies	20-23
	Intersectoral Collaboration	24-25
	Health promotion and education	26-27
	Provision of quality services	28-36
	Capacity building	37-40
	Health Information Systems (monitoring, quality)	41-42
	Research and Development	43-44

ACRONYMS:

APHM	Association of Private Hospitals, Malaysia
ASEAN	Association of Southeast Asian Nations
CEDAW	Committee on the Elimination of Discrimination against Women
CPR	Cardio-pulmonary Resuscitation
CPAP	Continuous Positive Airway Pressure
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Person with Disabilities
DOSM	Department of Statistic Malaysia
DSW	Department of Social Welfare
ECCE Council	Early Childhood Care & Education
FHDD	Family Health Development Division
G6PD	Glucose-6-phosphate Dehydrogenase
HECC	Health Education & Communication Center
IHSR	Institute for Health Systems Research
IKU	Institute of Public Health
ILO 82	International Labour Organisation
INTAN	National Institute of Public Administration
ISPCAN	International Society for the Prevention of Child Abuse and Neglect
JAKOA	Department of Orang Asli Development
JPJ	Road Transport Department Malaysia
KOSPEN	Komuniti Sihat Pembina Negara
KPKT	Ministry of Housing and Local Government
LPPKN	National Population & Family Development Board
MDD	Medical Development Division
MIROS	Malaysian Institute of Road Safety Research
MMA	Malaysian Medical Association
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOWFCD	Ministry of Women, Family and Child Development
MPA	The Malaysian Paediatric Association
NCD	Non-communicable Disease
NGO	Non-government Organisation
NHMS	National Health and Morbidity Survey
NICU	Neonatal Intensive Care Unit
NPRA	National Pharmaceutical Regulatory Agency
OGSM	Obstetrical & Gynaecological Society of Malaysia
OT	Operation Theater
PPBM	Persatuan Pengasuh Berdaftar Malaysia
SCN	Special Care Nursery
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WCHHKL	Tunku Azizah Hospital, Kuala Lumpur
WHO	World Health Organisation

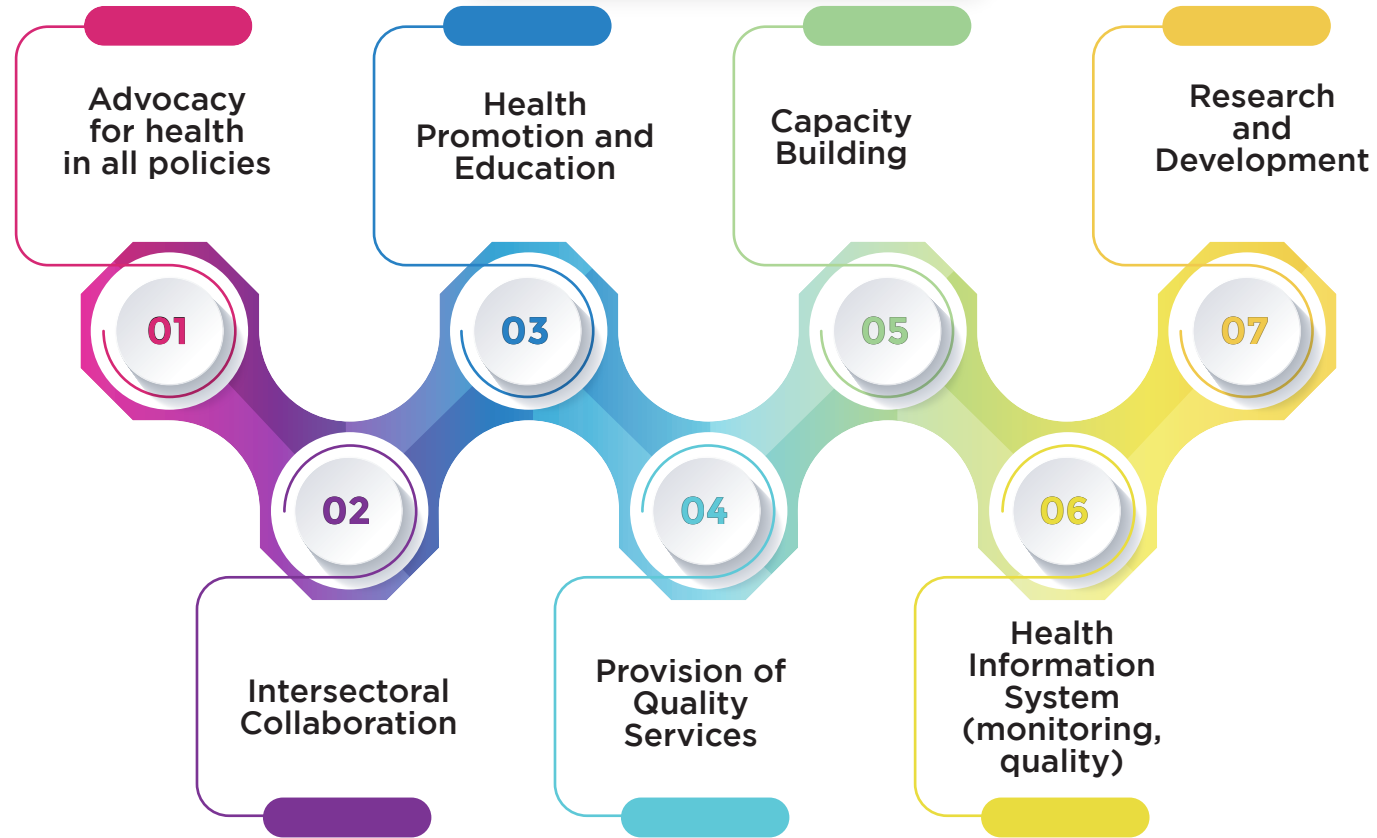
VISION

Healthy children achieving their full potential in a supportive environment.

MISSION

To ensure implementation of health in all policies, to empower families and communities to provide supportive environment for child development and to ensure access to comprehensive and quality health care services.

STRATEGIC PILLARS



1. INTRODUCTION

This framework focuses on reducing mortality among children less than 5 years and supporting growth and development among young children. It takes into account the SDG target for child health as a continuation of unfinished agenda during the MDG era i.e., to reduce mortality of children under 5 years with a focus to end preventable deaths.

The strategies in this framework for action also gives focus on two main areas in line with the Convention on the Rights of the Child (CRC), namely child survival and child development. Implementation of the framework for action for both child survival and child development is not only the responsibility of the health sector but also the responsibility of other relevant agencies and the community.

2. BACKGROUND

Improvements in child health and survival have been national development goals since the First Malaysia Plan in 1966. Infant and child mortality rates have declined dramatically, and are now on par to those of highly developed countries.

The availability of child health services even in rural areas through the country's primary health care system, access to vaccines and treatment of communicable diseases, together with the progressive increase in access to clean water, improved sanitation, and better child nutrition have been the key determinants for the dramatic decline in infant and child mortality rates over the past three and half decades since 1970s.

Health programs in primary care underwent tremendous changes over the past two decades with the policy change to transfer outpatient services to primary care in the early 90's and the introduction of expanded scope of services in 1996 namely services for adolescent, elderly and persons with disabilities. This has put a toll on the services already in place. The introduction of new concepts and services such as personalised care, family doctor concept implemented over the years were meant to improve overall service delivery. Emphasis needs to be given to maintaining and improving the quality of services for maternal and child health.

Current challenges include the double burden of disease both communicable and non-communicable as well double burden of malnutrition of both underweight and overweight with an increasing trend of stunting. New challenges include the increasing use of technology among children, inadequate child care, inadequate knowledge and skills in parenting and media influence on health seeking behaviour for example the increasing numbers of vaccine refusals. With the changing disease pattern and new challenges, health care providers are inadequately trained to meet the demands of clients.

2.1 CHILD HEALTH PROGRAMMES

Child health services have been carefully developed since 1970, with the establishment of the Maternal Child Health and Health Education Units in the Ministry of Health. These units have been responsible for establishing service norms, standards, and procedures, as well as the delegation of roles and responsibilities of manpower for service delivery. The integrated maternal and child health programme approach aimed to synergise efforts to reduce child mortality.

All children attending child health clinic undergo growth and developmental assessment. During scheduled visits (eight during the first year of life and another seven before entering school), any high-risk cases detected will be referred to medical officer and subsequently specialist if needed. For purposes of recording and monitoring, a Child Health Record Book (home-based) is given to all newborn. The record book is meant for use at all levels of care, either government or private health facilities to facilitate continuity of care.

Newborn screening initiatives include (i) G6PD deficiency screening introduced in 1983, (ii) screening for Congenital Hypothyroidism introduced in 1998 and implemented in phases beginning with 3 major hospitals and currently involving 96% of newborns, and (iii) newborn hearing screening initiated in 2001 and as of December 2020 involves 21 hospitals implementing universal hearing screening and 32 hospitals carrying out targeted screening for high-risk newborns. To further reduce mortality and morbidity other newborn screening programme need to be reviewed.

MOH introduced child immunization programmes in a phased and sustainable manner, integrating them into existing child health services. Currently Malaysian children are protected against 13 vaccine preventable diseases.

The concept of integrated management of childhood illness (IMCI) was implemented in 2001 to further reduce child mortality. IMCI is an integrated approach to child health that focuses on the well-being of the whole child and aims to reduce death, illness, and disability and to promote improved growth and development among children under 5 years of age.

Mortality reporting began with reporting of stillbirth and neonatal death in January 1998. In July 2012 reporting system was improved to include deaths among children under-5 years with full implementation by 2014. The aim is to collect mortality data, identify preventable deaths and remedial factors towards improving health services.

In addition, resource material such as manuals and guidelines have been developed and implemented such as the perinatal care manual, management of Neonatal Jaundice, management of congenital hypothyroidism, guidelines for implementation of the National Immunisation Programme, guidelines for classification of preventable and non-preventable deaths and a guideline to assess implementation of child health programme for supervisors.

3. CURRENT STATUS

Data on child health services, child mortality and morbidity is collected through e-HMIS i.e. an administrative data collection system. FHDD also periodically collects data from states on specific information required for monitoring and evaluation of newer programmes. Additional data on child health has been acquired through population National Health Morbidity Surveys and other studies. National Health Morbidity Survey 2016 was focused on Maternal and Child Health.

3.1 Under-5, Infant and Neonatal Mortality Rates

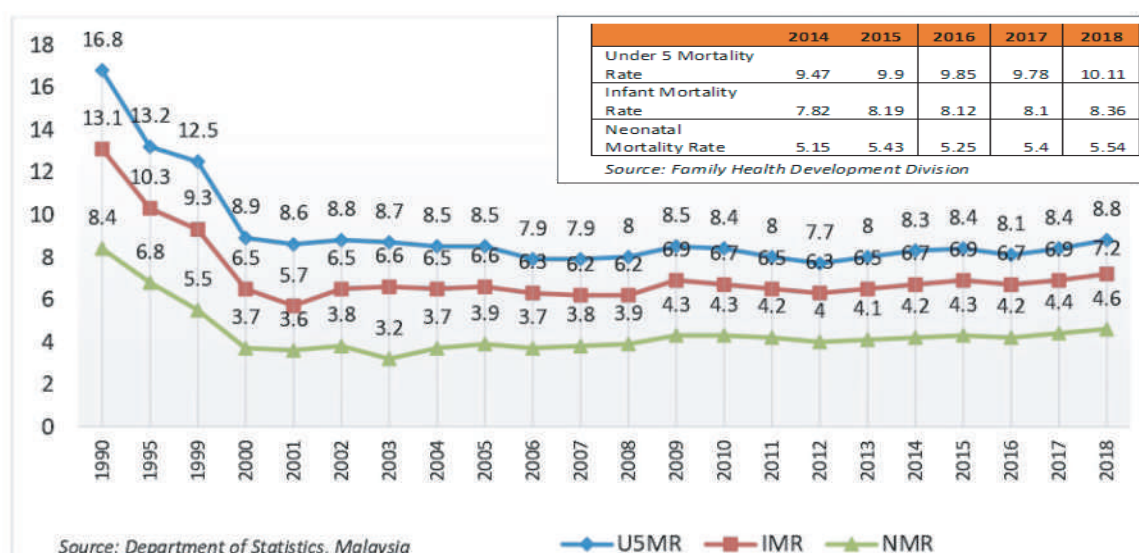
In its endeavor to attain the Millennium Development Goal of reducing under 5 mortality by two thirds, Malaysia managed to reduce by 50%, similar to global achievement. Under-five mortality rate (U5MR) declined from 16.8 per 1,000 live births in 1990 to 8.4 in 2015 whilst Infant mortality rate (IMR) declined from 13.1 to 6.9 per 1,000 live births within the same time period.

The SDG target for child health under Goal 3 is to end preventable deaths among children under-5 by 2030. To further reduce the mortality rate it was important to develop a system that could tease out preventable deaths from the total deaths reported.

Family Health Development Division (FHDD) developed the Stillbirth and Under-5 Mortality Reporting System (SU5MR) and implemented it nationwide in 2014, to assist in identifying causes of death and remedial interventions for improvement of the health system. Department of Statistics (DOSM) however is the custodian of statistics and provides the official data for mortality rates for the country.

Mortality trends for neonatal, infant and under-5 mortality have plateaued since 2000 to 2018 as seen in Figure 1.

Figure 1
Neonatal, Infant and Under 5 Mortality Rates, Malaysia



Number of deaths and mortality rates for both stillbirths and under-5 deaths reported by the DOSM and FHDD (through the SU5MR System) are slightly different, where the number reported by the FHDD is higher. The discrepancy between these two data is due to the different nature of data collection, definition used and the limitations due to local regulations. Discussions are ongoing with DOSM to verify and streamline the data.

Mortality Among Vulnerable Population: Orang Asli

The economic, social and rural-urban disparities have resulted in differences of mortality rates at the state and local levels. Mortality rates are higher among vulnerable groups such as the Orang Asli. Mortality rate among OA is three to four times the rate at national level as seen in Figure 2.

Figure 2
Mortality Rates for Orang Asli, 2012-2016

	2012	2013	2014	2015	2016
National Under 5 mortality rate	7.7	7.9	8.3	8.4	8.1
OA Under 5 mortality rate	24.4	28.8	25.9	26.7	30.1

Source FHDD

3.1.1 Causes of Mortality according to the ICD 10 Classification

All cases are discussed at the district and state levels by the Under-5 Mortality Technical Committees and classified according to ICD 10 Classification, before the full report is sent to the FHDD. Figure 3 shows the causes identified for the year 2014 to 2016. Comparing the three years, the top five causes of Under-5 deaths shows that the pattern has been similar over.

a. Under-5 Mortality

Overall, for the year 2016, 34% of deaths among under-5 are due to conditions from perinatal period where majority is related to prematurity. Another 30% of deaths are due to congenital malformation where one third is attributed to congenital heart disease. Injuries is the 3rd leading cause of death for children under 5 years where majority of the cases are among toddlers (1-4 years), followed by respiratory and certain infectious and parasitic disease.

Figure 3
Cause of Under- 5 Deaths (ICD 10) 2014-2016

ICD 10 CLASSIFICATIONS CAUSE OF DEATHS	2014		2015		2016	
	No.	%	No.	%	No.	%
CONDITION FROM PERINATAL PERIOD	1761	35.2	2021	39.2	1719	34.3
CONGENITAL MALFORMATION	1447	28.9	1400	27.1	1504	30
INJURIES & EXTERNAL CAUSES	322	6.4	317	6.1	319	6.4
RESPIRATORY	294	5.9	352	6.8	279	5.6
UNKNOWN	374	7.5	287	5.6	298	6
CERTAIN INFECTIOUS & PARASITIC DISEASE	302	6	248	4.8	254	5.1
CNS	157	3.1	199	3.9	224	4.5
NEOPLASMS	129	2.6	117	2.3	105	2.1
ENDOCRINE, NUTRITIONAL, METABOLIC	80	1.6	65	1.3	91	1.8
SYMPTOMS, SIGNS & ABNORMAL FINDINGS NOT ELSEWHERE CLASSIFIED (NEC)	46	0.9	41	0.8	61	1.2
GASTROINTESTINAL	29	0.6	39	0.8	48	1
CIRCULATORY SYSTEM	24	0.5	37	0.7	52	1
DISEASE OF BLOOD & IMMUNE SYSTEM	18	0.4	19	0.4	25	0.5
GENITOURINARY TRACT	6	0.1	11	0.2	19	0.4
OTHERS	15	0.3	5	0.1	7	0.1
Total	5004	100	5158	100	5005	100

Source: Stillbirth & Under 5 Mortality Reporting System, Family Health Development Division, Ministry of Health Malaysia

Figure 4
Top Three Causes of Death According to Age Group, 2016

EARLY NEONATAL	LATE NEONATAL	28 DAYS to <1 YEAR	TODDLER
Condition from perinatal period	Condition from perinatal period	Respiratory	Injuries & external causes
Congenital Malformation	Congenital Malformation	Certain infections & parasitic disease	Respiratory
Unknown	Respiratory	Injuries & external causes	Certain infections & parasitic disease

b. Neonatal Mortality

Newborn mortality is a sensitive indicator of the quality of care provided during the antenatal period, delivery and immediate postnatal period. Analysis of data collected by FHDD for the year 2016 showed that 54% of Under 5 Mortality occurred during the first month of life i.e. the neonatal period. Based on data from DOSM, 75.5% of deaths during neonatal period occurred in the 1st week of life. In order to reduce neonatal mortality, interventions should focus on essential early newborn care and NICU services.

Based on the ICD Classification, two thirds of deaths during neonatal period are those classified under conditions arising from perinatal period and congenital malformation period. 60% of the cases from the perinatal period are attributed to prematurity. Among deaths due to congenital malformation, one third is attributed to congenital malformation of circulatory system (33.6%) and one fifth due to chromosomal abnormalities (20.9%).

c. Infant Mortality (excluding neonates, i.e. 28 days to less than 1 year)

Death among infants excluding neonates totals up to almost one third (28%) of overall under-5 deaths. The major contributing factors are respiratory, certain infections and parasitic disease as well as injuries and external causes. Infection and injuries need to be addressed.

d. Mortality among toddlers 1-4 years

In 2016, death among toddlers 1-4 years comprise of 18% of overall under-5 deaths. Majority of death was attributed to injuries and external causes, followed by respiratory causes and certain infections and parasitic disease. Among the deaths due to injuries, it is seen that majority is due to motor vehicle accident (26.5%), followed by drowning (23.3%) and suffocation/chocking (13.3%). Caregivers need to be on the alert to ensure safety.

**Figure 5
Causes of toddler mortality according to type of injuries, 2014-2016**

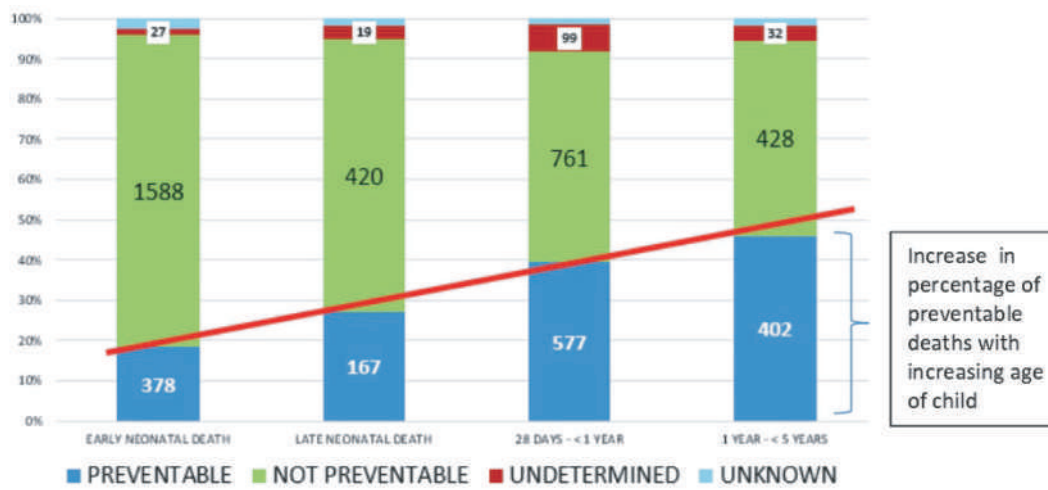
INJURY BREAKDOWN	2014		2015		2016	
	No.	%	No.	%	No.	%
Motor Vehicle Accident	102	31.7	90	28.4	96	30.1
Milk aspiration	55	17.1	38	12.0	39	12.2
Drowning	73	22.7	74	23.3	69	21.6
Non-Accidental Injury	18	5.6	27	8.5	27	8.5
Fall	10	3.1	14	4.4	12	3.8
Burn	18	5.6	8	2.5	8	2.5
Head Injury	9	2.8	16	5.0	31	9.7
Choking	14	4.3	20	6.3	9	2.8
Suffocation	11	3.4	8	2.5	12	3.8
Others	5	1.6	12	3.8	9	2.8
Unknown	7	2.2	10	3.2	7	2.2
TOTAL	322	100	317	100	319	100

Injuries are preventable and needs all agencies to work together to reduce mortality due to injuries. The most common type of deaths due to injuries is motor vehicle accident, followed by drowning (21.6%). Non-accidental injuries (NAI) are abuse cases (both suspected and confirmed cases). Majority of the NAI is blunt injury to the head.

3.1.2 Preventable Deaths

The 2016 Technical Report reported that overall, 30% of deaths among children under-5 years were preventable. Among neonates less than 28 days only 20% (545 /2599) were preventable, whilst among children 28 days to less than 1 year it was found that 40% (577/1437) were preventable and among toddlers 1 to less than 5 years, it is seen that 47% (402 /862) deaths were preventable. Preventable deaths vary according to age groups as shown in Figure 6.

Figure 6
Preventable Deaths According to Age Group, 2016

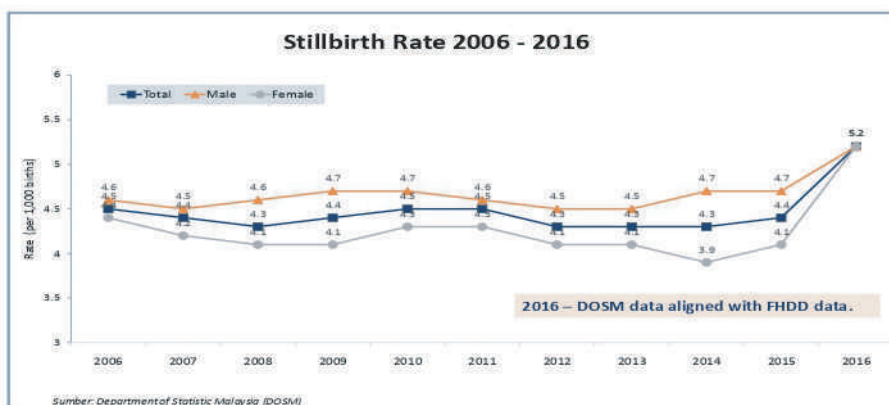


Overall, the preventable deaths include injury, respiratory and certain infections and parasitic disease. These require close networking with other agencies (government and non-government), parenting and caregiver programmes and community education and empowerment.

3.1.3 Stillbirth rate

In 2016, DOSM has aligned the stillbirth data with data from FHDD mortality reporting system.

**Figure 7
Stillbirth Rate, 2006-2016**



Stillbirth reflects of the mother’s health and care during pregnancy. Reasons for stillbirth include congenital defects, infections, placenta and umbilical cord problems. The stillbirth rate for Malaysia is already low, to further lower the rate we need to analyse the mortality data, identify preventable causes and remedial measures.

3.2 Immunisation

Coverage for all immunisation has maintained above 95% over the years with the exception of a slight fall in coverage of MMR in 2014 and 2015. FHDD collects data on refusals for childhood vaccination since 2014 which shows a slight increase between 2015 and 2016. The increased efforts in awareness raising in 2016 need to be sustained.

NHMS 2016 on completeness of primary immunisation showed that 95.3% received complete primary immunisation, however only 86.4% could be verified using records kept by family. The additional 8.9% self-reported as having completed their child’s primary vaccination. This goes to show that although close to one tenth of parents agree to immunisation but they are unaware of the importance of keeping immunisation records.

A total of 4.5% children did not complete the primary vaccination by the age of 12 months, and 0.1% had not received any vaccination. Looking at DPT-IPV/Hib vaccination records it was found that 1.5% of the children aged 12-13 months did not received any and the percentage of non-vaccinated children was highest for non-citizens at 7.1%. Reasons for incomplete primary immunisation need to be analysed and intervened.

A total of 6.2% children received more than 50% of their vaccination at private facilities. Data collection from private needs to be improved.

Majority (89.4%) of mothers mentioned doctors as their source of information, with 1% using electronic news or website and another 0.6% getting information via social media. Majority have no concern on any vaccine however 0.6% worry about MMR vaccine

The Pneumococcal vaccination was introduced in 2020 and it is hoped that more under-5 deaths can be averted.

3.3 Newborn screening

Newborn screening initiatives include (i) G6PD deficiency screening introduced in 1983, (ii) screening for Congenital Hypothyroidism introduced in 1998 and implemented in phases beginning with 3 major hospitals and currently involving 96% of newborns, and (iii) newborn hearing screening initiated in 2001 currently involves 7 hospitals implementing universal hearing screening and 20 hospitals carrying out targeted screening for high risk newborns. One third of infant deaths due to congenital malformation involves congenital heart disease. Screening prior to discharge is important to elicit any possible case with congenital heart disease.

To further reduce mortality and morbidity newborn screening programme need to be reviewed. National level committee is required to look at newborn screening and decide on national policy.

3.4 Growth and development

Child assessment for growth and development needs to be carried out regularly for early detection of problems in growth and any developmental delay. Data shows that child attendances to clinic is around 80% for children below 1 year, hovers about 40%- 50% for toddler age (1-4 years) and only touches 20% for preschoolers (5-6 years). There needs to be more engagement with nurseries, care centers and kindergartens to ensure children receive adequate quality assessment of their growth and development.

Nutrition data from NHMS showed that the prevalence of under nutrition that includes underweight (13.7%), stunting (20.7%) and wasting (11.5%) among Malaysian children under five was much higher than the prevalence of overweight (6.4%). There is much to be done to educate parents in maintaining proper nutrition.

Delayed development is commonly associated with mental or physical disabilities or both, resulting in substantial functional limitation on major life activities. Data from NHMS shows that the total prevalence of developmental delay among children aged 6-59 months was 3.3%. The highest prevalence was found in speech at 1.7%, followed by social skills at 1.2%, fine motor at 0.7% and gross motor at 0.6%. The prevalence of failed M-CHAT is 1.6% comparable to current administrative data.

It is important to ensure that children are given the best stimulus for their brains in terms of reading materials, toys, and more importantly, adult engagement with children. Verbal interaction between the children and caregivers, as well as better quality of care has a positive association with young children's social and cognitive development.

However, NHMS 2016 found that only 24.6% of children aged 36 to 59 months had adults engaging with them in four or more activities that promote learning and school readiness during the 3 days preceding the survey. These activities include reading books to or looking at picture books with the child, telling stories to the child, singing songs or lullabies to or with the child, taking the child to the playground, playing with the child and lastly, naming, counting or drawing things with the child. Adult involvement was inversely related to mothers' education level. Study showed that majority of children (91.4%) played with store bought toys, 56.0% used household objects and only 25.9% of children played with home-made toys.

To improve quality of care, multi prong approach is needed. To improve quality of services at the clinic, a system needs to be put in place for continuous monitoring and evaluation of the services. Skill training has to be ongoing with rigorous monitoring of competencies. Online training options need to be made available. In addition, parents need to be educated on needs of a growing child in terms of nutrition, physical activity, communication and social stimulation. There is a need to enlist help of other agencies, care providers and NGOs towards better quality care for children under-5 years.

3.5 Child mental health

Available data on mental health problems among children and adolescents aged 5 through 15 years showed an increasing trend from a prevalence of 13.0% (1996) to 19.4% (2006) and a further 20.0% in 2011. Findings indicate that the rate of increase has decreased in the past five years. Socially and economically disadvantaged groups were most vulnerable to mental health problems.

Data from NHMS 2016 showed that 52.2% of children under 5 years of age were exposed to inappropriate screen time. This statistic is alarming as the American Academy of Pediatrics (AAP) discourages media use for children below 2 years and limits the duration of screen time up to 2 hours/day for children more than 2 years of age. Parental education on appropriate screen time should be instilled as early as possible during antenatal visits. Unstructured playtime is more valuable for the developing brain than any electronic media exposure. Nurseries, child care centres and schools need to develop screen time policy and guidelines.

The NHMS 2016 study showed that 70.8% of children aged 12-59 months received some form of violent disciplinary method from their parents or caregivers. Psychological aggression was high at 57.8% among parents and caregivers in Malaysia. 55.0% of children received some form of physical punishment however severe physical punishment method was low at 5.2%. Study also shows that 54.8% of parents and caregivers believed that physical punishment is needed to bring up, raise or educate the child properly. Negative experiences and environmental influences early in life have been shown to adversely affect the learning, behaviour, physical and mental well-being of a child. Parents need to be educated to positively engage and discipline a child in a manner that does not affect their well-being or retard their physical and psychological growth.

There is a need to develop parenting kit for new parents especially young couples and first-time parents. Child abuse prevention starts with positive parenting. This requires close networking with the social services.

3.6 Dental Care

Health education on dental care for children under-5 years has not been given emphasis. From the results of NHMS 2016 survey mother's knowledge was low. What is worrying is that only four in ten mothers reported they had ever received advice regarding the care of their child's teeth from health care personnel. Among those who ever received advice only 26.5% thought that it was very important to look after their child's oral health, showing that advice was ineffective. This almost similar to mothers who never received advice. There is a need to strengthen oral healthcare programmes for toddlers.

4. ISSUES AND CHALLENGES

In moving forward to ensure the best for our children, new threats and challenges that threaten child survival and child development must be addressed. The target for SDG is to reduce all preventable deaths by 2030. A major challenge is to further reduce the already low under-5 mortality rates. The guideline for classification of deaths as preventable or otherwise has been developed in 2017 by MOH. Preventable deaths, majority of which are due to injury (MVA, drowning, abuse, neglect, choking), infections (respiratory, vaccine preventable disease) and death due to infections with underlying malnutrition require social interventions.

MOH is also looking into the needs of children in the geographically more remote areas, like indigenous people and those in Sabah and Sarawak and vulnerable populations such as urban poor and non-citizens. Malaysia also faces a new set of problems, such as those of emerging and re-emerging infections, from our illegal immigrants and migrant workers. Intervention need to be holistic and involve many agencies.

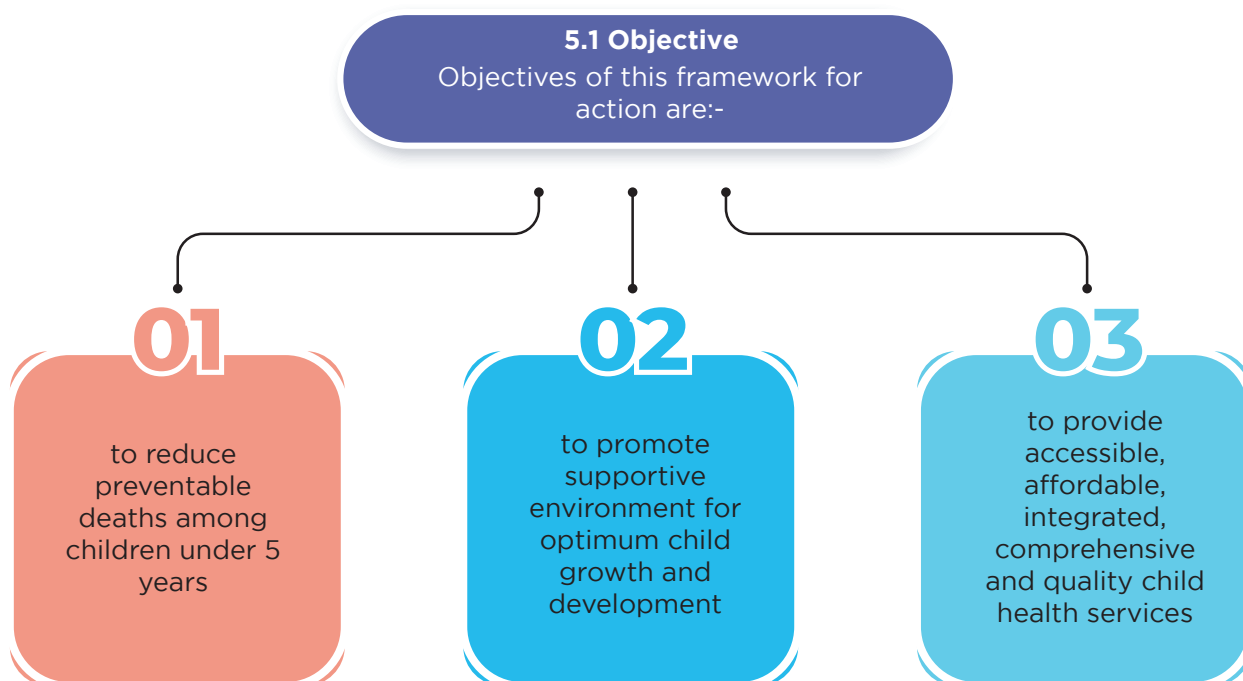
There is a need to improve sexual and reproductive health knowledge towards personal safety and prevention of abuse. The lack of protective factors due to change in family structure and lack of cohesiveness, poor communication and poor parenting causes poor physical, mental and social development. Interventions require involvement of many agencies both government and non-government agencies.

Challenges in implementation of programmes include lack of manpower in terms of numbers and expertise to cope with the increasing workload and expansion of programmes. There is a need for specialized manpower to tackle specific problems e.g. clinical psychologist, geneticist and Multidisciplinary Team management of cases to improve quality of care. Facilities, technology & equipment, screening programmes together with interventions come with a price.

The Ministry of Health is unable on its own, to achieve better health for the children without good inter-sectoral cooperation across sectors and agencies in the country, such as education, rural development, information, transport, housing, etc. as well as technical support and assistance from regional and international bodies. This smart partnership must be strengthened and continued.

This framework reviews current child health services to realign services to meet the needs.

5. CHILD HEALTH PROGRAMME FRAMEWORK



5.2 Strategies

The 7 strategies include:-

- 1 Advocacy for health in all policies
- 2 Intersectoral Collaboration
- 3 Health promotion and education
- 4 Provision of quality services
- 5 Capacity building
- 6 Health Information Systems (monitoring, quality)
- 7 Research and Development

5.3 Activities

Details of activities are described in the appendix and include short term and long-term plans.

5.4 Expected Outcome

	Objective	Focus Area	Expected Outcome
1	To reduce preventable deaths among children under 5 years	<ul style="list-style-type: none"> •Mortality due to infection and injury. •Mortality due to prematurity. •Mortality due to preventable congenital malformation 	<ul style="list-style-type: none"> • Reduction of preventable under 5 mortality by 30% by the year 2030 • Parenting programme by 2023 – Improving health in first 1000 days of a child’s life and beyond • Online course for child health for primary care by 2025 • Improve mortality surveillance system and initiate registries • Engagement with relevant agencies to reduce mortality in vulnerable population • Establishment of human milk bank for premature babies
2	To promote supportive environment for optimum child growth and development	<ul style="list-style-type: none"> •Strengthen implementation of available Acts •Policies to support quality of child care and reduction of preventable injuries, malnutrition and infection. •Intersectoral collaboration to ensure service to vulnerable population, safe internet use and support families •Research priorities on child health 	<ul style="list-style-type: none"> • Reduced incidents of injury, disease outbreaks in nurseries • Reduction in inappropriate screen time for children • Policy on the legal age for leaving children unsupervised • Specific Plans for vulnerable population developed and implemented by 2023 • Clearinghouse for Child Health • Improved indicators of child growth and development
3	To provide accessible, affordable, integrated, comprehensive and quality child health services	<ul style="list-style-type: none"> •Child growth and development •Prevention and control of Vaccine Preventable Diseases (VPD) •Screening services for early detection •Quality of hospital and primary health care (PHC) services •Strengthening quality of service for critically ill children •Management of cases of abuse and neglect 	<ul style="list-style-type: none"> • Increase coverage of growth & development assessment at 4 years • Reduction in stunting, underweight and overweight • Measles and Rubella elimination • Pneumococcal vaccine in the National Immunisation Programme (NIP) • National policy on newborn screening developed by 2025 • Reduced incidence of pre-eclampsia, neonatal death (RDS, intraventricular haemorrhage, neonatal sepsis) • Active growth monitoring of child growth in private hospitals/clinics using WHO growth standard

PLAN OF ACTION FOR CHILD HEALTH SERVICES 2021-2030

1. Advocacy for health in all policies

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Advocacy for health in new policies and enforcement of current policies pertaining to child health	Incorporate specific statement pertaining to child health in the national development plan (RMK) & health development plan	MOH (Planning Division)	2018 and on going	In every national development plan (RMK) & health development plan
		Enforcement of <i>Akta Kawalan Pencegahan Penyakit 1988</i>	MOH (Disease Control Division)	On going	No. of enforcement activity per year
		Policy for healthcare of vulnerable groups (Orang Asli, migrant & refugee children)	MOH (Public Health Development Division)/MOWFCD	2021 onwards	Policy developed
		Briefing session dialogues sessions and seminars at national & state level <ul style="list-style-type: none"> •Increase awareness for all and enforcement of the Child Act 2001 (Revised 2015) •Awareness of international instrument on children (eg: CRC, CEDAW, CRPD, ILO 82, Convention On Sale of Children, Child Prostitution & Child Pornography) 	MOWFCD (DSW)/ MOH (FHDD/ Disease Control Division)	2021 onwards	No of activities

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
2	Strengthen Child Care Centre Act 1984 (Revised 2008)	<ul style="list-style-type: none"> • Enforcement of Act • Adherence to the ratio of child to care • PERMATA Child Care Course-for nursery operators and caregivers • PERMATA Basic Child Care Course for operators of nurseries at home (<i>TASKA di Rumah</i>) • Registration of <i>TASKA Rumah</i> 	MOWFCD (DSW)	On going	Number of audits Number of centers adhere to Act Number of registered nurseries Number of trained home nurseries operators
3	Advocate for policies to support quality of child care	3.1. Child Caregiver as a profession <ul style="list-style-type: none"> • MOWFCD to form a task force from multiple agencies 	MOWFCD, PPBM, NGO	On going	Policy developed
		3.2. Policies to support women in workforce e.g. support for the concept of flexible working hours (e.g.part time) and venue (e.g working from home) for all mothers 3.3. Policy on leave or work from home for mother having children with infectious disease (requiring isolation)	Ministry of Human Resource, MOWFCD, Public Service Department Malaysia	2025	Policy developed

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
		<p>3.4. Advocate for support from employers and local authorities</p> <ul style="list-style-type: none"> • To facilitate exclusive breast feeding (EBF) by making available EBF facilities at work place and leisure • To make mandatory all new office buildings to allocate room for EBF with storage facility • Inter agencies-to work together towards child-friendly town planning 	Nutrition Division Ministry of Housing and Local Government (KPKT)	On going	Policy developed
4	Advocate for policies in reducing preventable injuries (MVA, drowning, home accidents, choking and abuse), malnutrition and infection	4.1. Increase awareness and advocate for development of specific policies/ legislation on injury prevention e.g. use of child car seat, ban of baby walker and baby hammock and safety measures during cycling	JPJ/MIROS/DSW	On going	Specific legislations/ policies developed
		4.2. Advocate for local authority by laws for safety of public places e.g: playground, swimming pool, pedestrian crossing, open drain, lakes, fire hazard, escalator safety	Relevant local authority & MOH (Disease Control Division)	2023	Guideline developed
		4.3. Mandatory first aid skill to all caregivers (institution and home)	MOWFCD (DSW)	2022	Policy developed

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
		4.4. Advocate on prevention of undernutrition in Child Care Centre (stunting, wasting and underweight) <ul style="list-style-type: none"> • Child growth monitoring • Breastfeeding • Infant and young child feeding 	MOH (Nutrition Division)	On going	Policy developed
		4.5. Advocate on reducing preventable infection in nurseries and kindergarten <ul style="list-style-type: none"> • Immunization as a requirement in admission policies • Internal policies for infection control 	MOH (Disease Control Division)	2021	
5	Advocate for policies to improve early childhood education	Nurseries, child care centres and schools need to develop screen time policy and guidelines	MOH (Disease Control Division Family Health Development Division)	2021 onwards	Policy developed
6	Advocate for policies to prevent inadequate care	Policy on the legal age for leaving children unsupervised needs to develop (NHMS 2016-2.9% of children under 5 years left unattended or under the care of another child below 10 years)	MOWFCD (DSW)	2022	Policy developed
7	Advocate for policies to prevent congenital anomalies	3.1. Pursue initiative towards flour fortification with iron and folic acid <ul style="list-style-type: none"> -Implement mandatory iron and folic acid fortification of wheat flour 	Nutrition Division	On going	Flour fortifications implemented by 2020 Mandatory iron and folic acid fortification of flour by 2025

2. Intersectoral collaboration

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Strengthen Intersectoral collaboration for better quality of care towards reduction of child mortality and morbidity	1.1. Revisit the national committees to ensure MOH interest is included	MOH (Public Health Development Division/Disease Control Division/Family Health Development Division)	2021	Committee with KKM inclusion
		1.2. Collaborative projects towards better service provision for children together with <ul style="list-style-type: none"> • Professional bodies and private sector • Academia for research & development • International & regional agencies & bodies (WHO, UNICEF, UNFPA, UNHCR, ASEAN, ISPCAN) 	MOH (Public Health Development Division/Disease Control Division/Family Health Development Division/Medical Development Division)	On going	Number of collaborative projects per year
		1.3. Engagement with NGOs to optimize capacity with <ul style="list-style-type: none"> • Outsource/joint implementation of certain activities & services for community, family & specific target groups e.g. awareness & training etc. • Areas for collaboration e.g: Child Abuse and Sexual Abuse, Pre-School Enrichment Program, Parenting Education Program, unintentional injury prevention programmes, disability, learning etc. 	MOH (Public Health Development Division/Disease Control Division/Family Health Development Division/Medical Development Division) Partners: PS The Children, Persatuan Kesihatan Mesra Kanak-Kanak Negara Malaysia, Safe Kids, Persatuan Pengasuh Berdaftar Malaysia, ECCE Council etc	On going	Number of collaborative projects per year

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
2	Intersectoral collaboration to ensure service to vulnerable population	<p>2.1. Engagement with relevant agencies to ensure services to reduce mortality and morbidity as well as improve child wellbeing are made available to vulnerable groups.</p> <ul style="list-style-type: none"> • Orang Asli, children of indigenous population • Street children, migrant children abandoned children, refugees, disabled children, • Children with HIV&AIDS 	MOWFCD (DSW) JAKOA, MOH (Public Health Development Division/Disease Control Division/Family Health Development Division/Medical Development Division)	On going	<p>No. of program per year</p> <p>Specific Plans developed and implemented by 2025 intervention</p>
3	Collaboration towards promotion of safe internet use among children under 5 years	<p>Engagement with relevant NGOs and agencies to implement programmes for safe use of smart media/internet to prevent internet addiction</p> <ul style="list-style-type: none"> • Development of manual/guideline • Identify target/platform for implementation • Training health staff/parents/nursery/ kindergarten 	Ministry of Communications and Multimedia/ Malaysian Communications and Multimedia Commission	On going	Reduction in inappropriate screen time for children (NHMS on Maternal and Child Health)
4	Collaborate with organizations to support families	4.1. Network with NGOs to develop support group for parents/caregiver for specific areas e.g care of premature babies	Family Health Development Division/Medical Development Division	2023	Support groups available

3. Health Promotion and Health Education

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Empower individuals, family & community through promotion and public Awareness	1.1. Review and update content of Portal MyHealth	MOH/MOWFCD/ MOE	2021 onwards	Structured parenting programme implemented by 2023.
		1.2 Conduct structured parenting programmes for first time parents and young couples in clinics and community settings with focus on child growth and development, positive parenting and healthy lifestyle for children under 5 years (nutrition, play, screen time, sleep)			
		1.3. Awareness programmes through social media for parents to reduce mortality and morbidity <ul style="list-style-type: none"> • Common childhood illness and early danger signs • Common dental problem • Violence and injury prevention • One family one saver (KOSPEN module) 	MOH (HECC/ Dental Division/ NCD Division), LPPKN	On going	
		1.4 Incorporate Healthy family awareness and positive parenting programs into existing program e.g. incorporate into university program (Siswa sihat), premarital course, MPA - positive parenting	MOWFCD, MOH (Family Health Development Division & HECC)	On going	No. of program per year
		1.5. Carry out Community awareness programs on safety & injury prevention, vaccination, nutrition, child health & mental health development, early detection & stimulation activities through eg: KOSPEN, Tunas Dr. Muda, Felda <ul style="list-style-type: none"> • Activities may include health talk, pamphlet, poster, forum, video, health screening activities, health camps • Ensure lifeguard in public swimming pool • Basic life support 	MOH (Disease Control Division and other relevant divisions) KOSPEN, Tunas Dr. Muda, Felda NGO	On going	No. of program per year

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
2	Development and dissemination of health educational material	<p>2.1. Develop education material on specific topics for parents and caregivers e.g:</p> <ul style="list-style-type: none"> • proper feeding technique, type and texture of food to prevent choking • how to handle stress/difficult babies to prevent Shaken Baby Syndrome • criteria to choose good babysitter or child minding facilities • first aid skills and CPR for caregivers • prevention of accidents at home e.g. discourage use of hammock and baby walker, encourage safe sleeping environment • dangers of leaving child unattended in the car, swimming pool, waterfall, parks etc • reducing deaths from road traffic accidents • appropriate child discipline techniques for parents, teachers and child minders • prevention of early childhood caries • healthy eating among children <p>2.2. Dissemination through various platforms including conventional and social media e.g. Portal Myhealth</p>	<p>MOH (HECC, Dental, Nutrition and other relevant divisions)</p> <p>MOWFCD</p> <p>NGO's eg. St John Ambulance MIROS MOE</p>	On going	<p>Material on specific issues developed and disseminated</p> <p>Social media dissemination - shares and likes</p>

4. Provision of Quality Services

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Services to reduce mortality due to premature birth	1.1. Reduce cases of premature births with use of progesterone in high risk cases for preterm labour	Jawatankuasa Perkhidmatan & Perkembangan O&G/Medical Development Division/ NPRA/ BPFK	2020 onwards	SOP on use of progesterone, Aspirin and calcium Reduction in incidence of preeclampsia
		1.2. Consensus on use of calcium supplementation and aspirin to reduce preeclampsia			
		1.3. Reduce cases of iatrogenic premature delivery			
		1.4. Reduce premature births by limiting the number of embryos for Artificial Reproductive Technique to not more than 2	Jawatankuasa Perkhidmatan & Pengurusan O&G/ Medical Development Division /OGSM	On going	Guideline & education materials on ART
		1.5. Reduce number of teenage pregnancies through SRH education in school and increase awareness on antenatal services for teenagers to enhance early antenatal booking	Family Health Development Division/DSW	On going	Reduction of teenage pregnancy
2	Strengthen management of premature birth	2.1. Strengthen the implementation of current antenatal management of premature birth 2.2. Initiate/expand recommendations from CRC in the antenatal management of premature birth 1.6. Develop SOP on use of magnesium sulphate for neuroprotection in patient <30 weeks POA and use of tocolysis (nifedipine) for patient with pre term labour	Jawatankuasa Perkhidmatan & Perkembangan O&G/ Medical Development Division	Ongoing/ reinforced	Reduction in neonatal death, RDS, intraventricular hemorrhage Reduction in incidence of chorioamnionitis and neonatal sepsis

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
3	Improve quality of hospital services for neonates	3.1. Improve NICU services <ul style="list-style-type: none"> • Expand neonatal retrieval NICU • Increase number of NICU beds, human resource and transport team. • Replace old NICU equipment • Allocate financial resources for consumable and drugs • Establishment of human milk bank for premature babies 	Medical Development Division/Training Division/Nursing Division/Planning Division/Nutrition Division	2020	20% of ED ambulances fitted for pediatric and neonatal use Increase NICU and SCN beds 1 neonatologist: 3000 deliveries NICU 1:1 nursing norm Milk bank: pilot in 2020 at WCHHKL For regional, 1 per region by 2025
		3.2. Improve infection control in NICU to reduce death from septicemia (major cause of preventable death in preterm infants) - increase manpower and refrain from recycle single use consumable items.	Medical Development Division/Pediatric Department/ Human Resource Division/ Nursing Division	2020	Dedicated infection control nurse Reduction in Neonatal Mortality rate from septicemia 1/3 of NICU nurses should have post-basic training by 2025
		3.3. Implement Kangaroo Mother Care for infants weighing 2,000 g or less and clinically stable - guidelines, training and facilities	Medical Development Division / Planing Division		Number of Hospital implementing Kangaroo Mother Care
		3.4. Increase availability of equipment for non-invasive ventilation	Medical Development Division	On going	Number of non-invasive ventilation machine/Number of NICU beds

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
		<p>3.5. Improvement of stabilization of baby post delivery</p> <p>a. Prevention of hypothermia in labour room and Maternity OT through:</p> <ul style="list-style-type: none"> • Dedicated resuscitation area • Baby warmer wrap and Low cost baby thermal control wrap <p>b. Early CPAP</p> <ul style="list-style-type: none"> • T-piece resuscitator • Air and oxygen outlets • Oxygen blender 	Planning Division/ Medical Development Division	2020 onwards	Dedicated resuscitation area in OT complex of new hospitals which is not in the OT proper
		<p>3.6. Improving outcome of babies with Hypoxic Ischaemic Encephalopathy (HIE)</p> <ul style="list-style-type: none"> • To provide major hospitals with hypothermia therapy machine and aEEG monitor 			Number of hospitals with facilities of early CPAP with targeted oxygen therapy
					Number of hospitals with hypothermia therapy machine and aEEG monitor

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
4	Strengthening quality of service for critically ill children	<p>4.1. Develop service - One stop call center for patient who are critically ill and require PICU bed: "PICU helpline".</p> <ul style="list-style-type: none"> Working with other agencies and disciplines especially pre-hospital care in order to shorten time of initiation of comprehensive treatment by creating a comprehensive retrieval and advices services center 	Medical Development Division, National Emergency Care Service and National Paediatrics Service, MOF		<p>Policy on Regionalization of critical care services base on identified region. PICU helpline</p> <ul style="list-style-type: none"> Central (Tunku Azizah Hospital, Kuala Lumpur) 2025 Southern 2025 East Coast 2030 Northern 2030 Sabah 2030 Sarawak 2030
		<p>4.2. Improve the existing critical care services in term of human resources, infrastructures and consumables.</p> <ul style="list-style-type: none"> 1 PICU bed for every 45,000-child population 1 intensivist to 4 PICU beds. 1 nurse to 1 PICU bed ratio. PICU Equipment- non-invasive ventilator and point of care ultrasound machine in every <p>Manpower-</p> <ul style="list-style-type: none"> Increase number of nurses and paramedic post in paediatric intensive care Improve staff training in critical care Allied health care services in all paediatric services ie physiotherapy, occupational therapy, speech therapists, counsellors, psychologists 	Medical Development Division, MOH/ National Paediatric Service/Paediatric Intensive Care Fraternity/Public Service Department Malaysia/ Universities/College of Nursing/Training Management Division, MOH)		<p>By 2025:</p> <p>Target 200 PICU beds, 50 Pediatric Intensivists, 1200 additional nurses 100 high end invasive ventilator 50 high end non-invasive ventilators 20 mid-range ultrasound Provide consumables budget of RM 50,000 for each PICU bed per year</p>

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
5	Improve screening services for early detection	5.1. Enhance prenatal diagnosis a) Strengthen Pre-Pregnancy Clinic Services b) Strengthen Ultrasound Screening Services	Planning Division/ Medical Development Division/Family Health Development Division	On going	Pre Pregnancy Services Care % increase in the number of ultrasound equipment
		5.2. Expand newborn screening program • Develop a national policy on expanded newborn screening • Strengthen genetic counselling • Strengthen current services - screening for congenital heart disease, IEM and hearing screening	Medical Development Division/ENT	2016 - 2030	National policy on newborn screening developed by 2020 All hospitals with specialist to implement congenital heart screening by 2020

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
6	Strengthen services to reduce medically preventable mortality and morbidity.	<p>6.1. Training of early recognition of ill children for healthcare providers.</p> <p>i) Train junior medical officers and paramedics early recognition of sick child.</p> <p>ii) Improve basic resuscitation skills. – Malaysia basic pediatric resuscitation</p>	<p>Pediatricians/ Family medicine/ Emergency physicians</p>	2020	<p>Reduction of preventable mortality by 5% in 5 years' time</p>
		<p>6.2. Improve quality of referral and transfer services of ill children by strengthening the networking and retrieval services.</p>	<p>Dedicated team.</p>		
		<p>6.3. Improve quality of detection and management of ill infant and toddler in primary care</p> <p>i) Strengthen implementation of IMCI services in clinics with no medical officer</p> <p>Implement an adapted version of IMCI in all clinics for a holistic approach to assessing and managing an unwell child under 5 years (ATUCU5)</p>	<p>Family Health Development Division</p> <p>Health District Office/Divisional Health Office</p>	2019-2020	<p>Indicator - Number of deaths in those managed by allied health trained in IMCI</p> <p>IMCI training in basic nursing schools 2019, already available for medical assistants</p>

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
7	Strengthen services to reduce mortality and morbidity due to infections	<p>7.1. Strengthen immunisation services - Improve vaccination coverage and reduce vaccine hesitancy</p> <p>i) Identify vulnerable infants through mapping, screening and strengthening of the personalised care concept</p> <p>ii) Strengthen defaulter tracing and counselling services on immunisation</p> <p>iii) Strengthen immunisation education programme in hospital and health</p> <p>a) Educational material, public campaign</p> <p>b) Risk communication training for staff</p> <p>c) Refer to national plan of action</p> <p>iv) Include pneumococcal vaccine as part of the National Immunisation Program (NIP)</p>	<p>Collaboration with other organization</p> <p>Disease Control Division</p> <p>Family Health Development Division</p> <p>Health District Office/Divisional Health Office</p>		<p>Maintain high immunisation coverage</p> <p>Reduction in defaulters and vaccine refusals</p> <p>Measles elimination</p> <p>Rubella elimination</p> <p>Pneumococcal vaccine being introduced into LP.</p>
8	Reduction of preventable congenital anomalies	<p>8.1. Promote use of preconception folic acid</p> <ul style="list-style-type: none"> • Develop guideline/SOP/manual for use of pre-conceptual folic acid <p>8.2. Ensure use of pre-conceptual folic acid is included in the pre-pregnancy clinic counselling</p>	Jawatankuasa Perkhidmatan & Perkembangan O&G/Family Health Development Division	Ongoing for pre pregnancy	Guideline/SOP/Manual produced

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
9	Strengthen services to improve child's growth and development	<p>9.1. Expansion and strengthening of child health services in primary care</p> <ul style="list-style-type: none"> i) Strengthen early detection & intervention services for malnutrition ii) Strengthen screening & assessment of children aged 2-4 years (height, weight, speech, autism and ADHD) iii) Screening of all children before primary school (height, weight, identify learning difficulties) iv) Universal use of existing home-based child health record including private v) Accessibility of existing home-based child health book at school entry (compulsory entry document for school) 	Family Health Development Division/Medical Development Division/ Pediatricians/MMA/ APHM/professional bodies/MOE	2020	<p>Reduction in stunting, under-weight and overweight among children under 5 years by 2021 (based on 2016 baseline)</p> <p>Percentage of children screened for growth and development at 4 years old increased by 5% per year</p>
		<p>9.2. Provision of the adequate nutrition</p> <ul style="list-style-type: none"> i) Implement the national action plan on nutrition for under 5 ii) Adopt recommendation to improve PPKZM based on evaluation findings iii) Expansion of Community Feeding Centres to address malnutrition among vulnerable groups (Orang Asli, urban poor etc.) iv) Greater emphasis on nutrition during the first 1000 days of life (e.g.: breastfeeding and complementary feeding). 	Nutrition Division/ Family Health Development Division	On going	<p>Reduction in prevalence of low birth weight</p> <p>Improvement in indicators on infant and child feeding</p> <ul style="list-style-type: none"> •Breast feeding •Introduction to solids •Minimum meal frequency •Minimum acceptable diet

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
10	Strengthen management of cases of abuse and neglect	<p>10.1. Upgrading OSCC facilities</p> <p>10.2. Strengthen the referral & follow up system from KK to hospital and vice versa (Eg. Referral & follow up of abuse & neglect children, strengthen personalised care & Family Doctor Concept)</p> <p>10.3. Enhance training of health and hospital staff on child abuse and neglect management</p>	Medical Development Division/Disease Control Division	On going	<p>Number of OSCC upgraded</p> <p>To update and disseminate revised guidelines-“working together document”-2020</p> <p>No. of training per hospital – 1 per state per year</p>

5. Capacity Building

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Capacity building in neonatal and paediatric care	1.1. Improve neonatal resuscitation competency in hospitals and health clinics <ul style="list-style-type: none"> • Adequate equipment and consumables for resuscitation training • Extend the training to medical officer in health centres 	Medical Development Division/Paediatric Department	On going for NRP 2020	Number of medical officers in clinics trained with Malaysian basic resuscitation program. Dedicated team.
		1.2. Improve paediatric resuscitation competency in hospital and health clinic through paediatric resuscitation course namely Paediatric Life support (PLS), Advance Paediatric Life Support (APLS), Paediatric Basic Course <ul style="list-style-type: none"> • Adequate equipment and consumables for resuscitation training • Adequate modal insan support for staff to participate in the training • Extend the training to doctors, paramedic and nurses at both government and private hospital and health care centre • Establish a Malaysian Resuscitation program which could reduce the cost of the course 	Medical Development Division/Paediatric Department/MOF	Ongoing APLS, PLS and Basic course	Number of doctors, paramedics and nurses trained.

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
		1.3. Increase specialised manpower to strengthen sub-specialty services (for all disciplines)	Medical Development Division/Training Management Division	2016-2030	Number of staff trained sub specialities
2	Capacity building for primary health care staff	<p>1.3. Improve quality of detection and management of ill infant and toddler in primary care</p> <p>i) Strengthen implementation of IMCI services in clinics with no medical officer</p> <p>Implement an adapted version of IMCI in all clinics for a holistic approach to assessing and managing an unwell child under 5 years (ATUCU5)</p>	<p>Family Health Development Division</p> <p>Health District Office/Divisional Health Office</p>	2019-2020	<p>Indicator-Number of deaths in those managed by allied health trained in IMCI</p> <p>IMCI training in basic nursing schools 2020, already available for medical assistants</p>
		<p>2.1. Develop training material based on Child Health Record(RKK)</p> <ul style="list-style-type: none"> • Early detection of common infections • Vaccine and immunisation • Breastfeeding, nutrition, growth monitoring • Injury prevention <p>2.2. Training of staff on:</p> <ul style="list-style-type: none"> • parenting skills • communications skills • Counselling skills • Child Rights 	Family Health Development Division/Disease Control Division/HECC	2020 onwards	<p>Module/manual developed by 2020</p> <p>Initial TOT commenced in 2021</p> <p>Parenting training programme implemented in all districts by 2022</p>

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
3	Capacity building of Childcare Provider	<p>3.1. Review existing modules (health aspect)</p> <ul style="list-style-type: none"> • Kursus Asuhan PERMATA (KAP) module (for institution) • Kursus Asas Asuhan PERMATA Taska Rumah (KAPTR) module <p>3.2. To develop or revise a module for early recognition/detection of common health issues problem in child care centres</p> <ul style="list-style-type: none"> • Early detection of common infections • Vaccine and immunisation • Prevention of injury • Screen time • Dangers of usage of sedative medications such as cough mixture <p>3.3. Training of the trainers</p> <ul style="list-style-type: none"> • Health Staff • Agencies involved in training of Child Care providers <p>3.4. Guidelines, awareness and training for Shelter homes & welfare institution</p>	Collaboration between JPM-PERMATA / Department of Social Welfare/ Family Health Development Division/Disease Control Division/ Ministry of Human Resource	2021	<p>Training modules reviewed to include health issues by 2021</p> <p>Number of training</p>

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
4	Capacity building in handling of abuse and neglect cases	<p>4.1. Training and capacity building to improve competency in handling cases at all levels with focus on OSCC</p> <p>4.2. Training to the counselor to handle the issues (Eg: abuse, neglect, exploitation & trafficking)</p> <p>4.3. Join education & awareness program (Eg: MOH, MOF, KPWKM, JKM, Judiciary, LPPKN, KPKT, MOT, KEMAS, local authority etc)</p>	Disease Control Division/Medical Development Division/DSW & Other Relevant Divisions in MOH	On going	<p>No. of trainings per year</p> <p>Target: 1 training/ state/year</p>
5	Online learning	<p>5.1. Develop content for online learning modules suitable for</p> <ul style="list-style-type: none"> • Health Staff • Child Care Provider and • Public (parents/community) <p>5.2. Preparation of manuals, SOP, early warning signs and training for Child care providers & helpers</p>	Medical Development Division/Family Health Development Division/INTAN	2018 onwards	<p>Guidelines/SOP etc developed and made available online</p> <p>Module uploaded for use by 2020</p>

6. Monitoring and Evaluation

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Monitoring execution of plan of action	Set up Technical Committee to monitor the implementation of the POA i. Regular meetings and reports on progress ii. Review POA 2025	Family Health Development Division	2020 onwards	Technical committee in place Regular follow up on implementation. POA reviewed by 2025
2	Initiate/Strengthen monitoring mechanism for specific issues	2.1. Identify and develop registry <ul style="list-style-type: none"> • Injury & death registry • Immunisation Registry • Drowning registry • PICU registry 2.2. Sharing information - to enhance collaboration among government & other agencies) eg: Violence Injury Prevention Surveillance System (VIPSS)	MOH (Disease Control Division/ Medical Development Division/CRC/ Health Informatic Center)	On going	Established registry which can be assessed by relevant stakeholders • PICU registry by 2025 Mechanism for sharing information in place
3	Strengthen current surveillance system	3.1. Review and improve current mortality surveillance system	Family Health Development Division	2020 2020	Guideline and SOP being reviewed every 5 years Analysis output on preventable cause of death in Under 5 years of age

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
		3.2. Optimize utilization of administrative data (HMIS, non HMIS) i. Regular meetings and reports on progress ii. Review POA 2025	Family Health Development Division Health Informatic Centre (PIK)	2020	Technical report annually
4	Optimize utilization of child health record book	4.1. Review and improve child health record book • Phone Apps	Family Health Development Division	2020	Child health record book being reviewed every 5 years
		4.2. Child Health Record Book scheduled audit	Family Health Development Division	2021 onwards	Audit report annually

7. Research and Development

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
1	Improve quality of mortality data	1.1. Improve the current manual Under-5 Mortality Reporting System (SU5MR) <ul style="list-style-type: none"> i. Verification of mortality data with states and DOSM ii. Identify and implement activities <ul style="list-style-type: none"> • to increase medically certified deaths • to reduce ill defined deaths iii. Audit U5 deaths reports <ul style="list-style-type: none"> • By age groups - neonatal, infant and toddler • By congenital anomalies iv. Explore use of Corrected mortality rate (exclude LCM) <ul style="list-style-type: none"> • Define Lethal Congenital Anomalies vs Preventable Anomalies eg. Spina Bifida 	Family Health Development Division/DOSM	On going 2017 onwards 2019	Decrease in gap between data from DOS and SU5MR Increase in medically certified deaths Annual mortality /audit reports
		1.2 . Enhance data collection and analysis of under 5 mortality through the development of web-based reporting system for under 5 Mortality Reporting System (MyMIS)	Information Management Department (BPM)/ Family Health Development Division	2020 onwards	Implementation of IT System by 2025
		1.3. Enhance data collection and analysis from MNNR <ul style="list-style-type: none"> • 43 hospitals including private hospital 	Pediatric Department/ IHSR/Health Information Center	On going	Registry creation

NO	PRIORITY AREAS	ACTIVITIES	RESPONSIBLE OFFICER/DEPT	DATE OF IMPLEMENTATION	INDICATOR
2	Research	2.1. Conduct regular NHMS every 5 years on maternal and child health with baseline data	IKU	2021 onwards	Survey conducted every 5 years
		2.2. Congenital abnormalities Registry <ul style="list-style-type: none"> • Multi centric prospective study (2010-2013 completed using MNMR data) • To analyse existing data 	Medical Development Division/NIH All tertiary hospital	2022 onwards	Number of study
		2.3. Identify research priorities on child health <ul style="list-style-type: none"> i) Conduct program evaluation ii) Suggested research topics <ul style="list-style-type: none"> • impact of baby walker and swing at TASKA and home • TASKA at high rise building (> level 3) • Survey on parenting skill based on child health record book 	IKU	2022 onwards	Number of study
		2.4. Behavioral and risk factors studies for developing preventive strategies for violence injury prevention	MOH (Disease Control Division)/NIH	2022 onwards	Number of study

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REFERENCES

1. UNICEF. (2015). FACT SHEET: A summary of the rights under the Convention on the Rights of the Child. [online] Available at: http://www.unicef.org/crc/files/Rights_overview.pdf [Accessed 19 Mar. 2015].
2. United Nations, Sustainable Development Goal 3, Ensure healthy lives and promote well-being for all at all ages. <https://sustainabledevelopment.un.org/sdg3>
3. National Health Morbidity Survey Report 2016 Volume II
4. Boundy EO, Dastjerdi R, Spiegelman D, et al. Kangaroo Mother Care and Neonatal Outcomes: A Meta-analysis. *Pediatrics*. 2016;137(1): e20152238
5. NoorAni Ahmad et.al. Trends and factors associated with mental health problems among children and adolescents in Malaysia *Int J Cult Ment Health*. 2015 Apr 3; 8(2): 125-136. Published online 2014 Apr 25. doi: 10.1080/17542863.2014.907326 PMID: PMC4409054
6. The National Plan of Action for Nutrition of Malaysia III 2016–2025 (NPANM III)
7. Technical Report Under five deaths In Malaysia Year 2016. Ministry of Health Malaysia
8. Family Health Development Division Annual Report 2017
9. Family Health Development Division Annual Report 2018
10. Family Health Development Division Annual Report 2019

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