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HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE

PROGRESS REPORT FOR MALAYSIA 2016 - 2019 & SEMINAR PROCEEDINGS

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:

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The views expressed in this report are those of the authors alone and do not necessarily represent the opinions of other investigators participating in the survey, nor the views or policy of the Ministry of Health.

The information presented in this report are based on the data that were publicly available as of August 2020.

Health in the Sustainable Development Goals and Universal Health Coverage: Progress Report for Malaysia 2016 – 2019 & Seminar Proceedings

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FOREWORD

Ministry of Health (MOH), just as the Government of Malaysia is committed in achieving the Sustainable Development Goals (SDGs) and Universal *Health Coverage (UHC). Health in the Sustainable Development Goals and Universal Health Coverage: Progress Report for Malaysia, 2016 – 2019 & Seminar Proceedings* prepared by Planning Division is a way to visualise its current standing in achieving the 2030 Agenda. The report is organised by themes as described in World Health Statistics 2019. The five themes are:

- Reproductive, Maternal, Newborn and Child Health
- Communicable Diseases
- Non Communicable Diseases
- Health systems and service capacity
- Environmental Health & Other Determinants of Health

This report consists the country's progress towards the SDGs and the gaps which must be closed for these to be achieved by 2030. This report is designed to ensure the actions remain on target; shortcomings are addressed as they arise, and all interested parties remain engaged.

To keep relevant agencies involved, a seminar was held on 11th August 2020. The purpose of the seminar is to serve as a platform to discuss the performance of the national health system and to obtain additional input, comments and suggestions on how to improve the achievements of SDG & UHC targets in Malaysia.

We need to inject a sense of urgency with only 10 years remaining before the 2030 deadline. Achieving the 2030 Agenda requires immediate and accelerated actions by countries along with collaborative partnerships among governments and stakeholders at all levels.

INTRODUCTION

Malaysia together with other world leaders adopted the 2030 Agenda for Sustainable Development on the 25 September 2015 during the United Nations (UN) General Assembly Meeting. The 2030 Agenda for Sustainable Development is a global commitment towards achieving sustainable development in a balanced and integrated manner. The Sustainable Development comprises of 17 interlinked Sustainable Development Goals (SDGs) with 169 targets and 247 indicators.

The Ministry of Health Malaysia (MOH) as the custodian for the country's population health outcome was entrusted to monitor the SDG3: Good Health and Well-Being. In addition, other goals related to health are Goals 1, 2, 5, 6, 7, 11, 16 and 17.

Target 3.8 in SDG 3 addresses 'Universal Health Coverage' (UHC). This target is measured by financial risk protection and health service coverage; access to quality essential healthcare services, and access to safe, effective, quality and affordable essential medicine and vaccine for all. As a result, the World Health Organization (WHO) outlined additional indicators to monitor UHC to allow countries to monitor their progress towards achieving UHC.

For the year 2019, the Sustainable Development Solution Network placed Malaysia at the 68 out of 162 countries. Malaysia had a SDG index score of 69.6 and 72.9 for UHC. It is imperative to carefully monitor the implementation of SDG and UHC in Malaysia and identify new issues and challenges as well as strategies and directions to ensure the achievement of SDG and UHC targets for local and international comparisons. Strong support and collaborations from stakeholders both internally and externally need to be established for us to achieve this purpose. Malaysia has put into place for Health and Health Related SDG and UHC a governance structure both at national level and health sector level.

National SDG Council

At the national level, the Prime Minister chairs the National SDG Council. This council consists of representatives from the Steering Committee and Technical Working Committees where members are from public & private sectors, non-governmental agency (NGO's), Civil Society Organization (CSO's) and academia (Figure 1). Its objectives include establishing the national agenda, implementation of SDGs and preparing relevant reporting to UN High Level Political Forum.

The Technical Working Groups via the Steering Committee provides technical reports to the National SDG Council. MOH together with custodians from Goals 11 and 16 are in the cluster of Well-Being.

Figure 1: Governance Structure of SDG UHC at National level

HEALTH SECTOR

SDG UHC Technical Committee is chaired by Deputy Director General of Health (Research and Technical Support). This committee reports status of achievements and progress of SDG & UHC directly to the Director General of Health. The Planning Division of the MOH serves as the Secretariat for this committee.

This technical committee meets at least twice in a year and streamline initiatives and activities to be aligned to goals and the targets of SDG & UHC.

Each of the SDG & UHC indicators have its respective owners from various divisions in the MOH. These divisions are responsible to collect, analyse and interpret data, monitor achievements and progress of indicators, engage with relevant agencies and implement activities or intervention to ensure the set target is achieved.

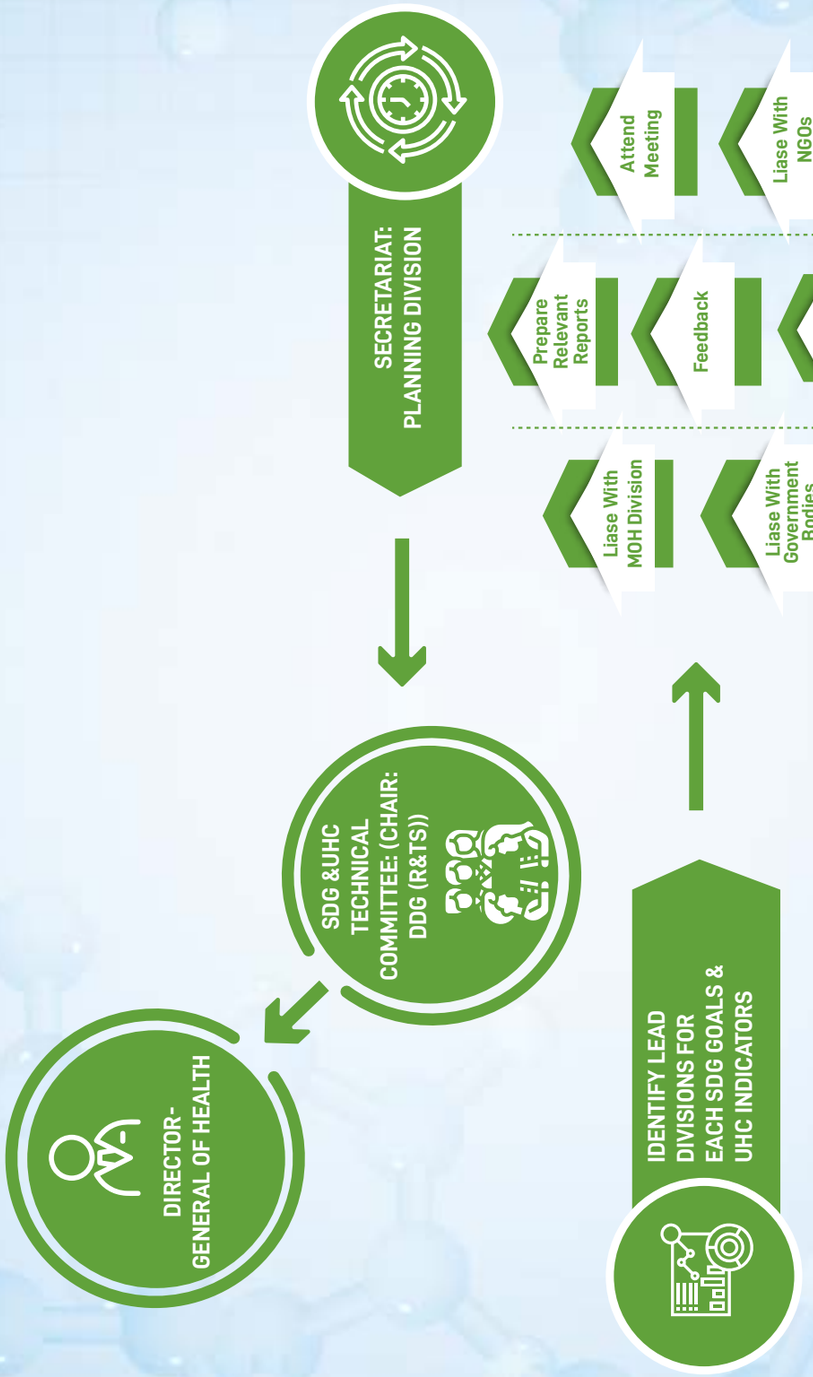

Figure 2: Governance Structure of SDG UHC in Health Sector

SUMMARY OF ACHIEVEMENT

Maternal, Reproductive, New-born & Child Health

Table 1: Maternal, Reproductive, New-born & Child Health (SDG 3)

Indicator		Achievement 2015	2016	2017	2018	Performance
3.1.1 Maternal mortality ratio (per 100,000 live birth)		23.8	29.1	25	23.5	●
3.1.2 Proportion of births attended by skilled health personnel (%)		99.4	99.5	99.6	99.6	●
3.2.1 Under-five mortality rate (per 1,000 live birth)		8.4	8.1	8.4	8.8	●
3.2.2 Neonatal mortality rate (per 1,000 live birth)		4.3	4.2	4.4	4.6	●
3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods (%) *Proxy:* Proportion of married women (reproductive age) using any methods for family planning (%)		52.2 (2014)				○
Proportion of married women (reproductive age) using modern methods for family planning (%)		34.3 (2014)				○
3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	*10-14 years*	0.16	0.14	0.14	0.10	●
	15-19 years	11.78	10.05	9.12	8.50	●
3.b.1 Proportion of the population covered by all vaccines included in the national program						
Immunization coverage of infants for DPT (completion dose)(%)		99.04	97.97	98.89	100	●
Immunization coverage of MMR (Mumps, measles and rubella) for children aged 1 - 2 years(%)		93.07	94.37	88.8	87.75	●
Immunization coverage of female aged 15 years for HPV (human papilloma virus) (2nd dose) (%)		84.07	83.69	83.62	82.23	●

Legends:

● On track/ SDG target achieved
● Not on track of SDG target
● Stagnant/ Slow progress
○ Unable to comment

Table 2: Maternal, Reproductive, New-born & Child Health (Other Health-related SDGs)

Indicator		Achievement					Performance
		2015	2016	2017	2018	2019	
2.2.1 Prevalence of stunting among children under 5 years of age (%)		17.7	20.7	NA	NA	21.8	🔴
2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight) (%)	Wasting	8.0	11.50	NA	NA	9.7	🟢
	Overweight	7.1	6	NA	NA	5.2	🟢
5.6.2 Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education		Malaysia has Adolescent Social and Reproductive Health Policy to ensure adolescent access to reproductive health information and education					

Table 3: Maternal, Reproductive, New-born & Child Health (UHC)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
Immunization coverage rate for DPT3 (diphtheria tetanus-pertussis) (%)	99.04	97.97	98.89	100	🟢
Immunization coverage rate for measles (%)	93.07	94.37	88.8	87.75	🟢
Stillbirth rate (per 1000 total births) (%)	4.4	5.2	5.4	5.5	🟢
Case rate of congenital syphilis (per 100 000 live births)	4.22	2.95	0.39	2.67	🟢
Exclusively breastfed rate in infants 0-5 months of age (%)	NA	47.1	NA	NA	○
Incidence of low birth weight among newborns (%)	11.5	11.4	11.7	11.8	🔴
Anaemia prevalence among women of reproduction age (aged 15-49 years) (%)	34.7	NA	NA	29.9 (2019)	🟢
Percentage of children under 5 years of age with suspected pneumonia who were taken to a health facility (%)	NA	94.3	NA	NA	○
Proportion of deliveries in health facilities (%)	99.2	99.1	99.4	99.3	🟢
Proportion of newborns receiving essential newborn care (%)	86.89	87.44	88.83	89.78	🟢

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Non-communicable Diseases

Table 4: Non-communicable Diseases (SDG 3)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (per 100,000 population)	76.6	80.9	91.8	121.5	🔴
Mortality rate attributed to cardiovascular disease	45.1	47.0	53.2	64.9	🔴
Mortality rate attributed to cancer	23.7	25.6	28.4	33.9	🔴
Mortality rate attributed to diabetes	1.1	1.2	1.9	4.9	🔴
Mortality rate attributed to chronic respiratory disease	6.7	7.1	8.3	9.7	🔴
3.4.2 Suicide mortality rate (per 100,000 population)	0.10	0.06	0.07	0.09	🔴
	2015		2019		
3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol Proxy: Prevalence of Heavy Episodic Drinking (HED) among 18 years old and above (%)	0.9		1.0		🔴
3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older (%)	22.80		20.7		🟢

Legends:

🟢 On track/ SDG target achieved
🔴 Not on track of SDG target
🟡 Stagnant/ Slow progress
○ Unable to comment

Table 5: Non-communicable Diseases (Other Health-related SDGs)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months Proxy: Number of cases of ever-partnered women and girls over aged 15 years and older who have experienced physical, sexual or psychological violence by a current or former intimate partner, in the previous 12 months in MOH facilities	1220 cases	1321 cases	4183 cases	7467 cases	🔴
5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months by age and place of occurrence. Proxy: Percentage of women who reported experiencing sexual abuse before the age of 17 in the previous 12 months in MOH facilities -(OSCC RETEN)	49	24	22.53	29.76	🔴
	2016	2017	2018		
16.1.1 Number of victims of intentional homicide per 100 000 population Proxy: Number of reported violent crime	5531	5024	4660		🔴

Table 6: Non-communicable Diseases (UHC)

Indicator	Achievement				Performance
	2015		2019		
Age-standardized prevalence of raised blood glucose level among adults 18+ years (%)	9.5		16.5		🔴
Age-standardized prevalence of raised blood pressure among persons aged 18+ years (%)	22.9		22.9		🔴
Age-standardized prevalence of overweight and obesity (body mass index ≥ 25 in person aged 18+ years (%)	32.8		42.7		🔴
Age-standardized prevalence of insufficiently physically active persons aged 18+ years (%)	23.4		20.1		🔴
	2016		2017		
Age-standardized prevalence of current tobacco use among persons aged 13-15 years (%)	14.8		13.2		🟢
	2015	2016	2017	2018	
Cervical cancer screening rate *Proxy:* Percentage of pap smear coverage (%)	23.10	23	26.30	24.19	🟡
30-day mortality after admission to hospital for acute myocardial infarction (STEMI/NSTEMI) Proxy: STEMI / NSTEMI in-patient mortality rate (in MOH facilities)	3.97 / NA	5.51 / 2.11	2.54 / 1.82	2.51/ 1.79	🟡

Legends:

🟢 On track/ SDG target achieved
🔴 Not on track of SDG target
🟡 Stagnant/ Slow progress
⚪ Unable to comment

Communicable Diseases

Table 7: Communicable Diseases (SDG 3)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations	0.17	0.17	0.17	0.18	🟡
3.3.2 Tuberculosis incidence per 100,000 population	79	81	81	79	🟡
3.3.3 Malaria incidence per 1,000 population	0.08	0.07	0.13	0.1409	🟡
3.3.4 Hepatitis B incidence per 100,000 population Proxy: Hepatitis B Notification Rate	12.4	12.3	15.41	14.52	🟡
3.3.5 Number of people requiring interventions against neglected tropical diseases MDA coverage among targeted population in filarial endemic states	Eligible population = 19,326; given drugs = 17684 (MDA coverage 83.1%)	Eligible population = 25,181; given drugs = 25,181 (MDA coverage 96.3%)	Eligible population = 49,333; given drugs = 47,760 (MDA coverage 96.8%)	Eligible population = 16,258; Given drugs = 16,258 (MDA coverage 100%)	🟢

Table 8: Communicable Diseases (UHC)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
HIV testing coverage among people living with HIV	98%	95%	83%	86%	🟢
Antiretroviral therapy coverage	31%	42%	54%	55%	🟢
Viral suppression rate among people on ART	85%	94%	95%	97%	🟢
Second-line treatment coverage among MDR-TB cases (%) Proxy: Treatment success rate for patients treated for multidrug-resistant tuberculosis (MDR-TB)	42%	51%	64%	71%	🟢
Mortality rate attributable to HCV infection	N/A	N/A	1.86	1.85	🟡
Mortality rate attributable to HBV infection	0.13	0.19	0.17	0.21	🔴
Dengue mortality rate	1.1	0.75	0.55	0.45	🟢

Legends:

🟢 On track/ SDG target achieved
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🟡 Stagnant/ Slow progress
⚪ Unable to comment

Health System and Service Capacity

Table 9: Health System and Service Capacity (SDG 3)

Indicator	Achievement 2017				Performance
3.8.1 Coverage of essential health services	*73*				○
	2013		2016		
3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income (10%/25%)	*1.44% / 0.16%*		*1.96% / 0.19%*		●
	2015	2016	2017	2018	
3.c.1 Health worker density and distribution (per 1,000 population)					
Doctors	1.524	1.582	1.805	1.887	●
Dentists	0.209	0.227	0.268	0.299	●
Pharmacists	0.345	0.332	0.361	0.414	●
Registered Nurses	3.279	3.236	3.311	3.289	●
Widwifery Personnels	1.661	1.682	1.667	1.661	●
3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	*100%*	*100%*	*100%*	*92%*	●

Table 10: Health System and Service Capacity (Other Health-related SDGs)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
1.a.2 Proportion Of Total Government Spending On Essential Services (Education, Health And Social Protection) In health context: General Government Health Expenditure As % Of General Government Expenditure	9.86	10.01	10.8	10.51	◐
17.19.2 (b) Proportion of countries that have achieved 100% birth registration and 80% death registration	Malaysia has conducted at least one population and housing census in the last 10 years and has achieved 80 per cent death registration				●

Table 11: Health System and Service Capacity (UHC)

Indicator	Achievement					Performance
	2015	*2016*	*2017*	*2018*	*2019*	
Bed occupancy rate	71.06	69.98	60.32	68.36	69.74	●
Rate of use of assistive devices among people with disabilities (%)	NA	NA	NA	NA	56.5	○
Patient experience (%)	96.13	96.3	96.64	97.34	96.65	●
Proportion of health care facilities with basic water supply (%)	100	100	100	100	100	●
Proportion of health care facilities with basic sanitation (%)	100	100	100	100	100	●
Hospital average length of stay (in days)	4.1	4.07	3.87	3.95	4.02	●
Outpatient service utilization rate	3.23	NA	NA	NA	2.74	●
Post-operative sepsis rate (%) Proxy: Orthopaedic clean site surgical infection	0.60	0.39	0.58	0.35	0.61	●
Hospital readmission rate Proxy: Percentage of paediatric patients with unplanned readmissions to the paediatric ward within 48 hours of discharge	0.08	0.07	0.09	0.08	0.07	●
Proportion of the population utilizing the rehabilitation services they require (%)	NA	NA	NA	NA	53.8	●
Total current expenditure on health as a percentage of gross domestic product	3.82	3.69	3.71	3.76	NA	●
Current expenditure on health by general government and compulsory schemes as a percentage of total current expenditure on health	53.43	51.36	51.98	51.31	NA	●

Legends:

● On track/ SDG target achieved
● Not on track of SDG target
◐ Stagnant/ Slow progress
○ Unable to comment

Environmental Health & Other Determinants of Health

Table 12: Environmental Health & Other Determinants of Health (SDG 3)

Indicator	Achievement				Performance
	2015	2016	2017	2018	
3.6.1 Death rate due to road traffic injuries (per 100,000 population)	21.5	22.6	21.0	19.4	🟡
3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) Proxy: Mortality rate reported in MOH facilities attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services (per 100 000 population)	0.41	0.58	0.47	0.62	🔴
3.9.3 Mortality rate attributed to unintentional poisoning Proxy: Mortality Case reported in MOH facilities due to accidental poisoning by and exposure to obnoxious substance (per 100,000 population)	0.01	0.00	0.17	0.27	🔴

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Table 13: Environmental Health & Other Determinants of Health (Other Health-related SDGs)

Indicator		Achievement			Performance
		2015	2016	2017	
1.5.1/11.5.1/13.1.1 Number of death, missing person and directly affected person attributed to disasters per 100 000 population	Death	18	5	31	🔴
	Affected	28,057	40,090	177,862	🔴
6.1.1 Proportion of population using safely managed drinking water services (%)		95.5	95.3	95.5	🟢
6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water (%)		NA	99.7	NA	○
11.6.2 Annual mean concentrations of fine particulate matter (PM10) in cities (population weighted) (μg/m^3)		57	44	35	🟢

Table 14: Environmental Health & Other Determinants of Health (UHC)

Indicator	Achievement	Performance
	2015	
Seat-belt wearing rate (%)	48.40%	○
Motorcycle helmet wearing rate (%)	88.9%	○

Legends:

🟢 On track/ SDG target achieved
🔴 Not on track of SDG target
🟡 Stagnant/ Slow progress
○ Unable to comment

CHAPTER 1:

MATERNAL, REPRODUCTIVE, NEW-BORN AND CHILD HEALTH

Provision of Family Planning Services

Increasing access to quality family planning services and information has been an important factor in improving women's' health in Malaysia. It allows spacing of pregnancies and can delay pregnancies in young women who are at an increased risk of health problems and death from early childbearing. It prevents unintended pregnancies, including those of older women who face increased risks related to pregnancy. To date, family planning services and information is widely available through a network of clinics of the Ministry of Health, the National Population and Family Development Board, Federation of Reproductive Health Association of Malaysia (FRHAM), private sectors and commercial outlets.

Malaysia had reported a contraceptive prevalence rate (CPR) of 26.3% back in 1974. This has doubled to 52% in 1984 and has remained a plateau since then. The latest CPR was 52.2% in 2014 (LPPKN, 2014) whereby contribution of modern method was 34.3%. The most popular modern method used was the contraceptive pill (13.2%), tube ligation (6.9%), male condoms (5.6%), injectables (4.9%), intrauterine devices (2.7%) and Implants (0.7%). Malaysia has showed a reducing trend from 24.6% in 2004 to 19.6% in 2014 for unmet needs for family planning (both for modern and traditional method). Therefore, the proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied (both for modern and traditional method) has increased from 75.4% in 2004 to 80.4% in year 2014. This is a proxy figure for the indicator since the specific data for modern methods is not available.

The latest CPR was 52.2% in 2014 (LPPKN, 2014) whereby contribution of modern method was 34.3%.

On the other hand, total fertility rate in Malaysia has continued to decline; in year 2018 it was at 1.8 babies per woman, below the replacement level of 2.1 babies. Concurrent to the decline in birth rates, the average age of the mother at first birth has risen from 26.9 in year 2009 to 27.8 in year 2018. In general, this indicates a shorter reproductive period in women in Malaysia. Therefore, the important message that is to be conveyed on family planning to the women and their spouses is on birth spacing and not limiting the number of births instead. Providing contraceptives to women with high-risk lifestyles is another main highlight for family planning services in MOH, as this is part of pre-pregnancy care.

Social and economic factors play a major influence on women's uptake of family planning, thus it does not depend on factors within the health sector. It therefore requires coordination and partnerships with other agencies and the public in order to satisfy the family planning needs among women. Comprehensive Sexual Education (CSE), needs to be evaluated as it is a contributing factor that has reduced maternal and child mortality as well as contributed towards a safe delivery achievement.

Increasing availability of various methods of contraception especially long-acting reversible methods may improve the proportion of women who have their family planning needs satisfied using the modern methods. This is particularly an important strategy for women from high-risk groups. Data on unmet needs and the barriers for family planning is inadequate in Malaysia. Having data on preventable maternal death is as important as it is required to plan for future interventions. Having said this, MOH needs to review the current availability of disaggregated data in order to allow for equity analysis. (eg. access to safe delivery for non-citizens in Sabah).

Maternal Health

The World Health Organization (WHO) defines safe delivery as birth attended by skilled health personnel. This is regardless of the place of delivery. Since late 1980s onwards, the proportion of births attended by skilled health personnel has reached above 90%, and has continued to increase reaching more than 98% over the past 15 years. According to National Health and Morbidity Survey (NHMS) 2016, the proportion was 99.5% has reached the global target by WHO, 90% *(WHO 2015)* and national target, 95% (*MOH 2015*).

NHMS 2016 reported 0.5% of respondents had unsafe delivery and the prevalence was highest among mothers aged 15 to 19, uneducated and unemployed mother. Approximately 40% were conducted by traditional birth attendants whilst 49.7% were conducted by unskilled attendant. A retrospective analysis on unsafe delivery from the national surveillance data for year 2015 to 2017 indicated five major contributing factors that had led to unsafe deliveries and they were invalid identification documents, financial constraints, transportation problems, distance from health facilities and the mothers' personal choice.

MOH promotes deliveries in institutions with readily available trained staff and facilities for emergency care and resuscitation. Malaysia has maintained very high proportions of deliveries in health facilities since year 2000 with only 5.3% of the deliveries were outside health facilities. This figure continues to reduce and has been reported as only 0.6% of the deliveries had occurred outside health facilities. NHMS 2016 reported that 99.1% delivered in health facilities, with majority took place in government hospitals (80.5%), and followed by private health facilities (18.6%). The overall prevalence of spontaneous vaginal delivery (SVD) was 75.5% and Caesarean Section was 20.7% (*NHMS 2016*).

NHMS 2016 reported 0.5% of respondents had unsafe delivery and the prevalence was highest among mothers aged 15 to 19, uneducated and unemployed mother.

The external influence from extreme pro-natural birth groups is a potential threat to safe delivery practice that maintains high proportions of safe deliveries. Often these deliveries are not attended by trained personnel hence this is a risk to the mothers and babies. Therefore, birth-preparedness education with practical knowledge during antenatal care is essential to avoid unsafe deliveries. Should a woman who is considered in the category of low risk decide to deliver at home, an assessment on birth preparedness including good family support, safe and clean home environment as

well as staff safety is essential. The presence of a trained birth attendant during delivery is to monitor the progress of labour and to identify the early warning signs of complications. The mother, spouse and family should understand that if complications arise, she needs to be transferred to a hospital.

Provision of respectful maternity care (RMC) throughout pregnancy can improve the mother's experience. More efforts to ensure RMC during intrapartum should be in place to prevent mothers from resorting to unassisted deliveries. It warrants a need to study the expectation of women on the health care service delivery during antenatal, intrapartum and postpartum.

Maternal Death

Malaysia has demonstrated progress in reducing maternal mortality before year 2000. A steep decline in the maternal mortality ratio (MMR) was noted in the decade between 1960 and 1980, when it dropped from 141 to 56 per 100,000 live births. This rapid reduction continued throughout the 1980s but started to slow when it reached 1990s. During the era of MDG, the MMR of Malaysia had reduced from 44.0 per 100,000 LB in 1991 to 23.8 per 100,000 in 2015 which had accounted for a 45.9% reduction. This reduction was slightly higher than the world performance of a 44% decline but lower than the Western Pacific Region, with a 64% decline (*WHO 2015*). Malaysia has 2 best practises which are; Confidential Enquiries on Maternal Death and pre-pregnancy care.

In the last 5 years, five common causes of maternal deaths were Associated Medical Conditions, Pulmonary Embolism, Postpartum Haemorrhage (PPH), Amniotic Fluid Embolism and Hypertensive Disease in Pregnancy (HDP).

However, Malaysia is having a great challenge to further reduce the relatively low MMR. The MMR has been stagnant since year 2000, which was 24.4 per 100,000 LB in year 2000 and remained as 23.8 per 100,000 LB in 2015. The reduction is miniscule and this pattern has continued until 2018 with MMR at 23.5 per 100,000 LB. Perhaps classification on Confidential Enquiries on Maternal Death- eg assessing Mothers and babies, and reducing risks through audits might be helpful.

In the last 5 years, five common causes of maternal deaths were Associated Medical Conditions, Pulmonary Embolism, Postpartum Haemorrhage (PPH), Amniotic Fluid Embolism and Hypertensive Disease in Pregnancy (HDP). A transition for common causes of death is observed from obstetrics causes (e.g.: PPH, HDP) to Associated Medical Conditions (e.g.: cardiac and renal disease) over the last 15 years. Cardiac diseases accounted for 50 percent of Associated Medical Conditions in year 2012-2014 (*FHDD 2019*). However, in recent years, PPH is back and has become the main cause of death. Death due to pulmonary embolism showed an increasing trend and obesity was the main risk factor to led to the development of venous thromboembolism (VTE)[2]. These suggest the association with non-communicable diseases in Malaysia. Another alarming cause of direct death is ectopic pregnancy, which became the 6th cause of death after Amniotic Fluid Embolism.

The coverage of maternal health services has reached a remarkable level; coverage of antenatal care at least one visit, 99.4%; safe delivery, 99.5% ; institutional deliveries , 99.1%; mothers received at least three postnatal home visit, 88% ; postnatal clinic visit at 1 month , 98.2% (*NHMS 2016*).

WHO and partners have conducted a large Multi-country Survey on Maternal and Newborn Health, with a focus on the prevalence and management of severe maternal morbidities and noted that countries and world regions are transitioning in the same pathway towards elimination of maternal deaths. The phenomenon was described as 'Obstetric Transition' which have implications on the strategies aimed at reducing maternal mortality (*Souza 2014*). According to five stages of Obstetric Transition phenomenon, Malaysia fits in stage IV, described as MMR moderate or low (less 50 maternal deaths per 100,000 LB), low fertility, with indirect causes of maternal mortality, particularly non-communicable diseases. In order to further reduce MMR, addressing the quality of care and eliminating suboptimal care within the health systems are vital. In Malaysia, approximately 60-70% of maternal deaths are preventable if timely and appropriate medical treatment is instituted. The phase III delay (*Thaddeus 1994*) i.e delay in receiving adequate care at the facility; with issues related to suboptimal care and competencies of health personnel has become gradually critical.

To ensure that optimal care is given, initiatives to improve effective supervision and monitoring has been put in place. These include development of Guidelines on Effective Supervision of Maternal Health and Family Planning Services incorporating hands-on training to senior nurses on the guidelines. Competency-based training for healthcare providers also needs to be coordinated and scaled up to update their skills and knowledge.

Furthermore, an increasing burden of non-communicable disease and sociodemographic shift of the population has posed a challenge and has added complexity to the health care of pregnant women. As the age of Malaysian women during their first marriage is getting older, their age of having first baby has also increased from 26.9 in year 2009 to 27.8 in year 2018. This explains the complicated pregnancy since advanced maternal age is one of the common risk factors.

Strengthening of pre-pregnancy care along with reaching out to yet –to- be mothers for pre-pregnancy care, is among imperative strategies to optimise women in reproductive age with medical conditions before they embark upon pregnancy. It is to ensure optimal outcome for both mother and baby. One of interventions during pre-pregnancy consultation is effective contraceptive whereby both safety and efficacy of the method must be considered. MOH supports the use of Long Acting Reversible Contraceptives (LARCs) as these methods require administration less than once per cycle or month, i.e implants, intrauterine contraceptive device (IUCD) and injectable. However, availability of implants in health clinics is still limited since the method is relatively expansive.

Nutrition among Women of Reproductive Age and Birth Outcome

Anaemia is highly prevalent globally, disproportionately affecting women of reproductive age who are aged between 15 to 49 years old (WHO GNT 2025). It is essential for women in reproductive age (WRA) to have optimum nutrient intake for their well-being and as preparation to get pregnant. Every woman deserves to be healthy throughout each stage of life. A pregnant mother who is well-nourished will have a higher chance of a healthier offspring. However, one of most common conditions related

to deficiency in nutrition among pregnant women is anaemia. The National anaemia prevalence among women of reproduction age (UHC) in Malaysia had shown a reduction from 34.7% in 2015 to 29.9% in 2019 based on NHMS. This could be due to an increase in public awareness on healthy eating among this group as well as better management of anaemia among antenatal mothers with the implementation of the Quality Assurance Programme at the national level.

It is indeed a challenging task to provide proper prevention and control programmes for anaemia uniformly as each state faced multiple root causes of anaemia. Therefore, the best approach is by implementing tailored strategies that focuses on localized anaemia issues. Quality Assurance Programme has been used as the main tool to provide district nutritionists the basic standard guidelines to coordinate a team to manage anaemic mothers that attend government health clinics efficiently. The team consists of medical officers, nutritionists, nurses, pharmacists and lab technicians who work together hand in hand to find the root cause and plan the most suitable interventions locally.

However, anaemia prevention programmes that focus on clinic base has not the best solution to reduce the prevalence of anaemia in WRA and this is still a moderate public health concern in the country. Prevention should start as early as possible to reduce the burden of having a higher number of anaemic pregnant women in the clinic setting. A well-nourished WRA ensures a good start to a healthy pregnancy. Micronutrient requirement that is increases throughout pregnancy stages can be fulfilled adequately with the continuity of having a balanced healthy meal.

Thus, awareness on the importance of having optimum micronutrient intake is reflected by eating a balanced meal especially fruits and vegetable was still low among adolescent and young women. It is harder to make them realise that the same nutrient is also important for their body during their pregnancy. Although all women have the same expectation towards their newborn, to be healthy mentally and physically, the awareness to prepare themselves before pregnancy with optimum level of micronutrient intake was still low. As a result, this gap of awareness has led a certain group of women to become undernourished and anaemic during pregnancy and this has subsequently led to poor pregnancy outcomes. This is reflected in our incidence of low birth weight (LBW) among newborns (UHC). From 2010-2016, the LBW figures have been plateauing between 11.19% and 11.40%.

Although women with anaemia might have a risk of delivering a LBW newborn, according to Global Nutrition Target 2025: Anaemia Policy brief (*WHO 2014*), LBW is a complex syndrome with multiple links to different causative factors that vary across population and underlying causal factors. To provide an intervention directly to combat LBW is a challenge. All medical, nutrition, hygiene and other health factors that areinter-related to a mother's condition before and throughout pregnancy can lead to LBW.

Scaling up education and awareness among adolescent and young women on the importance of micronutrient intake through healthy eating is one of the main priorities. To achieve mass awareness, this young WRA need to know their own health status including their weight, BMI categories, NCD risk and they also need to be aware of their haemoglobin (Hb) as a start to prevent anaemia. All of this information is vital for them to take a step towards making a decision on changing their lifestyle to be healthier especially on food choices. At the same time, continuous support

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Table 15: Gestational Weight Gain (GWG)

Pre-Pregnancy BMI Categories	Total Gestational Weight Gain In 1st Trimester	Rate of Gestational Weight Gain in 2nd & 3rd Trimester	Total Gestational Weight Gain In Pregnancy
Underweight (< 18.5 kg/m^2)	0.5-2.0kg	0.5kg / week (0.44-0.58kg)	12.5 -18.0kg
Normal (18.5 – 24.9 kg/m^2)		0.4kg / week (0.35-0.50kg)	11.5-16.0kg
Overweight (25.0-29.9 kg/m^2)		0.3kg / week (0.23-0.33kg)	7.0-11.5kg
Obese (≥30.0 kg/m^2)		0.2 kg / week (0.17-0.27kg)	5.0-9.0kg

Source: Institute of Medicine (IOM) 2009

from the community and employer play a bigger role to provide women with a healthier eating environment by focusing on the consumption of legumes and local green leafy vegetables in their diet.

At the national level, efforts to fortify general-purpose wheat flour with iron and folic acid is still currently undertaken to strengthen the prevention and control of micronutrient deficiencies especially among pregnant women. By having localized and national strategies, Malaysia aims to achieve a 50% reduction of anaemia by 2030.

The risk of having LBW babies can be reduced if all women are healthy and have good nutrition status when they enter pregnancy stages. Strengthening prevention activities of malnutrition among pregnant women is necessary. Dissemination of information on the importance of having a healthy weight and nutrition status in order to have a healthy pregnancy and babies needs to be strengthened on various platforms.

Close monitoring of gestational weight gain (GWG) among antenatal mothers that is being done at the government health clinics is also being strengthened. All antenatal mothers attending government health clinics are given education on different range of GWG (using IOM 2009 criteria) according to their pre-pregnancy BMI categories. Close monitoring of GWG aims to reduce their risk factors on gestational diabetes mellitus, pregnancy induced hypertension, pre-eclampsia and other risk factors that could lead to unhealthy pregnancy and outcome of LBW babies.

In each visit, the weight of a mother will be monitored using IOM 2009 cut off as reference (Table 15).

Other than monitoring weight gain, women with chronic diseases during pregnancy must be closely followed up as several studies have shown that stillbirths are common among this group. Therefore measures to increase public awareness on the link between maternal and child survival, identifying preventable causes of stillbirth and emphasis on the importance of the 1000 days of life are among steps that can be taken to reduce number of stillbirths amongst this cohort of women.

Child Health

Malaysia has done comparatively well and is almost at par with other developed countries in improving child health status, particularly by reducing child mortality and increasing access to health services. Child mortality is a sensitive outcome indicator that measures the child's wellbeing and reflects the child's health and nutritional status, coverage of interventions for the promotion of child survival and also reflects the quality of care received by mothers before, during and after pregnancy.

SDG and UHC indicators to measure the child's health includes mortality rates (under 5 mortality, infant mortality, neonatal mortality and stillbirth), child nutritional status, immunisation coverage and care seeking as a measure of access to service and interventions.

Mortality rates for deaths among neonates, infants and children under-5 years

Reducing child mortality and improving the well-being of children has always been part of the national development goals. Prior to the adoption of the MDGs, there was already a reduction of under-five mortality rates (U5MR) by more than 75 per cent and infant mortality rates (IMR) by 70 per cent since 1965 in Malaysia. Thus, Malaysia has had a head start in child mortality interventions prior to most other middle-income countries.

Death during the first month of life was mainly contributed by Congenital Malformation and conditions from perinatal period.

The under-5 mortality rates have reduced by 50 % during the MDG era, making Malaysia comparable to high income nations. The under-5 mortality rate has reduced from 16.8 per 1000LB in 1990 to 8.4/1000LB in 2015. The mortality rate however has plateaud since 2000 with the latest under-5 mortality rate at 8.8/1000LB in 2018.

Similarly, the infant mortality in the MDG era reduced from 3.1 per 1000LB in 1990 to 6.9/1000LB in 2015. Over the years, as the number of deaths among toddlers has reduced, data from the Department of Statistics Malaysia (DOSM) indicates an increasing contribution of infant deaths to the overall under-5 mortality rate from 66.7 per cent in 2001 to 78.3 per cent in 2008 and 81.6 per cent in 2012. Since then there has not been much changes in the trend.

Neonatal mortality rates has also reduced from 8.4 per 1000LB to 4.3 per 1000LB during the same period. Since then it has gradually increased to 4.6/1000LB in 2018. More than 50% of under-5 deaths occurred during the neonatal period and further analysis of data from DOSM shows that 75.5% of the deaths during the neonatal period occurred during the 1st week of life. Death during the first month of life was mainly contributed by Congenital Malformation and conditions from perinatal period. Majority (60%) of deaths related to conditions from perinatal period were due to prematurity. Neonatal mortality was also a sensitive indicator of the quality of care provided during the antenatal period, delivery and immediate postnatal period.

The SDG target for child mortality is to end preventable deaths of new-borns and children under 5 years of age by the year 2030, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and under-5 mortality to at least as low as 25 deaths per 1,000 live births.

Malaysia has already achieved the said SDG targets, and moving forward we will focus on improving quality of care to further reduce the under-5 mortality. To further reduce deaths among children under 5 years, deeper analysis into the cause of death as well as details of the event leading to death is required.

In order to identify the main causes of under-5 mortality in Malaysia, the Family Health Development Division (FHDD) in MOH had developed The Stillbirth and Under-5 Mortality Reporting (SU5MR) System in 2012 which was fully implemented nationwide in 2014. Through this system, all under 5 deaths are investigated to identify the cause of death and remedial measures are required to mitigate and prevent similar problems in future. FHDD has also engaged the police force to ensure death certification for children under five yearsincludes health personnel as this would reduce inaccuracies in identifying the cause of death. Currently only 4 to 6 per cent of under-five deaths are not certified by health personnel.

There is still a small number of childrens' deaths for which the causes remain uncertain. DOSM reports indicate that the cause for 11 percent of under-five deaths is categorized as 'others' while 2.6 percent is reported as "unknown'. For neonatal deaths, the corresponding percentages are 8 percent (other causes) and 3 percent (unknown causes).

Based on the SU5MR System where each of the cases are discussed and reviewed at the district and state level, deaths categorized as 'others' have reduced to less than 1 percent as seen in the figure below. Tackling these uncertainties are important for intervention planning in order to further reduce child mortalities.

Causes Of Under- 5 Deaths (ICD-10) 2014-2016

In 2017, in line with the SDG target to focus on preventable under-5 deaths, a national guideline was developed to standardize the classification of under-5 deaths into preventable and non-preventable death. In addition to the SU5MR System, a childhood drowning registry was initiated in 2017 to collect data on drowning incidents brought to health facilities regardless if outcome ended in mortality or otherwise. This data has helped to identify predisposing causes to drowning incidents and has helped in the planning of preventive strategies and interventions.

The mortality reporting system findings show that overall, 30% of all under-5 deaths are preventable. However, there is a difference in proportion of preventable deaths according to age groups where only 20% of death among neonates were preventable compared to 40% of death among infants aged 28 days to 1 year and 45% among toddlers. The main preventable deaths identified among toddlers include injuries and external causes (MVA, drowning, asphyxia), amongst infant was respiratory causes (pneumonia and aspiration pneumonia) whilst among neonates was prematurity and amenable congenital malformation.

The challenge in further reducing mortality among children under five years, lies in addressing the cause of mortality. Reducing the infant and toddler mortality rate will be a challenge as they are related to the social determinants of health and require all stakeholders to be involved in planning and implementing interventions. One of the contributing factors to infant and toddler deaths attributed to respiratory causes, is the delay in seeking treatment and poor recognition of danger signs by parents and caregivers.

In most cases the preventable deaths are related to social determinants of health. Improving health services needs to be in tandem with advocating for health in all policies relating to children growth and development, safety and child protection.

Moving forward Malaysia will target the preventable under-5 deaths among toddlers, infants and neonates. Preventable deaths among toddlers and infants require interventions by multiple sectors, families and community. Focus on prevention of injury and infections among infants and toddlers will be through the following strategies;

i. Inter-sectoral collaboration (government, NGO and private) including nursery and kindergarten.

ii. Empower families and communities to provide supportive environment through promotion and health education.

iii. Capacity building to improve quality of service.

To reduce neonatal deaths one of the interventions recommended by WHO is to focus on strengthening essential early newborn care i.e. immediate and thorough drying, immediate skin to skin contact, delayed cord-clamping and initiation of breastfeeding in the first hour. Malaysia has already achieved 98% of its national target i.e. 91.38% newborns receiving this care. Part of intervention for preventable premature births will be through health education to mother during antenatal clinics.

To further reduce preventable neonatal deaths, Malaysia needs to reduce both prematurity related deaths and deaths as a result of amenable congenital malformation and this is resource intensive requiring investment in highly skilled manpower, specialised services and neonatal intensive care services.

Maternal obesity was seen in 14.6% of all pregnant women.

Several factors contribute to the preventability of deaths including social determinants, the highest level of service available and relevant public health policies. Efforts to reduce deaths resulting from preventable or treatable childhood diseases and malnutrition must be coupled with inter ministry approaches and general government commitment such as increase accessibility to clean water, improved sanitation and better child nutrition as well as a specific approach for vulnerable children.

Access and Quality of Health Services for Child Survival and Wellbeing

Indicators for the coverage of specific interventions in the promotion of child survival is important to ensure that all children receive adequate services. Child health services are provided as scheduled visits to the clinics and are available at all health facilities. Services provided include immunisation services as well as growth and development monitoring for early identification of any health issues.

The percentage of children attending health clinics reduced as they age where proportion of children below 1 year attending MOH health clinic was 75% but reduced to below 50% among toddlers 1-4 years. This may be because 53% of children had attended formal nurseries, while the rest were cared for by parents or caregivers.

Examples of indicators under the SDG and UHC include percentage of newborns receiving essential new born care, case rate for congenital syphilis and coverage for childhood immunisation. The percentage of children under 5 years of age with suspected pneumonia who were taken to a health facility showed the care seeking behaviour of parents and caregivers. In addition, the stillbirth rate reflects the quality of care received by mothers before, during and after pregnancy.

Stillbirth Rate reflects adequacy of antenatal and intrapartum care.

Malaysia has surpassed the target set under every newborn action plan (ENAP) to end preventable deaths, where target for stillbirth is 12/1000LB or less by 2030. By the end of MDG, the stillbirth rate (SBR) was 4.4/1000LB in 2015. The SBR increased to 5.2/1000LB in 2016, 5.4/1000LB in 2017 and 5.5/1000LB in 2018. This increase can be attributed to better reporting as MOH had introduced the Stillbirth Notification Format in 2015.

Stillbirth is very much related to maternal health. In many cases, stillbirth reflects inadequate coverage of antenatal care or intrapartum care. The NHMS 2016 showed that 97.4% respondents received adequate antenatal visits as suggested by WHO with a minimum of 4 visits. Several studies show that stillbirths are common among women with chronic diseases during pregnancy.

NHMS 2016 showed relatively high proportion of pregnant women in Malaysia with chronic diseases. Prevalence of cardiac diseases in pregnancy was at 0.5%, anaemia at 29.3%, Diabetes Mellitus/Gestational Diabetes Mellitus at 13.5% and the prevalence of hypertensive disorders was 5.8 %. Maternal obesity was seen in 14.6% of all pregnant women.

Quality of antenatal visits is important in identifying and ensuring women identified with risks are given appropriate care. The presence of risk factors in mothers or foetuses increases the likelihood of an adverse outcome. The ability to identify risks is essential in providing high quality obstetric and perinatal care. In the NHMS 2016, those with extreme maternal age, multi-parity and living in rural had a higher risk for occurrence of stillbirth.

Measures that can be taken to reduce SBR is as below:

i. Increasing public awareness on the importance of pre-pregnancy care and antenatal care for child survival.

ii. Proper reclassification of the perinatal deaths and ensuring availability of guidelines for monitoring and intervention for health staff to help recognize those potential cases at a higher risk of unexplained ante partum stillbirths.

iii. Ability to identify the causes of stillbirth may help in counselling mothers for future pregnancies. Identifying risks may help in identifying and closely monitoring high risk cases.

Assessing care seeking behaviour among parents/caregiver

Care seeking for Acute Respiratory Infection (ARI) is a key indicator for the coverage of intervention and care-seeking behaviour. The percentage of children aged below 5 years suspected with pneumonia and taken to a health facility (Table 16) is an indicator to measure the care seeking behaviour of adults caring for children under 5 years.

Malaysian parents and caregivers have done well whereby the NHMS 2016 data showed that 94.3% of children suspected with pneumonia were taken to a health facility. Prevalence of ARI was only 0.9% where a slightly higher prevalence of ARI was seen among children whose parents had lower level of education and

Table 16: Percentage of Children Under-5 Years of Age with Suspected Pneumonia Who Were Taken To a Health Facility

DISAGGREGATION	2016
Total	94.3
INCOME LEVEL	**2016**
Q1 (Poorest)	31.1
Q2	12.6
Q3	17.4
Q4	18.9
Q5 (Richest)	20
MATERNAL EDUCATION	**2016**
No education	1.0
Primary school	32.4
Secondary School+	66.6

Source: National Health and Morbidity Survey 2016

income. During the Under-5 Mortality Review meetings, delay in seeking treatment and poor recognition of danger signs by parents and caregivers were identified as one of the reasons for mortality due to respiratory causes.

Areas that need to be strengthened include health education to parents, caregivers and child minders and highlighting on the danger signs. Other areas to focus on include education on steps to prevent spread of infection through hand washing, good personal hygiene; ensure completeness of immunisation and judicious use of antibiotics.

Immunisation Programme

Ensuring all children receive vaccination is important as under 5 mortality is also contributed by vaccine–preventable disease. Thus, monitoring the proportion of the target population covered by all vaccines included in the national immunization programme (SDG 3.b.1) is vital. Under the UHC, there are 2 immunization programmes that have been highlighted: immunization coverage rate for measles (UHC) and immunization coverage rate for DPT3 (UHC).

Over the years, the national immunisation programme has become increasingly comprehensive. Diphtheria-pertussis-tetanus (DPT) vaccine was introduced in 1958, Bacille Calmette-Guérin (BCG) vaccine in 1962, oral poliovirus vaccine (OPV) in 1972, tetanus toxoid (TT) in 1974, measles vaccine in 1983, hepatitis B vaccine in 1989, and Haemophilus influenzae type b (Hib),measles-mumps-rubella (MMR) vaccines in 2002 and HPV vaccine in 2010. In 2020, the top management have agreed to introduce new vaccines in NIP i.e pneumococcal vaccine for children below 2 years.

Since 2018 all vaccines have achieved the target coverage of above 95%.

Malaysia NIP and VPD surveillance have achieved remarkable progress in regional and global immunization and VPD surveillance targets. The country has well-established and functioning systems for routine immunization service delivery and VPD surveillance. The immunization programme is largely managed and delivered by the government, but the private sector also plays an increasingly important role. The robustness of the healthcare system in delivering vaccination services was demonstrated when Malaysia switched to using the combined measles-mumps-rubella (MMR) vaccine in 2002 and still achieved high coverage in the few years that followed.

Immunization services are free at government health facilities for all Malaysian citizens. School health services include free immunization for Malaysian school children. There are outreach vaccination activities for children without access to routine vaccination services at health-facilities. Every state implements various initiatives to enhance immunization service delivery, such as the Personalised Care and Reaching Every District strategy.

The coverage for majority of vaccines for primary immunisation in children has been above 95% over the past five years with the exception of MMR. Since 2018 all vaccines have achieved the target coverage of above 95%. Validity of the administrative data was confirmed by the NHMS 2016 on Maternal and Child Health, which showed that coverage for completed primary vaccination among children aged 12-23 months was 95.3%.

Immunization Coverage for DTP3 (Diphtheria-Tetanus-Pertussis)

Administrative data shows coverage for DPT3 (completed 3 doses of DPT) has maintained above 95% since 2011. NHMS 2016 also showed that 98.3% of children received DPT3 (88.4% were verified and 9.9% self- reported). Based on disaggregated data, coverage achieved was above 98% regardless of sex and economic status as well as urban rural settings.

Immunization Coverage for Measles

Among childhood vaccine-preventable diseases, measles is a leading cause of death in children globally. In 2016, as the prevalence of measles cases in Malaysia was higher among children less than 1 year old, hence the schedule was changed where dose1 measles (MCV1) initially given at 12 months was brought forward to 9 months. The second dose (MCV2) was also brought forward from Year 1 in school to 12 months of age.

The coverage for MMR Dose 1 (MCV1) dropped from 2014 to 2017, following which it has achieved more than 95%. NHMS 2016 also reported achievement of 96.6% and there was no difference in coverage with regards to sex and income. However there was a slight difference with rural population having better coverage than urban children.

The challenges faced by the National Immunisation Programme (NIP) is mainly due to the increasing activism by vaccine hesitancy groups including active use of internet and social media in spreading wrong information, practise of alternative medicine and religious issues. Inadequate knowledge, lack of awareness on the disease and poor communication skills among health personnel have contributed towards the difficulties in combating vaccine hesitancy. In addition, complacency among public and health personnel has occurred as

immunisation coverage has always been high. Population internal mobilisation is a major cause for the difficulty in maintaining an accurate denominator to calculate coverage. Other causes are uncertain numbers of undocumented children and migrants as well as vulnerable population such as Orang Asli and urban poor.

The future focus for the programme is to ensure that high immunisation coverage is maintained. Moving forward, MOH needs to focus on competency enhancement, health education, intensifying the use of social media for information sharing and improve accuracy of denominator through implementation of immunisation registry.

Thus a pool of vaccine educators will be trained to improve competence in dealing with issues of vaccine hesitancy. Other activities include development of online learning on issues of immunisation, community empowerment through increasing community awareness and coordination of activities to sustain maximal immunization coverage including networking with relevant government agencies, private and NGOs.

Child Nutrition

Adequate nutrition is one of the contributing factors of a child's wellbeing (*Figure 3)*. Poor nutrition during the first three years of a child's life can lead to malnutrition. According to the World Health Organization (WHO), exclusive breastfeeding for babies for the first six months (UHC) of their life is one of the most important ways to prevent stunting, overweight and obesity among children.

The Ministry of Health (MOH) has implemented various strategies to promote breastfeeding. The main strategies to protect, promote and support encourage breastfeeding in Malaysia are through the implementation of the Malaysian Code of Ethics for the Marketing of Infant Foods and Related Products, Baby-Friendly Hospital Initiative (BFHI), Baby-Friendly Clinics Initiative, continuous promotion and education to the public on breastfeeding thru various activities to ensure that every child gets the best start in life through an environment that supports breastfeeding.

Nevertheless, the findings of NHMS 2016 showed that only 47.1% of mothers breastfed their babies until the age of 5 months as compared to the national target to be achieved by 2020 of 56%. The prevalence is higher in urban (48.3%) then in rural areas (45.1%).

Some of the consequences of poor nutrition among children are anaemia, stunting, wasting and overweight. These indicators are important to assess the nutritional well- being of children below 5 years old in the country.

However, there is currently no baseline data available for Malaysia for the prevalence of anaemia among children 6-59 months (UHC) collected either routinely as an administrative data or via research. Haemoglobin test is not routinely conducted for the under-five children at the health clinics. Full blood count (FBC) is taken to check their haemoglobin level only if it is necessary such as children seen to be symptomatic for anaemia.

The national level of prevalence of stunting among children under-five years of age (SDG 2.2.1) in Malaysia as reported in the NHMS had increased from 17.7% in 2015 to 21.8% in 2019.

In NHMS 2016, boys were at higher prevalence than girls. The prevalence of stunting was found to be slightly higher in rural areas (22.2%) than in urban areas (21.7%) in NHMS 2019. By states, Kelantan was reported to have the highest prevalence.

Malnutrition among children under-five years

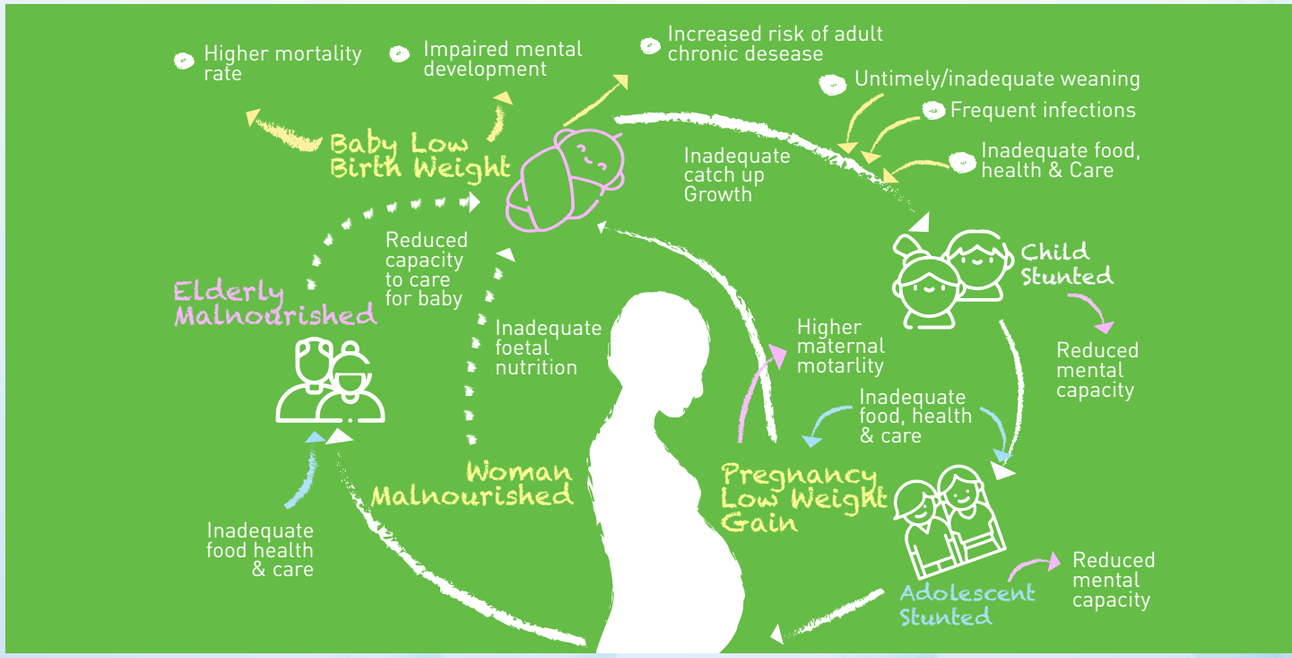
Nevertheless, the findings of NHMS 2016 showed that only 47.1% of mothers breastfed their babies until the age of 5 months

of age (SDG 2.2.2) also includes overweight and wasting. The NHMS findings showed that the national prevalence of overweight had slightly decreased from 7.1% in 2015 to 6% in 2016 and 5.2% in 2019. Thus, it has achieved the national target of less than 6.0% by year 2020.

On the other hand, the prevalence of wasting showed an increment from 8% in 2015 to 9.7% in 2019 as reported in NHMS. Based on NHMS 2016, the prevalence of wasting was higher among boys (13.3%) then girls (9.7%) and Johor had shown the highest prevalence of wasting in Malaysia (20.2%). In NHMS 2019, the prevalence of wasting was found to be higher in urban areas (10.1%) then in rural areas (8.5%). With national target of less than 6.6%, there are a lot of factors that must be looked through to achieve this target.

As reported in the Over or Under Double Burden of Child Malnutrition in Malaysia: A Landscape Analysis (Volume I) 2018, some of the significant determinants of child malnutrition were maternal height of mothers under 160cm, mothers did not receive appropriate Antenatal Care (ANC) services, poor infant and child feeding and care practices and also socio-demographic factors such as rural areas and gender; boys were found to be more likely to have all forms of malnutrition.

Figure 3: Life cycle of malnutrition



Source: ACC/SCN 2000

The prevalence of stunting was found to be slightly higher in rural areas (22.2%) than in urban areas (21.7%) in NHMS 2019

Malaysia faces a phenomenon where not all mothers choose to breastfeed according to the suggested duration as many working mothers discontinue exclusive breastfeeding once they return to work. The main issue to be highlighted is the inadequacy of maternity leave in Malaysia, which is only 60 days as compared to recommended maternity leave by the International Labour Organization of not less than 98 days, which prevent employees from breastfeeding their infants for the recommended period. Among other challenges is the slow implementation of BFHI in private hospitals.

The double burden of malnutrition among under-five children is one of the major global emerging issues that require urgent attention. Currently, there is an increasing trend of double burden malnutrition among young children in Malaysia with both under nutrition and overweight. Scaling up of multiple approaches of nutrition-sensitive and nutrition-specific intervention in programmes focusing on maternal and children are required to effectively tackle the increasing double burden malnutrition in the country with the support of adequate information through relevant research on nutrition and behaviours among pregnant mothers, children and family.

Prevention of malnutrition is crucial. Thus, various strategies were planned and being executed to curb the problem especially in the aspect of ensuring food and nutrition security and sustaining the food system to support and promote healthy eating practices. In addition, community-based approach with the use of various media platforms, and targeting child care settings were also being implemented to increase knowledge and practices of families and caregivers concerning infant feeding, exclusive breastfeeding, and complementary feeding.

Promoting exclusive breastfeeding mostly in the first 6 months of life is one step to ensure babies receive balanced nutrition from mothers. The Baby-Friendly Hospital Initiatives must be strengthened and implemented in private hospitals via intensive advocacy activities to the top management in private hospitals and Association of Private Hospital Malaysia (APHM). A proposal has also been made to include BFHI as one of the requirements under the Private Healthcare Facilities and Services Act 19, as well as listing implementation of BFHI in private hospitals as one of the main activities for the National Plan of Action for Nutrition of Malaysia (NPANM) III, 2016-2025.

Working mothers who wish to continue their breastfeeding journey after maternity leave should be encouraged to do so by creating a corporate structure that promotes a family and child friendly workplace. Any support and partnership in breastfeeding activities from all the relevant sectors such as government, private health care, NGO's, and breastfeeding support group should be strengthened.

A balanced diet should be a continuous process. After the first 6 months of life, to meet the evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to 2 years of age or beyond.

This is to make sure that the growth of a child is not compromised. Findings from the Over or Under Double Burden of Child Malnutrition in Malaysia: A Landscape Analysis (Volume I) 2018 indicated that some of the comprehensive strategies to combat malnutrition can be conducted by strengthening and scaling up nutrition intervention programmes among children. Therefore, a specific action plan to address stunting and other malnutrition issues are currently being formulated and will be implemented.

It is important as well to strengthen multi-sectorial efforts in ensuring food and nutrition security, sustaining food system to support and promote healthy eating practices by ensuring availability, accessibility and affordability of healthy food and food products for the population.

Adolescent Health

From year 1991 to 2015, there was significant reduction in Age Specific Fertility Rate (ASFR) per 1000 girls in Malaysia aged 15-19 from 28/1000 to 12/1000 *(DOSM*), which met the MDG aspiration. From 2016 onwards the ASFR among adolescent girls (15-19 years) further declined to a single digit of 8.5/1000 girls in 2018. Similar declining trend was seen in the number of live birth among adolescents (<15 and 15-19yrs) from 14,019 in 2016 to 11,938 in year 2018 (*DOSM*).

Table 17 highlighted the ASFR or adolescent birth rate by states among 15-19 years. The higher rates are in East Malaysia (Sarawak, Sabah and Labuan) whilst in Peninsular Malaysia, Pahang, Perlis and Kelantan recorded higher adolescent birth rates above the national figure of 8.5/1000 girls. These higher rates may be due to various factors such as poverty, existing social cultural practices of early marriage, early sexual activity, lack of knowledge on sexual reproductive health and poor usage of contraception among adolescents.

Ministry of Health also collected data on new antenatal cases registered at government health clinics which also showed a reduction of cases from 12,492 in year 2016 to 10,505 in 2018 *(FHDD,2019).* Further analysis showed that majority (more than 85.0 %) of the pregnant teenager seeks antenatal and delivery care at government facilities. It was noted, that there was an increasing trend of unmarried teenagers attending the government antenatal care services from 31.5 % in 2016 to 37.4% 2018 *(FHDD,2019)*. This led to MOH providing access to sexual and reproductive health (SRH) services to all regardless of age and marital status. This is in line with the SDG aspiration of providing access for all without any form of discrimination.

Increasing trend of sexual activities and risky behaviour with low knowledge on SRH and contraceptive usage among adolescents are among the challenges faced by the country. Factors affecting the health of adolescents are multi-factorial. Thus, adolescents' health intervention needs to take into consideration issues beyond the health sector, such as those related to legal, ethical, social, cultural and religious perspectives of the country. Thus, for effective outcome a holistic and integrated intra and inter-sectoral interventions is vital.

Increasing trend of sexual activities and risky behaviour with low knowledge on SRH and contraceptive usage

The Ministry of Health in collaboration with various agencies, such as Ministry of Women, Family and Community Development (MWFCD), Ministry of Education (MOE) and NGOs provide continuous advocacy for compulsory Comprehensive Sexuality Education (CSE) in schools and community. Community empowerment and mobilisation of civil societies and religious leaders for addressing adolescent health issues at grassroots are also conducted and need to be continued.

Initiatives to develop a national guideline on SRH for all age group have been carried out. However, the issue is the sensitivity of the implementation, which requires a very strong political will and push.

Table 17 : Adolescent Birth Rate (Per 1000 Girls Aged 15-19 Years) by States, 2015 - 2018

DISAGGREGATION		2015	2016	2017	2018
Malaysia	Total	11.78	10.05	9.12	8.5
	Rural	18.85	16.36	15.05	n.a
	Urban	8.79	7.48	6.72	n.a
Perlis		12.20	11.80	10.29	9.6
Kedah		8.38	7.32	7.26	6.8
Pulau Pinang		7.25	6.46	5.83	5.0
Perak		7.46	6.72	6.32	6.2
Selangor		7.79	6.99	6.31	6.0
W.P. Kuala Lumpur		8.93	8.09	6.72	6.4
W.P. Putrajaya		4.09	1.08	2.63	2.3
W.P. Labuan		29.55	23.33	20.91	12.3
Negeri Sembilan		8.35	6.98	7.04	6.8
Melaka		7.05	5.61	5.71	5.5
Johor		10.28	8.48	8.20	7.4
Pahang		14.68	12.56	11.91	11.8
Terengganu		9.55	9.58	8.86	7.3
Kelantan		12.63	11.62	9.79	8.8
Sabah		15.72	13.01	11.25	11.1
Sarawak		26.21	20.61	18.29	16.6

Source: Vital Statistics, Department of Statistics Malaysia

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
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CHAPTER 2:

NON-COMMUNICABLE DISEASES (NCDS)

This sub-section explores the various risk factors for NCDs, the modifiable behavioural risk factors as well as metabolic risk factors and infection, and mortality attributable to NCDs.

Globally, NCDs accounted for an estimated 41.1 million deaths in 2017, representing 73.5% of all deaths. Of the deaths that were preventable, over 85% occurred in low- and middle-income countries.

These diseases are mainly caused by modifiable behavioural risk factors such as lack of physical activity, poor diet, tobacco smoking and excessive alcohol consumption, which in turn lead to the development of metabolic risk factors linked to the development of NCDs such as raised blood pressure, high blood glucose, deranged lipid levels as well as overweight and obesity.

This chapter also examines infection related NCDs, specifically cervical cancer due to the Human papillomavirus (HPV); cervical cancer screening has been specifically included in the Universal Health Coverage (UHC) document.

While the SDG targets a one third reduction in premature deaths caused by NCDs, UHC indicators focus more on tackling the risk factors for contracting NCDs. For most countries, both SDG and UHC complement each other in terms of providing a framework for monitoring as well as the basis for action.

In Malaysia, 71% of premature deaths are caused by NCD. Cardiovascular and circulatory diseases being the leading contributor, accounting for 34.8% according to Malaysian Burden of Disease and Injury Study (2009-2014). In 2019, it was estimated that 1.7 million people currently lived with 3 major metabolic risk factors namely diabetes, hypertension and hypercholesterolaemia (*NHMS 2019*).

NCDs Risk Factors

Modifiable Behavioural Risk Factors

Three behavioural risk factors for NCDs are discussed in this section namely, harmful use of alcohol (SDG), tobacco smoking (SDG & UHC) and insufficient physical activity (UHC).

Harmful Use of Alcohol

Harmful use of alcohol is one of the leading risk factors for the burden of disease, contributing to violence, injury, suicide, chronic non-communicable diseases, infectious diseases (TB, HIV/AIDS, and pneumonia) and mental health disorders, besides alcohol dependence.

According to a recent study, between 1990 and 2017, the global adult per-capita consumption of alcohol increased from 5.9 L to 6.5 L and it is projected to reach 7.6 L by 2030 *(Manthey, 2019).* However, this indicator does not reflect the true burden of alcohol consumption in Malaysia as most of its population are considered "non-drinkers". Hence, the indicator, "Prevalence of Heavy Episodic Drinking (HED)", is regarded as more appropriate in view of the burden of disease attributed to the harmful use of alcohol and its resultant economic impact. Heavy Episodic Drinking (HED) is defined as those who consumed 6 or more standard alcoholic drinks at one sitting at least weekly.

The National Health and Morbidity Survey in 2015 showed that the prevalence of alcohol consumption amongst those aged 13 years and above in Malaysia was 7.7%; it was 8.4% for those aged 18 years and above. In NHMS 2019, it was shown that the prevalence of current alcohol drinkers among those aged 18 years and above had increased to 11.8%. The prevalence of HED had also increased from

HED was more common amongst members of the lower income group (people with a monthly income of between RM1000 and RM1999) at 11.8%.

0.9% (in the year 2015) to 1.0% (in the year 2019), with an estimated population of 212,144 adults involved. The proportion of HED amongst current drinkers was 8.4% and it was more common among urban dwellers (8.7%), males (10.3%), Bumiputera Sabah (16.7%) and Indians (12.0%) and finally, widowers (21.3%); HED was more common amongst members of the lower income group (people with a monthly income of between RM1000 and RM1999) at 11.8%.

For those who consume alcohol, the Ministry of Health Malaysia provides screening and brief intervention services at primary care level in more than 200 government health clinics. Cases that need further treatment are referred to the nearest hospital.

Issues faced by Malaysia in its efforts to reduce the harmful use of alcohol consumption include its limited jurisdiction in several alcohol interventions such as marketing, fiscal measures, accessibility and availability, industrial interference, and illegally produced alcohol.

At present, the Ministry of Health will be evaluating the implementation of the current Alcohol Action Plan (2013-2020) in preparation for its next iteration in 2021-2025. This document includes the prevention of the harmful use of alcohol through increasing public awareness, screening & intervention via health services, community empowerment, drink & drive prevention strategies and activities to reduce the availability of alcohol. The action plan also addresses measures to control the price of these beverages to limit their availability.

Tobacco Smoking

Tobacco products comprise those that are entirely or partly made from tobacco leaves, intended for human consumption through smoking, sucking, chewing, or sniffing; in the context of the SDG and UHC, these include smoke and smokeless tobacco products. Tobacco smoking is a major risk factor for cardiovascular and respiratory diseases, various types of cancers and many other harmful health conditions. Globally, tobacco use kills more

Table 18: Findings from the National Health Morbidity Survey 2019 on alcohol consumer & consumption

Results from the National Health Morbidity Survey (NHMS) 2019		
Prevalence of current alcohol drinkers: 11.8%		
Proportion of HED among current alcohol drinkers: 8.4%		
Proportion of HED among current drinkers by sex:	Male (10.3%)	Female (3.2%)
Proportion of HED among current drinkers by residential area:	Urban (8.7%)	Rural (7.5%)

than 8 million people a year with direct tobacco use causing approximately 7 million deaths; around 1.2 million people die from the effects of inhaling second-hand smoke.

Based on survey data, the age-standardized prevalence of tobacco smoking among persons aged 15 years and above in Malaysia has decreased from 22.8% in the year 2015 to 20.7% in the year 2019 (Table 19). Based on the NCD Global Targets for 2025 and the NSP-NCD 2016-2025, the target to be achieved by 2025 for prevalence of current tobacco use in persons aged 15+ years is 15%, from a baseline of 23%in 2011. Malaysia is thus making commendable and considerable progress.

As NHMS 2019 only collects data on tobacco use amongst people aged 15 years and above (GATS), in order for it to be comparable between countries, data for age-standardized prevalence of current tobacco use among persons aged 13-15 years (%) was extracted from the NHMS 2017: Adolescent Health. This also shows a slight reduction from the years 2016 to 2017 (Table 20).

The MOH aids smokers who are eager to quit smoking through its mQuit services. It is an integrated quit smoking service that encompasses public and private facilities in the country. Services provided include customized quit smoking plans, delivered by dedicated healthcare professionals that encompass pharmacological and behavioral change interventions.

The Ministry of Health, in collaboration with the Ministry of Education, has introduced the KOTAK *(Kesihatan Oral Tanpa Asap Rokok)* programme in schools to reduce the prevalence of smoking amongst teenagers through prevention and intervention approaches. This programme is in line with the National Strategic Plan for Tobacco Control 2016-2015 which intends to produce future generations that are free from any smoking practices.

The policy of banning the display of tobacco products at point of sale as well as the implementation of a ban on smoking at all eateries are examples of regulatory interventions that further underline the MOH's solid commitment to achieving the 'Endgame' for tobacco in Malaysia.

Table 19: Age-standardized prevalence of current tobacco use among persons aged 15 years and older (%)

DISAGGREGATION	2015	2019
Malaysia	22.8	20.7
Male	43	39.8
Female	1.4	1.5

Source: National Health & Morbidity Survey, NHMS 2015 & 2019

Table 20 : Age-standardized prevalence of current tobacco use among persons aged 13-15 years (%)

DISAGGREGATION	2016	2017
Malaysia	14.8	13.2

Source: 2016: Tobacco and E-Cigarette Survey Among Malaysia Adolescents (TECMA) 2016
2017: National Health and Morbidity Survey (NHMS) 2017: Adolescent Health

Table 21 : Age-standardized prevalence of insufficiently physically active persons aged 18+ years (%)

DISAGGREGATION	2015	2019
Malaysia	23.4	20.1
Rural	19.2	15.2
Urban	24.7	21.3

Source: National Health and Morbidity Survey (NHMS) 2015 -2019

Insufficient Physical Activity

Globally, decreasing physical activity levels has been identified as one of the leading risk factors for mortality and contributes to 6% of deaths world-wide (WHO 2010). NHMS 2015 revealed that the age-standardized prevalence of insufficiently physically active persons aged 18+ years (UHC) was at 23.4%; encouragingly this figure has dropped to 20.1% in the recent survey in 2019 (Table 21).

In both surveys, the prevalence was higher in urban areas, which could be because urban living encourages sedentary lifestyles. Overpopulation, road traffic density, excessive use of motorized transportation, poor air quality and too few public spaces make physical activity more difficult in the cities.

The creation of better built environments requires multi-sectoral and sustained efforts to integrate explicit chronic disease prevention objectives into the professional practices of diverse disciplines. Full implementation of the National Strategic Plan for Active Living (NASPAL) 2016-2025 encompasses not only physical activity promotion programmes but also strategies for collaboration with agencies outside of health to create a health promoting environment.

Overweight and Obesity

Obesity is one of the major risk factors for the diet related NCDs such as diabetes, heart disease and cancers. The problems of obesity are attributable to complex factors which include environmental, social, and cultural influences. Worldwide in 2016, more than 1.9 billion adults (18 years and older) were overweight with over 650 million of them being obese *(WHO 2020)*.

In Malaysia, almost half of the adult population aged 18 years and above was overweight and obese (*NHMS 2019*).

Malaysia has achieved the target for age-standardized prevalence of overweight and obesity (UHC) of below 47.7% by 2020. As reported in the findings of the NHMS, the national prevalence of overweight and obese has shown an increase from 32.8% in 2015 to

In Malaysia, almost half of the adult population aged 18 years and above was overweight and obese

42.7% in 2019, with a higher prevalence amongst females (Table 22). In NHMS 2015, more rural adults were overweight and obese than their urban counterparts. However, the reverse was observed in NHMS 2019.

There are various challenges to the efforts to reduce the prevalence of overweight and obesity in Malaysia because of the need to address several complex causes. One of the biggest issues is the lack of a supportive environment for healthy eating. The availability of fast-food restaurants and food outlets that operate 24 hours a day, in addition to a very convenient home delivery service, have always made food easily accessible. In addition, the abundant supply of processed foods in the market and the lack of control over unhealthy food and beverage advertisements have aggravated these problems.

Other challenges include the "eating out culture" and poor dietary practices including low consumption of fruits and vegetables. The WHO recommends the intake of fruits and/or vegetables of at least 5 servings per day (*Agudo 2005*). In Malaysia, the national prevalence of adults meeting this recommendation declined from 7.5% (*NHMS 2015*) to 5.1% (*NHMS 2019*) over the last decade. Healthy food, though readily available, is not affordable for the majority of Malaysians. NHMS 2019 revealed that the consumption of fruits and vegetables by Malaysian adults from the high monthly income group was almost 2 times higher than that by the lower monthly income group.

In response to the alarming trend of increasing incidence of overweight and obesity in the country, there is a need for urgent actions to be taken especially regarding hard policies. These include the removal of subsidies for sugar in 2013 and the implementation, since 1st July 2019, of excise duty at RM0.40 per litre for three categories of sweetened beverages, manufactured in the form of ready-to-drink beverages. The execution or implementation of more hard policies to address obesity via the Task Force to Combat Obesity in Malaysia is needed to limit the operating hours for the 24 hours restaurants.

As approved by the *Cabinet Committee For A Health Promoting Environment*, weight management programmes are conducted at the work place for overweight and obese staff. This programme provides weekly and monthly intervention such as nutrition activities, exercise and motivation for selected participants, who are then assessed according to their percentage change in weight, waist circumference, percentage of body fat, blood pressure and basic blood tests for glucose and cholesterol.

Other ongoing nutrition programmes targeted at the adult population are carried out in different settings including the workplace and the community. Workplace nutrition-related activities such as Healthy Catering, Healthy Cafeterias and Healthy Menu during Meetings are currently being implemented. Healthy eating awareness amongst the public is also incorporated into community-empowerment programmes such as *Komuniti Sihat Pembina Negara* (KOSPEN) & Enhanced Primary Health Care (EnPHC) that mobilize the community to actively participate as volunteers to carry out basic nutritional screening and disseminate nutritional information. The Healthy Community Kitchen, focusing on cooking demonstrations and healthy recipe modifications, is also one of the programmes that encourage hands-on and participatory involvement by the community.

It is therefore necessary for Malaysia, led by the Ministry of Health, to mobilise and strengthen collaboration between the key stakeholders via the whole of government and whole of society approaches in order to further reduce the prevalence of obesity. Regular engagement with the food and beverage industries to reformulate healthier options by reducing serving size as well as calorie and nutrient labelling of food in the market are examples of steps that will continue to be strengthened. The implementation of Healthier Choice Logo for food products sold in Malaysia that meet the nutrient criteria will facilitate consumers' choice of healthier food options. In Malaysia, only 1 in 5 adults are aware of the Malaysian Healthy Plate concept (*NHMS 2019*) and only 14% of them practise it daily. Thus, continuous and extensive strengthening of various nutrition advocacies to inculcate and empower healthy eating practices amongst Malaysians is warranted.

Various obesity prevention and control programmes for school children which will subsequently reduce the prevalence of obesity among adults are also currently being implemented and will continue to be strengthened. These include the implementation of School Feeding Programmes (HiTS) and Empowerment of Parents and Teachers Association (PTA) via the *Cara Hidup Anda Terbaik* - C-HAT initiative to empower the parents and teachers to help inculcate healthy eating habits amongst children.

Table 22: Age-standardized prevalence of overweight and obese in persons aged 18+ years

DISAGGREGATION	2015	2019
Malaysia	32.8	42.7
Rural	32.0	43.0
Urban	33.6	41.5
Male	32.2	34.0
Female	34.0	46.1

Source: National Health and Morbidity Survey (NHMS) 2015 & 2019

Raised Blood Glucose

Globally, from 1980 to 2014, the prevalence of diabetes among adults over 18 years of age rose from 4.7% to 8.5%. An estimated 1.6 million deat*hs were directly caused by diabetes (WHO 2020*).

NHMS 2019 revealed that among those with raised blood sugar, only 51.4% were aware they had the condition

Table 23: Age-standardized prevalence of raised blood glucose level among adults 18+ years

DISAGGREGATION	2015	2019
Malaysia	9.5	16.5
Rural	8.3	16.3
Urban	10.0	16.6

Source : 2015: National Health and Morbidity Survey (NHMS) 2015 & 2019

In Malaysia, the overall prevalence of raised blood sugar increased from 11.2% (2011) to 13.4% (*NHMS 2015*) and then to 18.3% (2019). NHMS 2019 revealed that among those with raised blood sugar, only 51.4% were aware they had the condition and from that figure, 89.1% received pharmacological treatment and 7.6% were advised lifestyle modification while the other 3.3% were not on any intervention (*NHMS 2019*).

Among those with known diabetes, 25.7% claimed that they were on insulin therapy, 85.6% claimed to be on oral antidiabetic drugs within the past 2 weeks, 88.0% had received specific diabetes diet advice from healthcare personnel and 75.4% claimed to have been advised to lose weight by healthcare personnel. 23.0% opted for traditional and complementary medicine (*NHMS 2019*).

Data for age standardized prevalence of raised blood glucose level among adults >18 years of age (UHC) in Malaysia shows that the prevalence had increased by 7%.

To improve the early detection of diabetes, the MOH is currently working with multilateral partners to intensify screening efforts. MOH programmes such as KOSPEN in the community, KOSPEN Plus in the workplace, EnPHC in 20 sentinel sites etc. are complemented by screening efforts by the PERKESO Health Screening Programme and the DOSH (Department of Occupational Safety and Health) screening programmes that are conducted by the Ministry of Human Resources. The Peka B40 programme is another government initiative to sustain the healthcare needs of low-income groups by focusing on NCDs and aims to increase early detection of NCDs.

Raised Blood Pressure

Globally, raised blood pressure is a major cause of premature death with an estimated 1.13 billion people having this risk factor. In Malaysia, the National Health and Morbidity Survey shows that the overall prevalence of raised blood pressure had dropped from 32.2% (2011) to 30.3% (2015) and subsequently to 30.0% (2019). Among all hypertensives, only 53.0% were aware that they had the condition; from that figure, 89.4%

Among all hypertensives, only 53.0% were aware that they had the condition

Table 24: Age-standardized prevalence of raised blood pressure among persons aged 18+ years

DISAGGREGATION	2015	2019
Malaysia	22.9	22.9
Rural	24.7	23.8
Urban	22.5	22.0

Source: 2015: National Health and Morbidity Survey (NHMS) 2015 & 2019

claimed to be on oral anti-hypertensive drugs within the past 2 weeks, 88.1% had received specific diet advice from healthcare personnel, 73.4% claimed to have been advised by healthcare personnel to lose weight and 81.1% had been advised to be more physically active or start exercising (*NHMS 2020*).

Table 24 shows the UHC indicator, age-standardized prevalence of raised blood pressure among persons aged 18+ years.

High salt intake is a major cause of raised blood pressure, accounting for about half the disease burden. A recent study in Malaysia showed that Malaysians were consuming approximately 7.9 gm /day or 3167 mg sodium per day (*MyCoSS 2019*) and this is above the WHO recommended intake of 5 grams per day. The study also showed that about 9 in 10 Malaysian adults were aware of the negative health impact of a high salt diet; however, this knowledge was not translated into practice.

The Global Action Plan for The Prevention and Control of NCDs Adopted at the 63rd World Health Assembly 2013 recommended salt reduction as a cost-effective strategy for the prevention of NCDs. Thus, as a way forward, the MOH is currently strengthening the implementation efforts that were outlined in the Salt Reduction Strategy to Prevent and Control NCD for Malaysia 2015-2020, in which are outlined strategies for promotion, education and collaboration with related stakeholders in order to reduce salt intake among Malaysians.

Although there are well-established treatment regimens for hypertension, many people are not screened and those who are diagnosed are not on effective treatment. The MOH has implemented the EnPHC demonstration project in 20 health clinics since July 2017 to increase the detection of NCDs by profiling the population for risks such as raised blood pressure. This is a proactive approach and emphasizes the importance of early prevention of disease.

On the other hand, the MOH also recognises that for patients with established hypertension, proper management of the disease is crucial to ensure that the treatment provided is optimal and blood pressure readings are at the recommended levels. Thus, the MOH initiated a national Hypertension Clinical Audit in Primary Care in 2019 to monitor the quality of hypertension management. This first national initiative showed that only 59.4% of patients with hypertension had adequate blood pressure control. Efforts are currently under way at sub-national level to improve processes related to hypertension care.

Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease

Causes of death were estimated by the WHO for 2000-2012 using data sources and methods

Table 25: Probability of dying from any of cardiovascular disease, cancer, diabetes, chronic respiratory disease between age 30 age exact age 70 (%)

DISAGGREGATION	2015	2016	2017	2018
Malaysia	NA	17.2	17	NA

Source: WHO estimates, Global Health Observatory

Table 26: Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease per (100,000 population)

DISAGGREGATION	2015	2016	2017	2018
Malaysia	76.6	80.9	91.8	121.5

Source: Statistics on Causes of Death, Malaysia, 2019, Department of Statistics Malaysia

that were specific to each cause of death (WHO 2014). These NCD mortality estimates were based on a combination of country life tables, cause of death models, regional cause of death patterns, and WHO and UNAIDS programme estimates for some major causes of death (not including NCDs). According to these estimates, the rates of premature mortality continued to decline steadily. However, based on the current trajectory, it is unlikely that Malaysia will reach the SDG target of 30% relative reduction.

The National Strategic Plan for Non-Communicable Diseases (NSP-NCD) 2016-2025 provides the overarching framework for Malaysia's response to the increasing burden of NCDs. Under the NSP-NCD, there are several Strategic Plans that address interventions that could result in substantial reductions in NCD deaths, in line with the WHO-recommended policy interventions or 'Best Buys' (WHO 2017).

Most of the current interventions in Malaysia are focused on raising awareness and knowledge to the changing of behaviours (soft policies) as well as improving the delivery of health services. Policy and regulatory interventions (hard policies) that support a health promoting environment are still in their infancy and this will require a whole-of-government and health-in-all policies approach.

Although there is a Cabinet-level committee for a Health Promoting Environment within the government, accelerated progress necessitates bold political decisions as well as increased investment in prevention and primary care and across the health system.

Cervical Cancer Screening Rate

The MOH uses the proxy indicator, "Pap smear screening rate among sexually active women aged 30 to 65 years old" at present. Pap smear screening has been implemented in Malaysia since 1965 as a part of its Cervical Cancer Control Programme. It is conducted by various service providers besides the Ministry of Health (MOH) such as the Ministry of Defence, National Population and Family Development Board, private hospitals and clinics and non-government organizations etc. However, the MOH remains the main Pap screening contributor over the years. In the past 5 (five) years, all the 15 states in the country did not manage to meet the targeted Pap smear coverage of 40%. In 2013, the Pap smear coverage among sexually active women aged 20 to 65 years was 22.7%.

The trend over the next 3 (three) years, i.e. from 2014 to 2016, remained stagnant at around 23% (23.5%, 23.1% and 23% respectively). However, in 2017, this proportion increased to 26.3%. However, this increase could be attributed to the change in the denominator as the policy for Pap smear was reviewed during this time. In 2017, the age range was raised from 20 years to 65 years to 30 years to 65 years. In 2018, the percentage decreased to 24.2%

Unfortunately, since the beginning of the programme, it has been conducted opportunistically. For a more successful screening programme, rigorous efforts are required to ensure that more women come forward to undergo screening. The issue of acceptability should also be addressed as many women feel embarrassed and fear discomfort. Some women also feel that they are not obligated to undergo screening.

Thus, knowledge on the fact that cervical cancer can be prevented needs to be circulated widely throughout the entire population as women, especially in rural areas, are still lacking in this knowledge. Promotional activities to ensure that women know about Pap smear screening in government health clinics and other facilities should be enhanced.

This programme is also hindered by inadequate manpower at health clinics as well hospitals. For example, a staff member who conducts Pap smear at the clinic is also responsible for other programmes at the clinic. Thus, the staff member is overburdened with the various other tasks and cannot fully concentrate on Pap smear screening. At hospital level, there is a backlog of slides that have not been read as there are limited numbers of cytoscreeners and histopathologists in the country.

Another issue faced by the programme is that of limited resources. The availability of Liquid Based Cytology (LBC) method, which is of higher quality, sensitivity and specificity compared to Pap smears, is an issue in many health clinics. An advantage of LBC is the reduced number of inadequate slides, which results in reduced unnecessary recall of the patient to repeat the procedure. However, the cost of this method has limited its more widespread use across the country.

Pap smear screening has been implemented in Malaysia since

1965

In some clinics, the women who underwent Pap smear were not given an appointment card. They were just informed verbally of their next test date and this may result in losing the women to regular follow-up.

Health care providers should promote this service to every woman who satisfies the criteria, not only at the Maternal and Child Health Service, but at all health facility touch points. Strict compartmentalisation of these services can hinder the success of this programme; for example, women attending outpatient clinics may not be offered this service because clinic staff are under the impression that performing Pap smears is within the purview of the Maternal and Child's Health Service only.

There is a need for dedicated staff to act as Liaison Officers (LO) in assuring good communication between the clinics and laboratories as well as the gynaecology clinics.

These LOs can be responsible for ensuring that the programme runs smoothly, meets the set targets and that cases are properly followed up.

The Cervical Cancer Screening Programme utilizing the HPV Test has been implemented in 4 states namely, Federal Territory Kuala Lumpur, Federal Territory Putrajaya, Kedah and Kelantan. This test detects the presence or absence of high-risk HPV which, if later found to be positive, will require that the women be subjected to LBC or directly referred to the gynaecological oncologist. This strategy is in line with the WHO's *Global Strategy Towards Elimination of Cervical Cancer.*

Mental Health

Introduction

The WHO defines Mental Health as a state of wellbeing in which the individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully and is able to contribute to his or her community.

Mental health problems often occur as a result of life stressors and are usually less severe and of shorter duration than mental illnesses; they interfere with a person's cognitive, emotional or social ability but may not meet the criteria for a diagnosed mental illness. They often resolve with time or when the individual's situation changes. However, if they persist or increase in severity, progression to mental illness may occur.

Mental illnesses, on the other hand, are disorders diagnosed by a medical professional that significantly interferes with an individual's cognitive, emotional, or social ability. One will not be able to cope with the challenges of everyday life. They occur with varying degrees of severity. Examples include mood disorders (such as depression, anxiety, and bipolar disorder), psychotic disorders (such as schizophrenia), eating disorders and personality disorders.

According to WHO 2018, 1 out of every 4 people in the world is affected by mental or neurological disorders at some point in his or her life. Approximately 450 million people suffer from such conditions, placing mental disorders among the leading causes of ill-health and disability worldwide. Depression alone accounts for 4.4% of the global burden of disease. Among adolescents, depression is the 3rd leading cause of disease burden while suicide presents itself as the 2nd leading cause of death among 15-29-year olds.

Depression and anxiety cost the global economy around US$ 1 trillion per year and it is a growing public health concern.

The NHMS in 2019 showed that the prevalence of depression was 2.3% amongst those aged 18 years and above

Malaysia's Mental Health Burden

In Malaysia, the mental health-related burden comprises up to 37% of total disability. NHMS 2015 revealed a mental health problem prevalence of 29.2 % in Malaysians above 16 years. In 2017, the NHMS Adolescent Health Survey (among school-going adolescents aged 13-17 years) revealed that 18.3% were depressed, 10.0% had suicidal ideation while 6.9% had attempted suicide. This showed an increasing trend compared to the same study conducted in 2012. The NHMS in 2019 showed that the prevalence of depression was 2.3% amongst those aged 18 years and above.

With the multi-ethnic and multi-religious profile of the Malaysian population, the concepts of mental illness and mental health in Malaysia can and have been addressed from different perspectives, representing the influence of various racial and religious beliefs. Malaysia is considered a middle-income country and a multi-sector economy, and thus the nature and prevalence of mental disorders are comparable with that of developing countries.

Mental Health Services

Currently, the Ministry of Health (MOH) Malaysia provides psychiatric and mental health services at four (4) mental institutions and 66 government hospitals nationwide.

One of the listed indicators for Universal Health Coverage is "Service coverage for severe mental health disorders". Severe mental disorders include the proportion of persons with psychosis, bipolar affective disorder and moderate to severe depression who are using these services.

At the primary care level, there are 1001 government primary health clinics providing mental health services through screening, intervention, and follow-up of stable mental patients while 17 health clinics provide psychosocial rehabilitation services. Mental health screening to detect levels of stress, anxiety and depression is being conducted in these health clinics and those identified will be given the appropriate intervention and referred for further treatment when necessary. Complying with the recommendations of the Malaysian Mental Health Act 2001, community mental health centres have also been set up since 2012 providing mental health treatment and psychosocial rehabilitation services. Currently, there are 25 Community Mental Health Centres (MENTARI) located throughout the country.

There are 1001 government primary health clinics providing mental health services through screening, intervention, and follow-up of stable mental patients while 17 health clinics provide psychosocial rehabilitation services

The challenges

Over and above the burden of mental disorders described previously are several challenges with respect to mental health problems in Malaysia:

i. The health literacy of the public regarding mental health is relatively low and many people including family members of mentally ill patients have a low level of awareness.

ii. Like many other countries, individuals with mental health problems suffer from stigmatisation and social exclusion which is exacerbated by inadequate community support.

iii. Resources for mental health services and programmes are scarce and this includes specialised services.

iv. The economic burden: common mental illnesses such as depression, anxiety and personality disorders, which account for the bulk of mental health problems, are often left untreated due to the cost constraints.

v. The mental health delivery strategy is skewed towards specialist care for the severely affected, relying on four comparatively well-funded standalone hospitals and a network of services at general hospitals, with less attention to primary care.

vi. Responsibility for mental health care is perceived to be solely the responsibility of the Health Ministry but mental well-being is actually beyond the purview of health as it encompasses many other social factors such as housing, finance, transport, education and employment. At present, the lack of coordination between various intra- and inter- agencies across sectors remains one of the challenges in addressing mental health issues.

The Way Forward

i) Social and Family Inclusion

There needs to be better empowering of families to participate and be more alert especially if any family members or friends are found to demonstrate symptoms of being emotionally troubled or show signs of depression. Upon detecting the signs, help must be offered, and individuals affected need to be brought forward to seek help from health authorities or relevant organisations.

ii) Addressing Stigma

Concerted efforts by the various government and non-governmental agencies must be in place. Mental health stigma needs to be tacked in every part of life and thus, it needs to be addressed in schools, colleges, universities, and the workplace. The media, including social media, plays an important role in disseminating correct and accurate information in the portrayal of mental health to the public in efforts to reduce stigma and to provide timely and accurate information on where to seek help.

Risk factors associated with the community are the stress of acculturation, war and disaster, violence, conflicts in relationships, discrimination, a sense of isolation and abuse.

iii) Distribution of Resources

Resources must be channelled equally towards promotive and preventive efforts rather than being focused on treatment aspects, in efforts to improve awareness and early detection.

iv) Making Mental Health an important agenda in every agency

Inter-sectoral approaches are needed to study the links between mental health, poverty and economic performance and to help provide opportunities to draw more people into education, employment, entrepreneurship and other economic activities in order to improve mental health outcomes.

Suicide

While mental disorders cover a wide range of conditions, suicide is another mental health issue that warrants attention. According to the WHO, an estimated 1 million people commit suicide in a year in the South-east Asia region and 500 people per day do so in the Western Pacific Region. The risk factors for suicidal behaviour are categorized into 3 groups: risk factors associated with the health systems and society, risks linked to the community and risk factors linked to the individual.

Risk factors associated with health systems and society include difficulty in accessing health care services and the essential care needed as well as media that reports and "sensationalize" certain suicide and this phenomenon increases the possibility of further copycat suicides. The stigma against people who seek help for a mental health problem, particularly suicidal behaviour, and uncomplicated availability for means of suicide comes under this category too. Risk factors associated with the community are the stress of acculturation, war and disaster, violence, conflicts in relationships, discrimination, a sense of isolation and abuse. Risk factors linked to the individual are the harmful use of alcohol, mental disorders financial loss, family history of suicide and previous suicide attempts.

The NHMS conducted in 2011, showed that suicidal ideation among Malaysians aged 13 and above was 1.7% (0.3 million); it was 1.1% (0.2 million) for attempted suicide. The 2012 Malaysia Global School–based Student Health Survey (GSHS) that was conducted is a school-based survey of students in Forms 1-5, which are typically attended by students aged 13 - 17 years. A total of 25507 students participated in the Malaysia GSHS with an 89% response rate and revealed a 7-9% prevalence of students who seriously considered attempting suicide during the past 12 months and a 6-7 % prevalence of students who actually attempted suicide one or more times during the past 12 months.

Amongst the influential factors of intentional suicide attempts are the following:

- Previous suicide attempt(s)
- Poor academic performance
- High expectations
- Psychological and mental disorders, especially depression and other mood disorders, schizophrenia, and social anxiety
- Substance abuse and/or alcohol disorders
- History of abuse or mistreatment
- Family history of suicide
- Feelings of hopelessness
- Impulsive or aggressive tendencies
- Financial or social loss
- Relationship loss
- Isolation or lack of social support
- Easy access to methods/means of suicide
- Media influence
- Exposure to others who have committed suicide (such as celebrities)

The National Suicide Registry Malaysia that was launched in 2007 compiled a census of suicidal deaths that occurred in Malaysia via its network of Forensic services till 2011; unfortunately, due to lack of resources, the registry has ceased its reporting.

The Way Forward

The MOH is in the process of developing a National Suicide Registry (NSR), which has been incorporated into the 12th Malaysia Plan.

Decriminalising suicide attempts

In Malaysia, Section 309 of the Penal Code states that "Whoever attempts to commit suicide, and does any act towards the commission of such

offence, shall be punished with imprisonment for a term which may extend to one year or with fine or with both"; the important difference between a real crime and a "cry for help" may not be adequately made here.

Moving forward, the MOH is actively in the process of decriminalising suicide attempts in order to help promote the need to reach out to those in dire need and improve help-seeking behaviour for those with mental health issues that lead to suicide attempts.

Among other initiatives by the MOH to prevent suicide include:

i. In collaboration with the Ministry of Education, the Healthy Mind Programne has been implemented in secondary schools nationwide. Through the Healthy Mind Screening which has been carried out in secondary schools so far, risk factors such as stress, anxiety and depression levels of students can be identified and given appropriate attention as well as intervention by school counsellors. Teachers are also given training to identify the initial symptoms of depression and suicidal behaviour among students through the scope of "Sayangi Nyawa, Hidupkan Harapan" in the Healthy Mind Training Module.

ii. Nationwide Mental Health awareness campaigns addressing Suicide.

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CHAPTER 3:

COMMUNICABLE DISEASE

Globally, there is an increasing burden of communicable and non-communicable diseases. However, developing countries like Malaysia are more vulnerable and exposed due to rapid changes in the demographic profile and socio-economic inequity Malaysia is also facing re-emergence of communicable diseases. The increasing double burden of disease will cause further strain on the already exhausted health care resources and services.

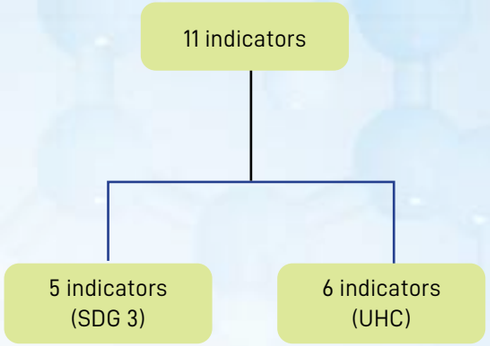
Tuberculosis (TB) remains to be a major public health challenge where the incidence has been increasing from 79 per 100,000 population in 2015 to 81 per 100,000 population in 2019. In 2014, about 14% of immigrants were diagnosed with TB. On the other hand, the percentage of TB infections among HIV patients has decreased since 2008.

In recent years, dengue fever in Malaysia has been rapidly increasing. The incidence of dengue fever was 64.3 per 100,000 population in 2001, doubled to 143.3 per 100,000 population in 2014 and increased further to 244.07 per 100,000 population in 2018. In spite of of the existence of a national vector control program led by MOH at all levels of government, the disease continues to spread.

Indicators

SDG 3.3 aims to combat infectious diseases. Some diseases listed under this SDG include AIDS, TB, malaria, neglected tropical diseases, hepatitis and water borne diseases. Five indicators have been identified to monitor each countries performance. Additionally, WHO has also included six more indicators under UHC, which brings it to a total of 11 indicators to monitor overall performance of communicable diseases (Figure 4).

Figure 4: Indicators of Communicable Diseases monitored by SDGs & UHC



Human Immunodeficiency Virus (HIV)

HIV incidence rate slightly increased from 0.17 to 0.18 from 2015 to 2018. By modelling, these figures are expected to increase more from 2018 to 2030 as mode of transmission of HIV has shifted from needle sharing to sexual transmission. However prevention coverage has not changed as per the shift of transmission mode. Malaysia has always committed on ending AIDS by year 2030 in line with the SDG 3.3.

Malaysia will focus on expanding treatment coverage of HIV to achieve 95% target by year 2030.

Coverage of HIV testing among people living with HIV has reduced from 98% to 86% from 2015 to 2018. Among the challenges MOH is facing in improving test coverage is testing of hard-to-reach key population. In order to expand testing coverage, MOH has initiated collaboration with civil society organizations (CSO) to test key population outside static health facilities e.g. via Community-Based Testing (CBT) and HIV self-testing (HIVST).

Table 27: Number of new HIV Infections (per 1,000 uninfected population), 2015-2018

DISAGGREGATION		2015	2016	2017	2018
Malaysia	Total	0.17	0.17	0.17	0.18
	Male	0.39	0.42	0.43	0.34
	Female	0.08	0.07	0.07	0.01

Source: Disease Control Division, Ministry of Health Malaysia

Among those tested positive, there is steady increase in antiretroviral therapy (ART) coverage from 2015 to 2018 that is from 31% to 55%. Among the challenges faced by health providers include linking people newly diagnosed with HIV to ART services, as well as lost to follow up in the period between HIV testing and treatment of ART. As the way forward, the MOH is committed to further increase ART coverage by:

- Rapid initiation of ART to all people diagnosed with HIV
- Ensure adherence through quality peer support and case management

Data has shown a steady increase in viral suppression rates among people living with HIV on ART from year 2015 to 2018. The highest achievement was in 2018 with 97% of those treated achieving viral suppression (less than 1000 copies / mL). To enhance quality of care and facilitate clinical decision making, the MOH plans to expand point of care testing (POCT) viral load testing to all primary care facilities. Currently POCT are limited to major hospitals and 14 health clinics.

These figures are expected to increase from 2018 to 2030 as mode of transmission of HIV has shifted from needle sharing to sexual transmission

Tuberculosis

Tuberculosis incidence has been increasing from 79 to 81 per 100 000 population 2015 to 2019. The low detection of TB as well as late delay of symptomatic TB patients in seeking TB treatment to healthcare facilities has contributed to further spread of diseases in the community. Inadequate knowledge and awareness regarding TB among the public is also an underlying issue. As a result, MOH has committed to increase case detection of TB by enhancing access to quality TB screening and diagnosis among contacts and selected high risk groups including paediatric population. Initiatives among other are to strengthen TB-HIV and TB co-morbid collaborative activities.

Drug resistant TB continues to affect TB control in Malaysia. MOH captures information on treatment success rate for patients treated for Multidrug-Resistant Tuberculosis (MDR-TB) as a proxy to Second-Line Treatment Coverage among MDR-TB Cases. In 2015 this proxy indicator rate was 42% whereas in 2016 this increased to 51%. There are still important challenges that need attention in MDR TB cases such as:

- Delay in diagnosis of MDR-TB
- Treatment adherence (MDR-TB treatment longer duration, intolerant with side effect of second line medication)
- MDR-TB cases were associated with high mortality rate

MOH has committed to increase case detection of TB by enhancing access to quality TB screening and diagnosis

Malaria

Malaysia declared its intention to eliminate malaria in 2011 with the goal of achieving zero indigenous human malaria transmission by 2020. The number of indigenous human malaria in Malaysia has declined from 4045 cases in year 2011 to 85 cases in 2017. Malaysia has now recorded zero indigenous malaria case for two consecutive years since 2018. Malaysia must maintain this status until 2020 before we could submit formal request for official certification of malaria elimination in 2021.

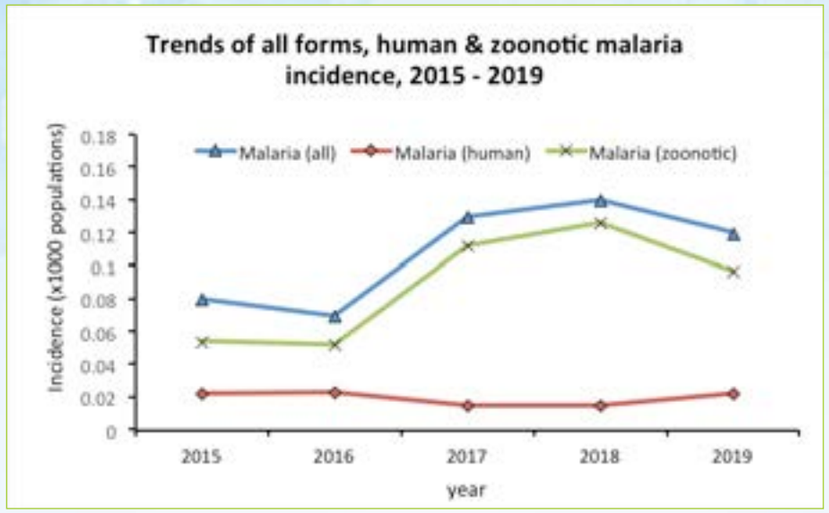
However, when it comes to all forms of malaria, the incidence increased from 0.08 per 1000 populations in 2015 to 0.12 per 1000 populations in 2019. This was largely contributed by the increase in incidence of knowlesi malaria from 0.05 per 1000 populations in 2015 to 0.097 per 1000 population in 2019 (Figure 2) Knowlesi malaria contributed to 82% of the total malaria cases reported in 2019. The sharp increase of knowlesi malaria in Malaysia could be attributed to improved diagnostic capacity (PCR) to differentiate knowlesi malaria from other human malaria. Changes in land use patterns for agriculture and infrastructure development create increased opportunity for spill over of infections to humans through closer associations with natural reservoir hosts

Table 28: Tuberculosis Incidence Rate (per 100,000 population), 2015-2018

Disaggregation		2015	2016	2017	2018
Malaysia	Total	79	81	81	79
	Male	95.9	116	112.9	99.8
	Female	60.8	51.8	53.6	58.4

Source: Disease Control Division, Ministry of Health Malaysia

Figure 5: Trends of all forms, human & zoonotic malaria incidence, 2015 - 2019



Source: Disease Control Division, Ministry of Health Malaysia

or access to infected vectors. Despite the increase in incidence of all forms of malaria, the mortality rate has been maintained at 0.02 per 100,000 populations from 2015 to 2019.

The biggest threat to indigenous malaria elimination initiative in Malaysia is importation of malaria from endemic countries either from influx of foreign workers or Malaysian workers returning from endemic countries. Foreign workers entering Malaysia via the registered foreign workers recruitment agencies are routinely screened for malaria before permitted to work in Malaysia. However, a sizeable proportion of these workers enters Malaysia via the porous border of the country and recruited without undergoing malaria screening.

Being a tropical country, anopheles mosquitoes are abundant in most parts of the country making malaria vulnerable to re-introduction of malaria in previously malaria free areas. In 2019, 620 (15.7%) out of the 3941 all types of malaria originated from source of infection outside Malaysia. These cases resulted in introduction of infection to 96 local people. Apart from the emergence of knowlesi malaria, the elimination programme finds that it has to compete with higher burden diseases such as dengue for resources which could impede the implementation of surveillance activities and preventive vector control. As the disease burden decline and healthcare workers have less opportunity to manage malaria cases, the

Despite the increase in incidence of all forms of malaria, the mortality rate has been maintained at 0.02 per 100,000 populations from 2015 to 2019.

Table 29: Malaria Incidence Rate (per 1,000 population)

DISAGGREGATION		2015	2016	2017	2018	2019
Malaysia	Total	0.08	0.07	0.13	0.14	0.12
	Male	0.12	0.12	0.2	0.22	0.19
	Female	0.02	0.03	0.05	0.05	0.04

Source: Disease Control Division, Ministry of Health Malaysia

programme finds it harder to sustain level of competency among health staffs.

MOH launched a 10-year National Strategic Plan (NSP) in 2011 with the goal of eliminating indigenous human malaria by 2020. Therefore, MOH Malaysia will conduct a programme review and develop a Plan for Prevention of Malaria Re-establishment 2021 – 2025, which is one of the key requirements for malaria elimination certification by WHO. Greater emphasis will be given to strengthening surveillance to reduce importation of malaria. MOH will continue support innovative approaches for malaria prevention and control, such as inter-agencies collaboration between MOH and other relevant government and private agencies.

For zoonotic malaria, MOH has strengthen the knowlesi malaria surveillance by developing capacity for molecular diagnosis (PCR) of knowlesi malaria covering the whole country in 2008. The National Malaria Treatment Guidelines has been updated and uses universal artemisinin-based combination treatment (ACT) for all species of malaria including knowlesi. A high level National Technical Committee on Control of Zoonotic Malaria tasked to develop an NSP for control of knowlesi malaria has been established.

Hepatitis

There has been an increased notification rates of Hepatitis B. Hepatitis B vaccine was introduced in the National Immunisation Programme (NIP) in 1989. This vaccine was given in a three-dose schedule at birth, 1 month old and then at 6 months. In 2011, Malaysia was certified by WHO as having achieved Hepatitis B control among children with prevalence of 0.3% (target <1%). The new target set under the 2030 Agenda is to achieve Hepatitis B elimination of <0.1% prevalence among children by 2030. True incidence of Hepatitis B is unknown, as no nationwide Hepatitis B registry available. The main burden of Hepatitis B is amongst adults, especially those born before 1989; prior to the introduction of Hepatitis B vaccine in the NIP.

The National Strategic Plan on Hepatitis B and C 2019 – 2023 outlines five key strategic areas namely:

- Strategy 1: Advocacy, communication and social mobilisation
- Strategy 2: Quality and coverage of prevention programme.
- Strategy 3: Access to diagnostic, treatment and care services
- Strategy 4: Quality strategic information, monitoring and evaluation, and research
- Strategy 5: Capacity building and enhancement

There are 4 targets that MOH needs to achieve by 2030. They are:

- To diagnose 90% of the population living with viral hepatitis
- To reduce the number of new cases of viral hepatitis by 90%
- To reduce mortality due to viral hepatitis by 65%
- To treat 90% of the population in need of treatment

The new target set under the 2030 Agenda is to achieve Hepatitis B elimination of <0.1% prevalence among children by 2030.

Dengue

Dengue is the most common arthropod-borne viral infection which is endemic in tropical and sub-tropical countries. In 2019, there was a global surge in dengue cases. A similar rise in the number of dengue cases has plagued the Association of Southeast Asian Nations (ASEAN) region. At domestic level, Malaysia recorded 61.4 % increase in dengue cases and 23.8% increase in number of dengue death compared to previous year. Despite the increase in the number of dengue cases and deaths in 2019, Malaysia consistently recorded annual reduction in Case Fatality Rate (CFR) for the last 5 years. The dengue CFR declined from 0.28% in 2015 to 0.14% in 2019. Every dengue death in Malaysia is reviewed by the State Dengue Mortality Review Committee which is chaired by State Director of Health and subjected to 4 monthly review by the National Dengue Mortality Committee chaired by Deputy Director General (Medical) to identify shortfalls and remedial measures.

Lymphatic filariasis

Malaysia started the Lymphatic Filariasis Elimination Programme (LFEP) in 2001. This programme aimed to interrupt transmission of LF and to alleviate morbidity among those already infected with LF. In 2003, mapping of LF endemicity was done in which eight states (Sabah, Sarawak, Perak, Johor, Kedah, Kelantan, Terengganu and Pahang) were identified as endemic states.

Mass Drug Administration (MDA) was conducted throughout the country in 2004 with five (5) annual cycles until 2008 using the two drugs therapy; Diethylcarbamize (DEC) and Albendazole. MDA drug treatment coverage for Malaysia increased from 84.3% in 2004 with an improving coverage yearly up to 95.1% in 2008. However, several additional cycles were conducted since 2012 to improve MDA coverage and also due to failure to interrupt local transmission.

Ongoing surveillance activities in Sabah, Sarawak and among *Orang Asli* found out 78 hotspot localities with high filarial antibody prevalence. Hence, the LF MDA campaign using new combination called triple drug therapy (DEC, Albendazole and Ivermectin) is the new strategy which was adopted to accelerate the elimination.

CHAPTER 4:

HEALTH SYSTEM AND CAPACITY

Human capital and health improvement programmes are of central importance towards sustainable development and economic advancement in any country. In Malaysia, the health care system has evolved from traditional remedies to meeting the emerging needs of the population.

Since the Independence of Malaysia in 1957, there has been major reorganization of health care services within the country. The initial reorganization started at the government primary health care services and has accelerated since the Alma Ata Declaration in 1978. In Malaysia, the Ministry of Health is the main provider of health care services to the general public. The organizational structure of the MOH has three levels, Federal, State and District, which are decentralized to improve efficiency. Each hierarchical level determines the extent of authority, information flow, accountability and supervision. This practice encompasses all aspects of care namely preventive, promotive, curative and rehabilitative. The primary aim is to produce a greater network of physical facilities, equity, accessibility and utilization of health care resources. At the same time, National Referral Centres were established to deliver specialized care to reinforce the essential care provided in health clinics.

Over the past decade there has been an explosion of tertiary level specialized care to fulfil the requirements of the population. Tertiary care focuses on the curative model, which is doctor and illness focused. This is often expensive, fragmented and institutionally focused and inappropriate for the bulk of health consumers. Within the current era, health care is changing towards wellness services as against illness services. This service includes a lifetime health plan that focuses on keeping the child and family well. This

Tertiary care focuses on the curative model, which is doctor and illness focused.

offers greater prominence to preventive issues and takes on healthier lifestyles by choices with risk prevention. The health care providers also needn't function as controllers but act as facilitators or partners with health consumers.

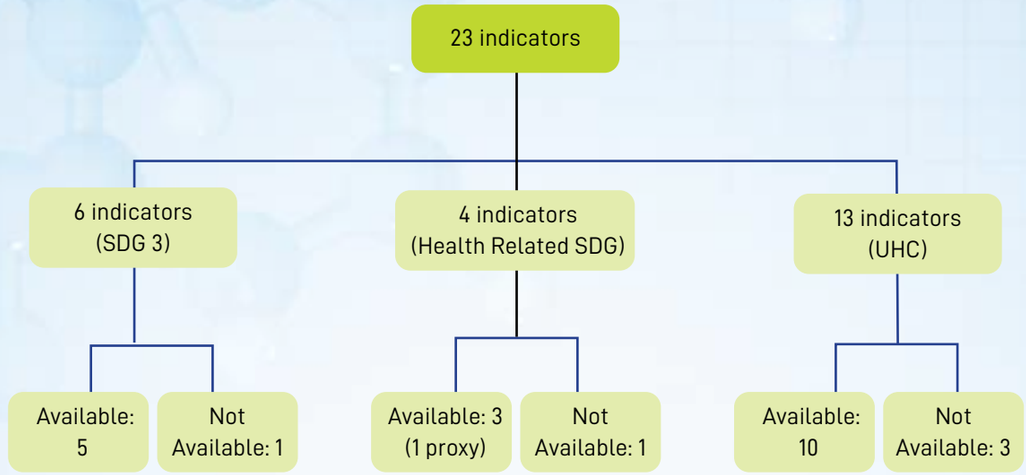
Indicators

The main SDG targets relating to universal health coverage (UHC) and health systems are Targets 3.8 (UHC), 1.a (resource mobilization), 3.b (research and development, and access to essential medicines and vaccines), 3.c (health workforce), 3.d (international health regulations) and 17.19 (statistical capacity-building).

The indicators for UHC track whether people in need of health services receive them (service coverage) and whether they incur financial hardship in doing so (financial protection). Service coverage is tracked using 16 tracer indicators, which are compiled into an index that ranges between 0 and 100.

There are a total of 23 indicators placed under this theme. Below (Figure 6) is the indicators distribution according to SDG 3, Health related SDG and Universal Health Coverage (UHC).

Figure 6 : Organogram of Data Availability for Health System



There are 20 indicators out of 21 indicators with available data. Availability of indicators according to SDG 3, Health related SDG and UHC are also shown in the above Figure.

SDG 3.8: To achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

World Health Organisation (WHO) describes that the goal of Universal Health Coverage, is to ensure everyone obtains the health services they need without suffering financial hardships when paying for them. It is thus a critical component of sustainable development and poverty reduction, and a key element to reduce social inequities.

Malaysia has been acknowledged globally for a high performing health system based on a well-trained workforce, excellent infrastructure and quality service delivery. It has a low incidence of catastrophic and impoverishing health care expenditure (SDG 3.8.2). According to the latest available data, less than 1% of the population spent more than 25% of their household budget for health.

Coverage of essential health services is defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population. The indicator 3.8.1 is an index reported on a unit-less scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage. The tracer indicators are as follows, organized by four components of service coverage:

i. Reproductive, maternal, newborn and child health
ii. Infectious diseases
iii. Non-communicable diseases
iv. Service capacity and access

In 2017, Global Monitoring Report on Tracking Universal Health Coverage showed that Malaysia scored 73% in the UHC service coverage index. Malaysia has managed to achieved this by

having good healthcare workers distribution, and widespread of healthcare facilities. Currently, more than 80% of the population live within 5km radius of the health facilities. Up till 2018, Malaysia has 2800 health clinic for its 32 million people. These clinics provide a wide range of services including outpatient, maternal and child health, point of care test, emergency care and extended scope are the adolescent health, elderly health, disable health, and school health. While areas where having physical facilities are currently not yet feasible, the Ministry has established mobile health teams to ensure equity. In 2018, there are a total of 239 mobile health teams providing service via land (187 teams), water (40) and air (12). However, as UHC is not just a destination but rather a journey, among the challenges that Malaysia faced in order to sustain UHC are the increasing disease burden involving communicable diseases (CDs) and NCDs, emerging ageing population and increasing workload in public facilities. Despite all the challenges, the government is committed to achieving UHC especially for the vulnerable and underserved people within the population and this would be done through the Peka B40 programme for the low income group.

In 2017, Global Monitoring Report on Tracking Universal Health Coverage showed that Malaysia scored 73% in the UHC service coverage index.

3.d.1 Average of 13 International Health Regulations (2005) core capacity scores

Malaysia is one of the countries in the Western Pacific Region, which continues to face health security risks from emerging diseases and public health emergencies. The risk of future events is likely to become more complex due to a changing social, environmental and economic landscape and forecasts of significant climate change that will potentially magnify the devastating health, political and economic impacts of these events. Effective management of emergency events is required to minimize its health, economic, social and political impact. Health security threats, particularly outbreaks of emerging diseases, can rapidly expand to affect multiple countries, highlighting the need for collective preparedness and response, and a common strategic direction nationally, regionally and globally. In order to prevent, control and respond to the continuous and inevitable health security threats, Malaysia agreed to implement the International Health Regulations (IHR 2005). Malaysia has complied with IHR core capacity requirements since it entered into force on 15 June 2007.

A Joint External Evaluation (JEE) was conducted by a multisectoral team of experts coordinated by the WHO in October 2019. The team had reviewed the country's International Health Regulations (IHR)'s core capacities across 19 technical areas and 49 specific indicators. The 19 technical areas covered by the assessment are arranged according to core elements, including Malaysia's ability to prevent and reduce the likelihood of outbreaks and public health hazards defined by the IHR. The team of experts had scored Malaysia's IHR capacity at 92% in 2019.

Expenditure on Health

The total expenditure on health in ringgit Malaysia shows a gradual increase over the years. In 2017, the expenditure from both public and private healthcare are amounted to RM57,361 million as compared to RM52,609 million in 2015. The Malaysia's public health system is financed mainly through general revenue and taxation collected by the federal government, while private sector is funded through private health insurance and out-of-pocket payments from consumers. The current health expenditure has remained predominantly by general government and compulsory scheme, representing 53.43% and 51.98% of total current expenditure of health in 2015 and 2017 respectively.

The Malaysia's public health system is financed mainly through general revenue and taxation collected by the federal government,

Patient Experience

Data for this indicator is as well are collected only from hospitals under the Ministry of Health Malaysia. Malaysia has had commendable achievement with regard to patient experience in its facilities, with good access to health services coverage, both by the government sector and private sector. Meeting the current generation's high expectations and demands is a challenge. Sustaining the current achievements by endeavouring t achieve a high level of Patient-Centred services, which is a key element of high quality healthcare

With the internet, patients and their families nowadays have easy access to medical and health information. They are more knowledgeable and aware of the latest developments in Medicine and thus, meting their heightened expectations can pose a formidable challenge to healthcare services.

CHAPTER 5:

ENVIRONMENTAL HEALTH & OTHER DETERMINANTS OF HEALTH

Urbanization is a result of population migration from rural areas in addition to natural urban demographic growth. Rapid, unplanned and unsustainable patterns of urban development are making developing cities turn into an emerging environmental and health hazards. Issues ranging from solid waste disposal, provision of safe water and sanitation, and injury prevention, to the interface between urban poverty, environmental and health due to growing of urban population results in public health playing an increasingly important role.

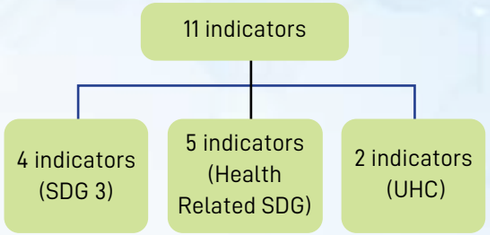
Sustainable Development Goals (SDG) and Universal Health Coverage (UHC) have adopted these problems to be underlined as their goals and indicators. Targets in Goal 11 do specifically mention to reduce the adverse per capita environmental impact of cities by paying special attention to air quality and other waste management. Goal 3, in their target 3.9 mentions to substantially reduce the number of deaths and illness from hazardous chemicals including air, water and soil pollution as well as contamination. This is supported by the targets for Goal 6 which mentioned to achieve universal and equitable access to safe and affordable drinking water as well as sanitation and hygiene for all. The other targets were regarding road traffic deaths, impact of natural disasters and usage of clean technology.

This chapter is focused on a few pollution or hazards that are caused by urbanization; air, water and soil contamination, chemical hazards, natural disasters and road traffic death. Indicators have been chosen from the list of SDG UHC indicators by WHO, which is a total of 88, into its most relevant topic to facilitate this report.

Indicators

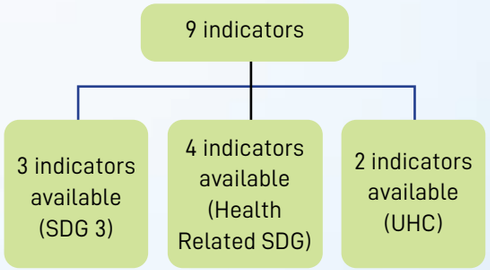
There are a total of 11 indicators placed under this theme. Below (Figure 7) are the indicators according to SDG 3, Health related SDG and Universal Health Coverage (UHC):

Figure 7 : Indicators in the Environmental Health & Other Determinants of Health



For Malaysia, there are 9 indicators, out of the 11 indicators, with available data. Availability of indicators according to SDG 3, Health related SDG and Universal Health Coverage (UHC) are shown below (Figure 8).

Figure 8 : Availability of data for Environmental Health & Other Determinants of Health



Air Pollution

Introduction

In 2006, ambient (outdoor) air pollution in both cities and rural areas had been estimated to cause 4.2 million premature deaths globally. This is due to the exposure to small particulate matter of 2.5 microns or less in diameter (PM 2.5) which leads to cardiovascular and respiratory diseases and cancers.

In 2016, WHO estimated that approximately 58% of outdoor air pollution-related premature deaths were due to ischaemic heart disease and strokes, while 18% of deaths were due to chronic obstructive pulmonary disease and acute lower respiratory infections respectively, and 6% of deaths were due to lung cancer.

Other than ambient air pollution, household (indoor) air pollution caused 3.8 million premature deaths globally in the year 2016. Indoor smoke from cooking and heating homes with biomass fuels and coal has caused serious health risk to 3 billion people, both in urban and rural areas and household air pollution was also a major source of outdoor air pollution.

Reducing levels of the global air pollution is one of the 17 Sustainable Development Goals. Goal 11 states: *"...By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management."*

In 2016, WHO estimated that approximately 58% of outdoor air pollution-related premature deaths were due to ischaemic heart disease and strokes

Malaysia has 2 main causes that lead to the high levels of air pollution. The first is air pollution caused by vehicles, especially from the common car due to its highest levels of car ownership per person in the world. This has led to very high levels of carbon monoxide pollution in all major cities in Malaysia.

Secondly is the trans-boundary pollution that is caused by the burning in Indonesian to provide land to plant palm oil. Indonesia is the world's largest producer of palm oil and much of its

Table 30: WHO air quality guidelines and interim targets for particulate matter: annual mean concentration

	PM_{10} ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	Basic for the selected level
Interim target -1 (IT-1)	70	35	These levels are associated with about a 15% higher long-term mortality risk relative to the AQG level.
Interim target -2 (IT-2)	50	25	In addition to other health benefits, these levels lower the risk of premature mortality by approximately 6 % (2-11%) relative to the IT-1 level
Interim target -3 (IT-3)	30	15	In addition to other health benefits, these levels reduce the mortality by approximately 6 % (2-11%) relative to the IT-2 level
Air quality guide-line (AQG)	20	10	These are the lowest levels at which total, cardiopul-monary and lung cancer mortality have been shown to increase with more than 95% confidence in response to long-term exposure to PM

Source: WHO air quality guidelines, 2005

recent high levels of economic growth are based on this industry. At certain times of the year and with given weather conditions, the smoke from these fires drift across the international boundaries into Malaysia.

Indicators

SDG 11.6.2: Annual mean concentrations of fine particulate matter (PM 2.5 & PM 10) in cities (population weighted)

The 2005 *WHO Air quality guidelines* offer global guidance on thresholds and limits for key air pollutants that pose health risks. The Guidelines indicate that by reducing particulate matter (PM_{10}) pollution from 70 to 20 micrograms per cubic metre (µg/m), countries can cut air pollution-related deaths by around 15% (Table 30).

SDG indicators require both PM10 and PM 2.5 to be measured. Currently, Malaysia only has data for PM10 from year 2015 to 2017. Figures had shown Malaysia's annual mean concentration of fine particulate matter range from 35 to 57 $\mu g/m^3$.

The ambient air quality measurement in Malaysia is described in terms of Air Pollutant Index (API). Instead of using the actual concentration of air pollutants, API is easily understood and ranges of value as a means of reporting the quality of air and reflects the effect on human health ranging from good to hazardous.

SDG 7.1.2: Proportion of population with primary reliance on clean fuels and technology

The use of solid fuels and kerosene in households is associated with increased mortality from pneumonia and other acute lower respiratory diseases among children, as well as increased mortality from chronic obstructive pulmonary disease, cerebrovascular and ischaemic heart diseases, and lung cancer among adults.

According to data taken from Global Health Observatory (GHO), more than 95% of Malaysian population primarily rely on clean fuels and technology for their cooking since 2000 to 2018. However, Malaysia has yet to collect local data for this indicator.

SDG 3.9.1: Mortality rate attributed to household and ambient air pollution

Ambient air pollution results from emission from industrial activity, household, cars and trucks, which are a complex mixture of air pollutants that are harmful to health. Of all of these pollutants, fine particulate matter has the greatest effect on human health. Polluting fuels is understood as wood, coal, animal dung, charcoal and crop wastes, as well as kerosene.

Globally, indoor and outdoor air pollution caused an estimated 7 million death or one in eight deaths in 2016. According to GHO data, age-standardized ambient and household air pollution attributable death rate in 2016 for Malaysia was 47 per 100,000 population. Malaysia has yet a mechanism to collect and calculate this indicator.

Water, Sanitation and Hygiene (WASH)

Introduction

Since 1990, the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) has reported country, regional and global estimates of progress on drinking water, sanitation and hygiene (WASH).

In the 2019 report, it was estimated that 29% of the global population or 2.2 billion people lacked "safely managed drinking water"– meaning water at home, available, and safe, based on data in year 2017.

Whereas 55% of the global population or 4.2 billion people lacked safely managed sanitation" – meaning access to a toilet or latrine that leads to treatment or safe disposal of excreta (2017) and 40% of the global population (3 billion people) did not have access at home to a handwashing facility with soap and water.

Improved drinking water sources include the following: piped water into dwelling, yard or plot; public taps or standpipes; boreholes or tubewells; protected dug wells; protected springs; packaged water; delivered water and rainwater. A water source is considered to be 'located on premises' if the point of collection is within the dwelling, yard, or plot.

Whereas improved sanitation facilities include flush or pour flush toilets to sewer systems, septic tanks or soakaway pits, ventilated improved pit latrines, pit latrines with a slab, and composting toilets. Safely disposed in situ; when pit latrines and septic tanks are not emptied, the excreta may still remain isolated from human contact and can be considered safely managed.

For hygiene, handwashing with soap is widely agreed to improve health outcomes. Most practical approach leading to reliable measurement of handwashing in national household surveys was observation of the place where household members wash their hands and noting the presence of water and soap at that location. This provides a measure of whether households have the necessary tools for handwashing and is a proxy for their behaviour.

SDG, in their Goal 6, mentions to ensure availability and sustainable management of water and sanitation for all. Whereas target 3.9 talks on mortality derived from exposure to unsafe water, sanitation and hygiene services.

Indicators

SDG 6.1.1: Proportion of population using safely managed drinking water services

The proportion of population using piped treated water services in Malaysia has increased from 95.5% in 2015 to 96.7% in 2018. Main data custodians are KASA (Ministry of Environment & Water), National Water Services Commission (SPAN) and other State Authorities not governed by the Water Services Industry Act (WSIA) 2006. All data are based on connections to reticulated public water supply systems. As MOH contributes only 10%, there is a need for the lead/main agency (eg. SPAN/KASA) to be involved and to achieve the indicator's target.

Despite Malaysia achieving more than 95% of its population using safely managed drinking water, there is still lack of this service in rural areas compared to urban areas. Urban and rural categorization is based on population

Neither KASA nor The Ministry of Rural Development (KPLB) have comprehensive programmes or plans to provide safe drinking water to rural communities

size. Neither KASA nor The Ministry of Rural Development (KPLB) have comprehensive programmes or plans to provide safe drinking water to rural communities. The decentralized water supply systems introduced by KPLB in the 10th and 11th Development Plans have not been sustainable.

Moving forward, the gaps between rural and urban areas in terms of safely managed drinking water services need to be reduced. A well-structured and long-term plan to provide treated water (reticulated or decentralized) to rural communities need to be developed by KPLB and the Indigenous People Development Department (JAKOA) in the coming Development Plans. KASA and SPAN have important roles to play in this aspect as they have the technical expertise in this field to support KPLB and JAKOA. Emphasis must also be given to the operation and maintenance of decentralized water supply schemes in order to be sustainable.

SDG 6.2.1: Proportion of population using safely managed sanitation services including hands washing facilities with soap and water (%)

Baseline data was taken from Household Income and Basic Amenities Survey that was conducted in 2016 by the Department of Statistics Malaysia (Table 2).This survey is conducted twice in every five years.

Nevertheless for MOH to get annual data, there is no accurate, overall and complete data available. Main data custodians are KASA, SPAN, Sabah Sewerage Services Department, Sarawak Sewerage Services Department and other state authorities not governed by WSIA.

As there is no rural data available from the various main agencies listed above, the rural coverage of sanitary latrines from MOH is adopted as a proxy data for this indicator.

Based on these data, safely managed sewerage services for rural areas is still lacking compared to urban areas. KPLB that is responsible for providing infrastructures to rural areas did not include sewerage services and solid waste management in its scope initially. The Sabah Sewerage Services Department and the Sarawak Sewerage Services Department are responsible for providing sewerage services for urban areas in their respective states only. A more comprehensive rural development policy was launched in 2019 whereby sewerage services and solid waste management are included in the development scope of KPLB.

Moving forward, as stipulated in the Rural Development Policy, KPLB and JAKOA will have to play major roles in addressing sewerage issues and assisted by the technical expertise of KASA , SPAN and Sewerage Services Department (JPP). The scope should also cover the rural areas of Sabah and Sarawak, and indigenous communities. A comprehensive national sewerage plan for rural areas needs to be drawn up for the wellbeing of rural communities and to make sure no one is left behind. Emphasis should also be given to the operation and maintenance of the sewerage systems in order to be sustainable.

SDG 3.9.2: Mortality rate attributed to exposure to unsafe water, sanitation and hygiene (wash) services (per 100 000 population)

Safe water and sanitation has been made available to more than 95% of the population. However, unsafe hygiene practices in certain populations and in certain areas, continue to contribute to the consistent mortality rate in Malaysia and the effect can be seen by the number of mortality cases due to diarrhea, intestinal nematodes infection and protein-energy malnutrition.

Currently, the data reported in Malaysia for this indicator are obtained from the Hospital

Records (Ministry Of Health facilities) and not from Department Of Statistics Malaysia (DOSM). Figures show that the mortality rate range between 0.41 to 0.62 from year 2015 to 2018.

Ministry of Health has put efforts to enhance education in safe hygiene practices especially to specific population groups who are affected most by these diseases.

Chemical Hazards

Introduction

The use of chemicals has increased dramatically due to the economic development in various sectors including industries, agriculture and transport. Chemicals may have immediate, acute effects, as well as chronic effects, often resulting from long-term exposures.

Chronic, low-level exposure to various chemicals may result in a number of adverse health outcomes, including damage to the nervous and immune systems, impairment of reproductive function and development, cancer and organ-specific damage.

Measuring how many people die each year from unintentional poisoning provides an indication of the extent of inadequate management of hazardous chemicals and pollution, and of the effectiveness of a country's health system. Cause-of-death statistics help health authorities determine their focus for public health actions.

INDICATOR

SDG 3.9.3: Mortality rate from unintentional poisoning (per 100 000 population)

Mechanism of data collection at the national level has yet to be established. For the time being, data reported only covers mortality cases from government hospitals and using proxy indicator of mortality rate due to accidental poisoning by and exposure to obnoxious substances. Deaths are taken from ICD 10 coding X40-X49.

Figures show data ranging between 0.00 to 0.27 death per 100 000 population from year 2015 to 2018. Moving forward, MOH will conduct the next burden disease study to collect this data.

Natural Disasters

Introduction

Worldwide, each year natural disasters kill around 90 000 people and affect close to 160 million people. Natural disasters include droughts, tsunamis, landslides, hurricanes, wildfires, floods, earthquakes, heat waves and volcanic eruptions. These disasters have an immediate impact on human lives and often result in the destruction of the biological, physical and social environment of the affected people, thereby having a longer-term impact on their survival, as well as health and well-being.

Malaysia has experienced 51 natural disaster

Worldwide, each year natural disasters kill around 90 000 people and affect close to 160 million people.

events in the last two decades (1998-August 2018). During this time period, 281 people had died, over 3 million people were affected, and disasters caused nearly US$2 billion (RM 8 billion) in damages. Malaysia has an INFORM 2019 (Index for Risk Management) for Natural Hazard and Exposure risk of 3.4/10. In 2015, the National Disaster Management Agency (NADMA), in the Office of the Prime Minister, became the lead disaster management agency for regional and international disaster management efforts. Early warning system for earthquake, flood, and tsunami including Short Message Service (SMS) capabilities and other technologies are used to alert communities of impending disaster risk.

Indicators

SDG 1.5.1/11.5.1/13.1.1: Number of death, missing person and directly affected person attributed to disasters per 100 000 population

Malaysia geographically is in a stable region, outside the Ring of Fire and south of major typhoon paths. However, it is often affected by other natural disasters such as floods, landslides, haze, earthquakes and other man-made disasters, as well as some rare cases of droughts and tsunami. Annually, floods account for the most frequent and significant damage and are responsible for a significant number of human lives lost, disease epidemics, property and crop damage, and other losses.

Based on data from 2015 to 2017 by Department of Statistics Malaysia, the number of deaths attributed to disasters range between 5 to 31 people and the rate is fairly stable at 0.1 each year. Nevertheless the number of affected persons increased year by year from 2015 to 2017.

In 2015, Sabah was the only state that recorded deaths for this indicator. Whereas in 2016, Kelantan and Sarawak recorded 3 and 2 death respectively. The highest number of death was recorded in 2017 with total of 31 death in Malaysia.

Road Traffic Injury and Death

Introduction

Every year, globally approximately 1.35 million people die as a result of road traffic crashes. Between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability as a result of their injury. Road traffic injuries cause considerable economic losses to individuals, their families, and to nations as a whole. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off work or school to care for the injured. Malaysia is among the countries with particularly high road traffic mortality rates, at an estimated 24 deaths per 100 000 population, in 2013.

Among listed risk factors of getting involved in road traffic injuries and death are speeding, driving under the influence of alcohol and other psychoactive substances, non-use of motorcycle helmets, seat-belts and child restraints, distracted driving, unsafe road infrastructure, unsafe vehicles, inadequate post-crash care and last but not least, inadequate law enforcement of traffic laws.

Indicators

UHC: Seat-belt wearing rate

Seatbelt wearing has been one of the proven road safety interventions. It has been found to effectively reduce the number of death and severe injury cases among car occupants by almost 50% for both driver and front passenger. Meanwhile, for rear seatbelt, it has been reported to effectively reduce the number of fatalities among rear passengers by 44%.

Seatbelt wearing is also the cheapest way to reduce road crash fatalities for car drivers and passengers. Seatbelt wearing is one of the interventions initiated by the government in many countries to reduce deaths and severely injuries due to road traffic crashes. Many countries, including Malaysia have enforced safety seatbelt wearing for vehicle occupants.

Based on data from Malaysian Institute of Road Safety Research (MIROS), from the year 1993 to 2008, the compliance rate among drivers had increased from 40.0% to 79.3%, and from 56.0% to 69.4% for front passengers. With the continuous and concerted efforts carried out by various agencies, the compliance rate shows further improvement.

A study conducted in 2008 revealed that public will only use rear seatbelt if the law is enforced. Roadside observations confirmed the above statement where in 2008 only 7% of rear passengers used seatbelt, even though 70% of public had good knowledge on the usefulness of seatbelt use. When the law on rear seatbelt use took effect on 1st Jan 2009, the compliance rate jumped up to 38% in January and 47% in February 2009. However, the compliance rate started to steadily decline the following months until it reached 13.5% at the end of 2009 and remained at a low level in the following years.

Strong political will and high commitment are required to ensure high rate of safety seatbelt wearing. As a way forward, collaboration to carry out initiatives, such as to encourage vehicle manufacturers to install "seatbelt reminder" for front and rear seats, to ensure seatbelt fitting check as a mandatory item in all vehicle inspections conducted by technical inspection provider and to enforce implementation of RS

Strong political will and high commitment are required to ensure high rate of safety seatbelt wearing. As a way forward, collaboration to carry out initiatives, such as to encourage vehicle manufacturers to install "seatbelt reminder" for front and rear seats.

Management (ISO 39001:2012), must be done with the transportation industry to elevate the awareness of road users.

UHC: Motorcycle helmet wearing rate

Among the vehicles that share the road, motorcycles seem to be a common vehicle used across most low- and middle-income countries (LMICs) because they are affordable, convenient, less regulated, fuel efficient, and faster than other types of vehicle.

The government of Malaysia had introduced regulations on motorcycle helmets in 1973, yet 40 years on, we are still recording high numbers of head injuries among motorcyclists. A helmet can reduce risks of injuries by 72 per cent and the probability of death by 39 per cent.

There are standardization of specification for helmets that is approved by Standard and Industrial Research Institute of Malaysia (SIRIM). Nevertheless, the usage of the right and certified product is still low.

Malaysia only has data for 2014 for motorcycle helmet wearing rate. Figures have shown that 91.2% of riders were compliant to helmet wearing and 88.9% of all riders wears helmet on their own for protection.

SDG 3.6.1: Road traffic mortality rate (per 100 000 population)

Data for road traffic mortality rate in Malaysia has shown fluctuating figures between 19.4 to 22.6. Data shows that Negeri Sembilan remained the highest number of mortality due to road traffic injury from year 2016 to 2018.

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
Progress Report for Malaysia 2016 – 2019 & Seminar Proceedings

SEMINAR PROCEEDINGS

Seminar on Health in the Sustainable Development Goals (SDG) and Universal Health Coverage (UHC)

Synopsis

The Planning Division of the Ministry of Health Malaysia as the Secretariat to SDG & UHC for the Health sector held a Seminar on Health in the Sustainable Development Goals (SDG) and Universal Health Coverage (UHC). It was held on 11th August 2020 at the Institute National Health (NIH), Setia Alam in collaboration with the World Health Organization (WHO).

The objectives of this seminar were:

1. to present the performance of SDG UHC for the Health sector to relevant stakeholders and
2. to obtain additional input on issues, challenges as well as suggestions in achieving the SDG UHC targets.

A total of 115 participants attended the seminar comprising of various agencies such as the Department of Statistics Malaysia (DOSM), Medical Relief Society Malaysia (MERCY Malaysia) and various divisions from the Ministry of Health. It was also attended by Dr Jacqueline Lo Ying-Ru, WHO representative for Malaysia, Brunei & Singapore and Professor Pascale Allotey (Director, United Nation University - International Institute for Global Health.

The seminar acts as a platform to discuss the performance of the national health system and get additional input, comments and suggestions on how to improve the achievements of SDG & UHC targets in Malaysia.

The presentation session began with a Presentation Overview of SDG in Health Sector & UHC in Malaysia by the Director of Planning Division, Yang Berusaha Dr Nordin Saleh and then the opening event was officiated by the Deputy Director General of Health, Research and Technical Support (P&ST), Dr. Hishamshah bin Mohd Ibrahim.

A total of five (5) themes were presented discussing the achievements, issues and challenges for the indicators listed within the UHC SDG framework. The five (5) themes are namely Reproductive, Maternal, Neonatal & Child Health, Health System & Service Capacity, Communicable Diseases, Urban & Environmental Health and Non Communicable Diseases & Mental Health.

Feedback, views and suggestions for improvement measures in achieving the SDG UHC targets from participants were recorded and are reported in this Seminar Proceedings.

Dr Nordin bin Saleh, Director of Planning Division delivering his presentation at the Seminar.

Dr Fazilah binti Shaik Allauddin (left), Dr Ying-Ru Jacqueline Lo (middle) and Dr Nordin bin Saleh (right) at the Seminar.

Dr Mahani binti AHmad Hamidy (left) and Dr Rozita Halina binti Tun Hussein (right) during the moderated discussion session.

Dr Hishamshah bin Mohd Ibrahim delivering his speech at the Seminar.

In September 2015, the then Prime Minister has reaffirmed Malaysia's commitment to support and implement the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs)

Opening Speech by Deputy Director-General of Health, Ministry of Health, Malaysia

Assalamu'alaikum warahmatullahi wabarakatuh and a very good morning to Dr Jacqueline Lo Ying-Ru, WHO Representative of Malaysia, Brunei and Singapore, Professor Pascale Allotey, Director of United Nation University – International Institute for Global Health and Mr Rushdi Abdul Rahim, Senior Vice President of MIGHT.

Sustainable Development Goals (SDGs) is the continuation of Millennium Development Goals (MDGs) that ended in 2015. The 2030 Agenda provides an integrated framework for shared action "for people, planet and prosperity" which to be implemented by all countries and all stakeholders in collaborative partnership. Embracing 'Leaving No One Behind' as its main principle, this ambitious agenda consist of 17 (seventeen) goals, 169 (one hundred and sixty nine) targets and 232 (two hundred and thirty two) indicators. However, for SDG and UHC in heath sector, we only monitor 88 indicators in total as prescribed in Western Pacific Regional Office Guideline on SDG and UHC Regional Monitoring Framework. Universal Health Coverage is a part of SDG which aims to ensure all people able to get needed health services in sufficient quality for it to be effective without financial hardship.

In September 2015, while addressing the United Nations Sustainable Development Summit, the then Prime Minister has reaffirmed Malaysia's commitment to support and implement the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). For year 2019, international agency has placed Malaysia at position of 68 out of 162 countries; SDG with an index score of 69.6 while 72.9 for UHC. SDG and UHC monitoring and evaluation (P&E) process in the health sector is important as this activity aims to monitor the implementation of SDG and UHC in Malaysia carefully and identify new issues and challenges as well as strategies, action plans and directions to ensure the achievement of SDG and UHC targets for local use and international. Strong supports and collaborations from stakeholders within- and outside- MOH need to be established in order for us to achieve that purpose.

The Planning Division of Ministry of Health as the Secretariat of SDG UHC at the MOH level intends to publish a report on the status of Malaysia's achievements for SDG UHC up till 2019. This seminar is organized to present to relevant stakeholders the performance of SDG UHC for the Health sector and get additional input on issues, challenges as well as direction and improvement measures in achieving the SDG UHC targets. It is hoped that all parties can work hand-in-hand and together we strive to achieve the SDGs and thus be able to assist our beloved nation to improve the health of the people. Hopefully with good health status, people will be able to continue to support the country's ambition to become a high-income country.

Lastly, I would like to express my sincere gratitude to Dr Jacqueline Lo Ying-Ru, WHO Representative for Malaysia, Singapore and Brunei representative; Professor Pascale, and Mr Rushdi for spending time with us today, sharing on SDG and UHC concept and way forward for health sector. Also to all participants of this seminar and workshop, thank you for your contribution for the report and also your commitment in striving to achieve SDG and UHC.

Thank you.

Embracing 'Leaving No One Behind' as its main principle, this ambitious agenda consist of 17 goals, 169 targets and 232 indicators.

Datuk Dr Narimah Awin at the Seminar.

Seminar Agenda

11 August 2020

Time	Agenda	Presenter
0800 – 0900	Participants registration	
0900 – 0930	Overview of Health in SDGs & UHC (by MOH SDG UHC Secretariat)	Dr Nordin bin Saleh, Director of Planning Division
0930 – 1000	**Break**	
	Moderator	Dr Rozita Halina Tun Hussein, Senior Deputy Director 1, Planning Division
1000 – 1030	Presentation: Reproduction, maternal and child's health	Dr Aminah Bee binti Mohd Kassim, Public Health Specialist of Family Health Development Division
1030 – 1100	Welcoming Remarks by Dr Hishamshah bin Mohd Ibrahim, Deputy Director General of Health (Research & Technical Support)	
1100 – 1130	Presentation: Communicable disease	Dr Chai Phing Tze, Public Health Specialist of Disease Control Division
1130 – 1200	Presentation: Health System and Service Capacity	Dr Mahani binti Ahmad Hamidy, Public Health Specialist and Deputy Director of Planning Division
1230 – 1300	Presentation: Urban and environmental health	Mr. Mohd Zaharon Bin Mohd Talha, Deputy Director of Engineering Services Division
1300 – 1400	**Lunch break**	
	Moderator	Dr Fazilah Shaik Allaudin , Senior Deputy Director 2, Planning Division
1400 – 1445	Presentation: Non-communicable disease and mental health	Dr Feisul Idhwan bin Mustapha, Deputy Director of Disease Control Division

Overview of SDGs and UHC in Malaysia

1. Presentation
The presentation was delivered by Dr Nordin bin Saleh, Director of Planning Division.

2. His full presentation is as Annex A.

Reproductive, Maternal, Newborn & Child Health

1. Presentation
The presentation was delivered by Dr Aminah Bee binti Mohd Kassim, Public Health Specialist of Family Health Development Division.

2. Her full presentation is as Annex B.

3. Discussion

3.1 Malaysia has 2 best practice for other countries to look at – Confidential Enquiries on Maternal Death and pre-pregnancy care.

3.2 Having data on preventable maternal death is important as it is needed to plan for future intervention.

3.3 However there is room for improvement as Malaysia's classification on Confidential Enquiry on Maternal Death – suggested to look at Mothers-and-Babies: Reducing Risks through Audits and Confidential Enquiries.

3.4 MOH needs to reach out to yet-to-be mothers for pre-pregnancy care.

3.5 Data on unmet needs for family planning is inadequate in Malaysia – having it included in the National Health & Morbidity Survey and also to look at barriers to unmet needs is important.

3.6 Comprehensive Sexual Education (CSE) needs to be evaluated – it is a contributing factor to maternal & child mortality as well as safe delivery achievement.

3.7 MOH needs to review the availability of disaggregated data in order to allow for equity analysis; among the example to review if data is available is access to safe delivery for non-citizens in Sabah.

Communicable Disease

1. Presentation
The presentation was delivered by Dr Chai Phing Tze, Public Health Specialist of Disease Control

Division.

2. Her full presentation is as Annex C.

3. Discussion

3.1 Available technology should be utilised in Communicable Diseases Program. Suggestion was made to utilise Artificial Intelligence in chest x-ray to diagnose TB.

3.2 Incidence of TB has not been on tract. TB infects people of all nationalities and hence treatment should be made widely available for all in Malaysia.

3.2.1 TB treatment is readily available for all regardless of nationalities. TB incidences are recorded in e-notification hence cases are recorded regardless of citizenship.

3.3 Mortality data must be interpreted with caution. The numbers of death sometimes are incorrectly classified. There is a need to improve on death certificate and the diagnosis by physician at hospital discharge level and mortality level.

3.3.1 The effort of improving medically certified death is ongoing, among the programs are training related personnel regarding causes of death and also doing verbal autopsy for death occurring outside medical facilities.

3.4 How does Ministry of Health plans to achieved the target of anti-retroviral coverage of 90%? In previous years, testings are to be done in clinical setting. Does Ministry made test available at community level? Is MOH planning to expand and upgrade HIV treatment program? For example, providing same day result for HIV test and hence enabling same day counselling to start treatment.

3.4.1 Currently, there is change in target population. The HIV patients used to be predominant among IVDU, and one of the programs targeted to the group is Methadone program. However now cases are more due to sexual transmission. These group of populations are harder to identify therefore program need to be tailored to this target group

Health System & Service Capacity

1. Presentation

The presentation was delivered by Dr Mahani binti Ahmad Hamidy, Public Health Specialist and Deputy Director of Planning Division.

2. Her full presentation is as Annex D.

3. Discussion

3.1 There is a need to improve on equity data in order to properly analyse healthcare coverage.

3.1.1 Department of Statistics Malaysia will take this into notes.

3.2 MOH needs to look at marginalised population – for example, undocumented children especially in the state of Sabah.

3.2.1 MOH Strategic Plan for 2016 – 2020 already has few initiatives for marginalized children eg. Orang Asli, those in Sabah & Sarawak. However, the initiatives are not comprehensive. There are still lots of room for improvement.

3.3 What is WHO expectation of Malaysia or other countries with target-less monitoring?

3.3.1 WHO is now trying to look at bigger picture and attempting to set linear targets. This can be discussed in the coming UHC Technical Meeting.

3.4 Is MOH planning to expand and upgrade HIV treatment program? For example, providing same day result for HIV test and hence enabling same day counselling to start treatment.

3.4.1 Currently, there is change in target population. The HIV patients used to be predominant among IVDU. And one of the programs targeted to the group is Methadone program. However now cases are more due to sexual transmission. These group of populations are harder to identify therefore program need to be tailored to this target group

Urban & Environmental Health

1. Presentation

The presentation was delivered by Mr. Mohd Zaharon Bin Mohd Talha, Deputy Director of Engineering Services Division.

2. His full presentation is as Annex E.

3. Discussion

3.1. Clean water supply and sanitation are important in controlling water-borne communicable disease. There is no data from Sabah & Sarawak but there has been cholera outbreak as there is no clean water supply at certain area of the states. Is there any possibility to incorporate those data even with involvement from other ministry?

3.1.1. It is possible. Small discussion with them has been made. However, MOH contribution is only 10%, main agency like SPAN /KASA would need to lead. Unless EPU identify otherwise.

3.2. For urban data, what is the definition / criteria defined? Whether we can say there is 100% clean water supply in slum areas?

3.2.1. Urban rural categorization is based on population size. The category definition is in revision but unsure of when is the revision will be made public.

3.3. For SDG UHC under the Urban & Environment Health theme is there other indicators included?

3.3.1. Yes. There are more but these indicators do not have data. Need to collect from DOE for e.g air quality. Indicators not collated then need to be highlight to UPE to allow further consolidation of data collection.

Non-communicable Disease

1. Presentation

The presentation was delivered by Dr Feisul Idhwan bin Mustapha, Deputy Director of Disease Control Division.

2. His full presentation is as Annex F.
3. Discussion

3.1 Tackling NCDs needs a multi-dimensional cooperation and approach. Ministry of Health alone are not fully capable to bring down the incidence of NCDs.

3.2 People of Malaysia also need a mental shift and put health as a priority (current surveys shows that Malaysians are disregarding health and look at health with low importance). Perhaps we've got message wrong to our community - , they don't need a doctor to solve their problem but the community solves their problem themselves.

3.3 We are talking about NSP NCS 2010-2014 and subsequent NSP NCD 2015-2025. How different this NSP from the first one? What is the lesson learn? We do not repeat the same over again and expecting to get different result?

3.3.1 NSP NCD just provide the framework, it doesn't tell what to be done. In order to be impactful, we need to have strong political will and a society who are ready to take responsibility for themselves. Society looks at health as a low priority because of lack knowledge or awareness. The looked health as low priority. MOH needs to plan intervention on how to raise the health as priority. To do this, the government needs to address and fulfil their other priorities such as food and shelter.

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APPENDICES

Abbreviations

ACT	artemisinin-based combination therapy
AIDs	Acquired Immunodeficiency Syndrome
ANC	Antenatal care
API	Air pollutant index
ARI	Acute respiratory infection
ART	Anti-retroviral treatment
ASFR	Age-specific fertility rate
BCG	Bacillus Calmette–Guérin
BFHI	Baby-friendly hospital initiatives
BMI	Body mass index
CBT	Community based-testing
CD	Communicable Disease
CFR	Case fatality rate
C-HAT	Cara hidup anda terbaik
CPR	Contraceptive prevalence rate
CRD	Chronic respiratory disease
CSE	Comprehensive sexual education
CSO	Civil Society Organization
CVD	Cardiovascular disease
DDG (R&TS)	Deputy Director General (Research & Technical Support)
DEC	Diethylcarbamazine
DOSH	Department of Occupational Safety and Health
DOSM	Department of Statistics Malaysia
DPT-3	diphtheria, tetanus toxoid and pertussis vaccine – completed 3 dose
ENAP	Every newborn action plan
enPHC	Enhanced primary health care
EPU	Economic Planning Unit
FBC	Full blood count
FHDD	Family Health Development Division
FRHAM	Federation of Reproductive Health Associations, Malaysia
GATS	Global Adult Tobacco Survey
GHO	Global Health Observatory
GSHS	Global school-based student health survey
GWG	Gestational weight gain
Hb	Haemoglobin

HBV	Hepatitis B virus
HCV	Hepatitis C virus
HDP	Hypertensive disease in pregnancy
HED	Heavy episodic drinking
HIV	Human immunodeficiency virus
HIVST	HIV-self testing
HPV	Human papillomavirus
ICD	International Statistical Classification of Diseases and Related Health Problems
IHR	International Health Regulation
IMR	Infant mortality rate
INFORM	Index for Risk Management
IOM	Institute of Medicine
IUCD	Intra-uterine contraceptive device
JAKOA	Indigenous People Development Department
JEE	Joint External Evaluation
JPP	Sewerage Services Department
KASA	Ministry of Environment and Water
KOSPEN	Komuniti Sihat Pembina Negara
KOTAK	Kesihatan oral tanpa asap rokok
KPLB	Ministry of Rural Development
LARCS	Long-active reversible contraceptives
LB	Live birth
LBC	Liquid based cytology
LBW	Low birth weight
LFEP	Lymphatic Filariasis Elimination Programme
LMIC	Low and Middle-income country
LO	Liaison office
MCH	Maternal and child health
MCV1 / 2	Measles containing vaccine – dose 1 / 2
MDA	Mass drug administration
MDG	Millenium Development Goals
MDR-Tb	Multiple-drug resistance Tuberculosis
MENTARI	Community mental health centres
MERCY Malaysia	Medical Relief Society Malaysia
MIROS	Malaysian Institute of Road Safety Research
MMR	Maternal mortal ratio Mump, measles and rubella vaccine

MOH	Ministry of Health
MRNCH	Maternal, reproductive, new-born and child health
MVA	Motor vehicle accident
MWFCD	Ministry of Women, Family and Community Development
NASPAL	National Action Plan for Active Living
NCD	Non-communicable disease
NGO	Non-governmental Organization
NHMS	National Health & Morbidity Survey
NMR	Neonatal mortality rate
NPANM	National Plan of Action for Nutrition of Malaysia
NSP	National Strategic Plan
NSP-NCD	National Strategic Plan for non-communicable disease
NSR	National Suicide Registry
OPV	Oral poliovirus vaccine
OSCC	One-stop crisis centre
PCR	Polymerase chain reaction
PM	Particular matter
POCT	Point of care testing
PPH	Post-partum haemorrhage
PTA	Parents and teachers association
Q1 – Q5	Quintile 1 – quintile 5 (of population)
RMC	Respectful maternity care
SBR	Stillbirth rate
SDG	Sustainable Development Goals
SIRIM	Standard and Industrial Research Institute of Malaysia
SMS	Short message service
SPAN	National Water Services Commision
SRH	Sexual and reproductive health
STEMI	ST-elevated myocardial infarction
SU5MR	Stillbirth & Under-5 Mortality Reporting
SVD	Spontaneous vertex delivery
Tb	Tuberculosis
U5MR	Under-5 mortality rate
UHC	Universal Health Coverage
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund

UNU-IIUGH	United Nations University - International Institute for Global Health
VPD	Vaccine preventable disease
VTE	Venous thromboembolism
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WRA	Women in reproductive age
WSIA	Water Services Industry Act

SDGs Indicator & Sources of Data

No.	Indicator	Source
3.1.1	Maternal mortality ratio (per 100 000 live births)	Vital Statistics, Department of Statistics Malaysia
3.1.2	Proportion of births attended by skilled health personnel (%)	Family Health Development Division, Ministry of Health
3.2.1	Under-5 mortality rate (per 1000 live births)	Vital Statistics, Department of Statistics Malaysia
3.2.2	Neonatal mortality rate (per 1000 live births)	Vital Statistics, Department of Statistics Malaysia
3.3.1	New HIV infections among adults 15-49 years old (per 1000 uninfected population)	Disease Control Division, Ministry of Health
3.3.2	Tuberculosis (TB) incidence (per 100 000 population)	Disease Control Division, Ministry of Health
3.3.3	Malaria incidence (per 1000 population at risk)	Disease Control Division, Ministry of Health
3.3.4	Hepatitis B incidence per 100 000 population	Disease Control Division, Ministry of Health
3.3.5	Number of people requiring interventions against neglected tropical diseases (NTD's)	Disease Control Division, Ministry of Health
3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Statistics on Causes of Death, Department of Statistics Malaysia
3.4.2	Suicide mortality rate (per 100 000 population)	Statistics on Causes of Death, Department of Statistics Malaysia
3.5.1	Coverage of treatment interventions (pharmacological, psychosocial, and rehabilitation and aftercare services) for substance use disorders	Data not available
3.5.2	Harmful used of alcohol defined to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol.	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
3.6.1	Road traffic mortality rate (per 100 000 population)	Royal Malaysia Police
3.7.1	Proportion of women of reproductive age(15-49 years)who have their need for family planning satisfied with modern methods	Malaysian Population and Family Survey, National Population and Family Development Board, Ministry of Women, Family and Community Development
3.7.2	Adolescent birth rate (per 1000 women aged 15-19 years)	Vital Statistics, Department of Statistics Malaysia

No.	Indicator	Source
3.8.1	Coverage of essential health services(defined as the average coverage of essential services based on tracer intervention that included reproductive, maternal, newborn and child health, infectious disease, non-communicable diseases, and service capacity and access, among the general and the most disadvantage population)	World Health Organisation
3.8.2	Proportion of population with large household expenditure on health as a share of total household consumption expenditure or income (%)	Planning Division, Ministry of Health
3.9.1	Mortality rate attributed to household and ambient air pollution (per 100 000 population)	WHO Estimates, Global Health Observatory
3.9.2	Mortality rate attributed to exposure to unsafe water, sanitation and hygiene (wash) services (per 100 000 population)	Planning Division, Ministry of Health
3.9.3	Mortality rate from unintentional poisoning (per 100 000 population)	Planning Division, Ministry of Health
3.a.1	Age-standardized prevalence of tobacco smoking among persons 15 years and older (%)	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
3.b.1	Proportion of the target population covered by all vaccines included in their national programme	Family Health Development Division, Ministry of Health
3.b.2	Total net official development assistance to medical research and basic health per capita	Data not available
3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis.	Pharmaceutical Services Programme, Ministry of Health
3.c.1	Health worker density and distribution	Planning Division, Ministry of Health
3.d.1	Average of 13 International Health Regulations (2005) core capacity scores	Disease Control Division, Ministry of Health
1.a.2	Proportion of total government spending on essential services (education, health and social protection) Proxy: General government health expenditure as % of general government expenditure	Planning Division, Ministry of Health
1.3.1	Proportion of population covered by Social Protection Floors/systems, by sex distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and vulnerable (Proxy: Social health coverage as a per cent of total population)	Data not available

No.	Indicator	Source
1.5.1/ 11.5.1/ 13.1.1	Number of death, missing person and directly affected person attributed to disasters per 100 000 population	National Disaster Management Agency (NADMA)
2.2.1	Prevalence of stunting (height for age less than -2 standard deviation from the median of WHO Childs' Growth Standards) among children under 5 (%)	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
5.2.1	Proportion of ever-partnered women and girls over aged 15 years and older who have experienced physical, sexual or psychological violence by a current or former intimate partner, in the previous 12 months by form of violence and by age.	Disease Control Division, Ministry of Health
5.2.2	Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months by age and place of occurrence.	Disease Control Division, Ministry of Health
5.6.2	Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education	National Population and Family Development Board, Ministry of Women, Family and Community Development
6.1.1	Proportion of population using safely managed drinking water services	National Water Services Commission
6.2.1	Proportion of population using safely managed sanitation services including hands washing facilities with soap and water (%)	Household Income and Basic Amenities Survey, Department of Statistics Malaysia
7.1.2	Proportion of population with primary reliance on clean fuels and technology	Data not available
11.6.2	Annual mean concentrations of fine particulate matter (PM 2.5 & PM 10) in cities (population weighted)	Department of Environment, Ministry of Environment and Water
16.1.1	Number of victims of intentional homicide per 100 000 population by sex and age	Royal Malaysia Police
16.1.2	Estimated direct death from major conflicts (per 100 000 population)	Data not available
16.1.3	Proportion of the population subjected to physical, psychological or sexual violence in the previous 12 months	Data not available

No.	Indicator	Source
16.2.1	Proportion of children aged 1-17 years who experienced any physical punishment and/ or psychological aggression by caregivers in the past months	Data not available
16.2.2	Number of victims of human trafficking per 100 000 population, by sex, age and form of exploitation	Data not available
16.2.3	Proportion of young women and men aged 18-29 years who experienced sexual violence by age 18 (Proxy: Percentage of women who reported experiencing sexual abuse before the age of 15)	Data not available
16.9.1	Proportion of children under 5 years of are whose birth have been registered with a civil authority by age.	Department of Statistics Malaysia
17.19.2 (b)	Proportion of countries that have achieved 100% birth registration and 80% death registration	Department of Statistics Malaysia

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UHC Indicators & Sources of Data

No	Indicator	Source
1	Life expectancy at birth	Department of Statistics Malaysia
2	Total current expenditure on health as a percentage of gross domestic product	Planning Division, Ministry of Health
3	Seat-belt wearing rate (%)	Malaysian Institute for Road Safety Research
4	Motorcycle helmet wearing rate 9%)	Malaysian Institute for Road Safety Research
5	Bed occupancy rate	Planning Division, Ministry of Health
6	Immunization coverage rate for DPT3 (diphtheria tetanus-pertussis)	Family Health Development Division, Ministry of Health
7	Immunization coverage rate for measles	Family Health Development Division, Ministry of Health
8	Stillbirth rate (per 1000 total births)	Vital Statistics, Department of Statistics Malaysia
9	Case rate of congenital syphilis (per 100 000 live births)	Disease Control Division, Ministry of Health
10	Exclusively breastfed rate in infants 0-5 months of age (%)	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
11	Incidence of low birth weight among newborns (%)	Vital Statistics, Department of Statistics Malaysia
12	Anaemia prevalence among women of reproduction age (aged 15-49 years)	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
13	Prevalence of anemia in children under 6-59 months	Data not available
14	Age-standardized prevalence of raised blood glucose level among adults 18+ years	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
15	Age-standardized prevalence of overweight (body mass index ≥ 25) and obesity (body mass index ≥ 30 in person aged 18+ years	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
16	Age-standardized prevalence of raised blood pressure among persons aged 18+ years	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
17	Age-standardized prevalence of insufficiently physically active persons aged 18+ years	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health

No	Indicator	Source
18	Percentage of children under 5 years of age with suspected pneumonia who were taken to a health facility	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
19	Antiretroviral therapy coverage	Disease Control Division, Ministry of Health
20	Second-line treatment coverage among MDR-TB cases(%) (Proxy: Treatment success rate for patients treated for multidrug-resistant tuberculosis MDR-TB)	Disease Control Division, Ministry of Health
21	Cervical cancer screening rate (Proxy: No of Papsmear screening)	Family Health Development Division, Ministry of Health
22	Coverage of services for severe mental health disorder	Disease Control Division, Ministry of Health
23	Current expenditure on health by general government and compulsory schemes as a percentage of total current expenditure on health	Planning Division, Ministry of Health
24	Rate of use of assistive devices among people with disabilities	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
25	Proportion of newborns receiving essential newborn care	Medical Development Division, Ministry of Health
26	30-day mortality after admission to hospital for acute myocardial infarction	Medical Development Division, Ministry of Health
27	Patient experience	Medical Development Division, Ministry of Health
28	Proportion of health care facilities with basic water supply	Engineering Services Division, Ministry of Health
29	Proportion of health care facilities with basic sanitation	Engineering Services Division, Ministry of Health
30	Hospital average length of stay (in days)	Planning Division, Ministry of Health
31	Dengue mortality rate (Proxy: Number of reported death due to dengue fever and dengue haemorrhagic fever)	Disease Control Division, Ministry of Health
32	Mortality rate attributable to HBV and HCV infection	Disease Control Division, Ministry of Health
33	Proportion of deliveries in health facilities	Family Health Development Division, Ministry of Health
34	Age-standardized prevalence of current tobacco use among persons aged 13-15 years	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health

No	Indicator	Source
35	Outpatient service utilization rate	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
36	Cataract surgical rate and coverage	Medical Development Division, Ministry of Health
37	Post-operative sepsis rate	Medical Development Division, Ministry of Health
38	Hospital readmission rate	Medical Development Division, Ministry of Health
39	Proportion of the population utilizing the rehabilitation services they require	National Health & Morbidity Survey, Institute for Public Health, Ministry of Health
40	HIV testing coverage among people living with HIV (Proxy: People aged 15 years and over who received HIV testing and counselling, estimated per 1000 adult population)	Disease Control Division, Ministry of Health
41	Viral suppression rate among people on ART	Disease Control Division, Ministry of Health

Health in the SDG & UHC Seminar

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83. Mdm. Chua Yau Li
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85. Mdm. Nur Amalina binti Muhamad
86. Mdm. Kwek Lih Ling
87. Mdm. Teh Li Yin
88. Mdm. Lau Ling Wei
89. Mdm. Nuwairani Khalid
90. Mdm. Norhaslin binti Abd Halim
91. Mdm. Nur Afiqah binti Zakaria
92. Mdm. Noorazleen binti Mohd Noh
93. Mdm. Komathi Perialathan
94. Mdm. Nuwairani binti Khalid
95. Mdm. Fatkhiah binti Haji Khalil
96. Mdm. Norazida Ab Rahman
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99. Mdm. Narry Lwi
100. Mdm. Norehan
101. Mdm. Azlinda
102. Mdm. Nur Ain
103. Mdm. Lau Ting Her

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ANNEX A

OVERVIEW OF SDG IN HEALTH SECTOR AND UHC IN MALAYSIA

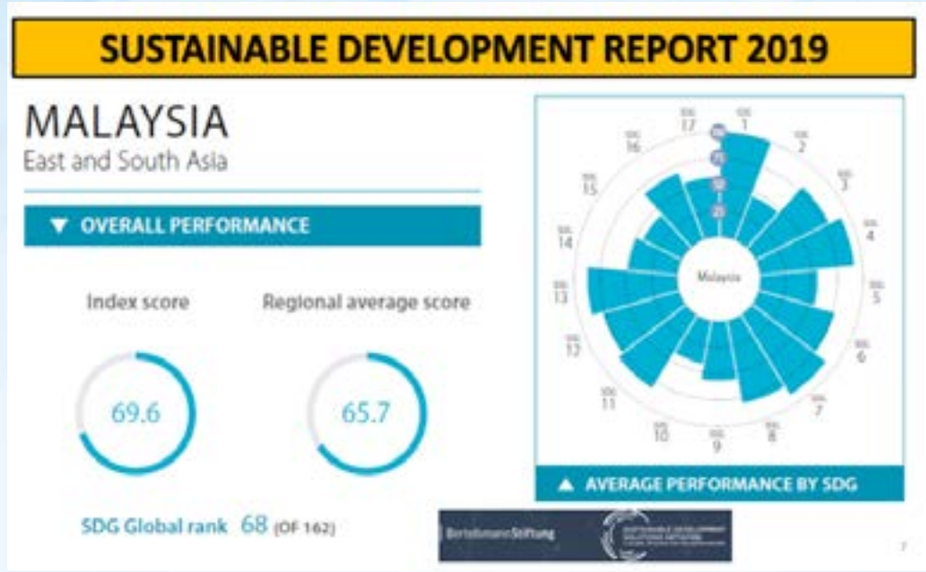
"Health in the Sustainable Development Goals (SDG) and Universal Health Coverage (UHC)"

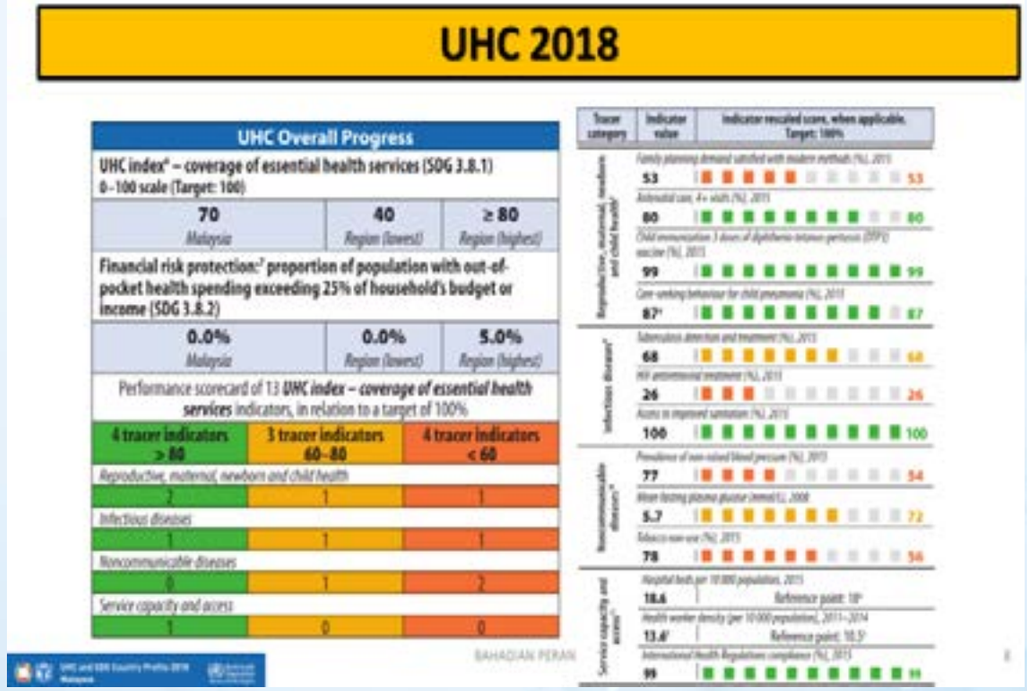
PLANING DIVISION 11th AUGUST 2020

ANNEX A


PERFORMANCE MEASUREMENT
HEALTH
GOAL 3
27
indicators
3
24
20
indicators
7
13
Available
Not Available


UNIVERSAL HEALTH COVERAGE (UHC)
World Health Report 2010
The UN resolution, 12 December 2012
all people having access to quality health services without suffering the financial hardship associated with paying for care. (WHO 2013)
41
indicators


SUSTAINABLE DEVELOPMENT REPORT 2019
MALAYSIA
East and South Asia
OVERALL PERFORMANCE
Index score
Regional average score
69.6
65.7
SDG Global rank 68 (OF 162)
AVERAGE PERFORMANCE BY SDG
Malaysia


UHC 2018
UHC Overall Progress
UHC index* – coverage of essential health services (SDG 3.8.1)
0–100 scale (Target: 100)
70 Malaysia
40 Region (lowest)
≥ 80 Region (highest)
Financial risk protection:† proportion of population with out-of-pocket health spending exceeding 25% of household's budget or income (SDG 3.8.2)
0.0% Malaysia
0.0% Region (lowest)
5.0% Region (highest)
Performance scorecard of 13 UHC index – coverage of essential health services indicators, in relation to a target of 100%
4 tracer indicators ≥ 80
3 tracer indicators 60–80
4 tracer indicators < 60
Reproductive, maternal, newborn and child health
2
1
1
Infectious diseases
1
1
1
Noncommunicable diseases
0
1
2
Service capacity and access
1
0
0
BAHAGIAN PERANCANGAN

ANNEX B

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
Progress Report for Malaysia 2016 – 2019 & Seminar Proceedings

SUSTAINABLE DEVELOPMENT GOALS & UNIVERSAL HEALTH COVERAGE

Reproductive, Maternal, Neonatal & Child Health

FAMILY HEALTH DEVELOPMENT DIVISION

MINISTRY OF HEALTH

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Reproductive, Maternal, Neonatal & Child Health

- There are a total of 21 indicators placed under this theme

7 indicators (SDG 3)

INDICATOR		Performance
SDG-3		
3.1.1	Maternal mortality ratio (per 100,000 live birth)	
3.1.2	Proportion of births attended by skilled health personnel (%)	
3.2.1	Under-five mortality rate (per 1000 live birth)	
3.2.2	Neonatal mortality rate (per 1000 live birth)	
3.7.1	Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods (PROXY - both for modern & traditional method)	
3.7.2	Adolescent birth rate (aged 15-19 years) per 1,000 women in that age group	
3.b.1	Proportion of the population covered by all vaccines included in the national program (%)	
	• Immunization coverage of infants for DPT (completion dose)	
	• Immunization coverage of MMR (Mumps, measles and rubella) for children **at 12 months (MCV2)**	

On track | stagnant | Not performing | No serial data /target

3 indicators (Health Related SDG)

INDICATOR		Performance
SDG Health-Related		
2.2.1	Prevalence of stunting (height for age less than -2 standard deviation from the median of WHO Childs' Growth Standards) among children under 5 (%)	
2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight):	
	• Wasting	
	• Overweight	
5.6.2	Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education	

On track | stagnant | Not performing | No serial data /target

11 indicators (UHC)

INDICATOR		Performance
UHC		
6	Immunization coverage rate for DPT3 (diphtheria tetanus-pertussis) (%)	
7	Immunization coverage rate for measles (%)	
8	Stillbirth rate (per 1000 total births)	
9	Case rate of congenital syphilis (per 100 000 live birth	
10	Exclusively breastfed rate in infants 0-5 months of age (%)	
11	Incidence of low birth weight among newborns (%)	
12	Anaemia prevalence among women of reproduction age (aged 15-49 years	
13	Prevalence of anemia in children under 6-59 months	
18	Percentage of children under 5 years of age with suspected pneumonia who were taken to a health facility	
25	Proportion of newborns receiving essential newborn care	
33	Proportion of deliveries in health facilities	

On track | stagnant | Not performing | No serial data /target

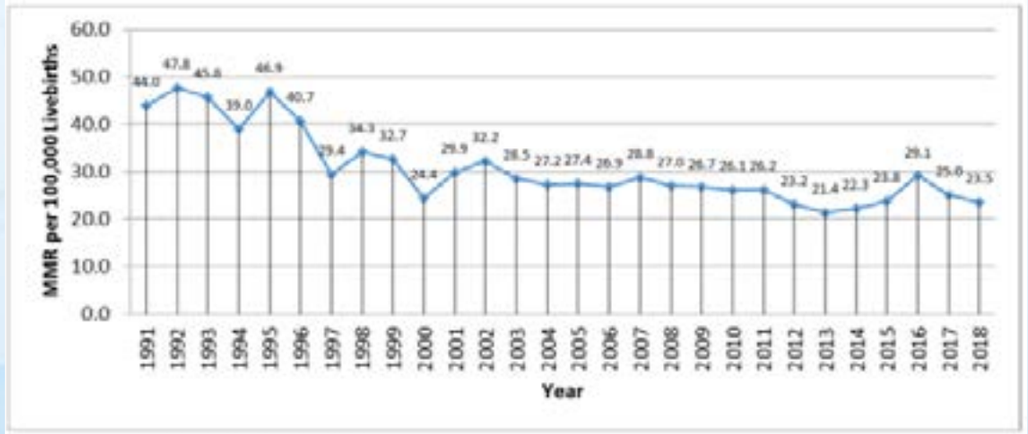
ANNEX B

Maternal Health -related Indicators

- i. Reproductive Health Indicators
  - SDG 3.7.1: Proportion of women of reproductive age who have their need for family planning satisfied with modern methods
  - SDG 3.7.2 : Adolescent birth rate (15-19 years) per 1,000 women in that age group
  - SDG 5.6.2 : Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education

- ii. Maternal Health and Service Indicators
  - SDG 3.1.1: Maternal mortality ratio (per 100,000 live birth)
  - SDG 3.1.2: Proportion of births attended by skilled health personnel (%)
  - SDG UHC Indicator 33. : Proportion of deliveries in health facilities
  - SDG UHC Indicator 8 : Stillbirth rate (per 1000 total births)
  - SDG UHC Indicator 9 : Case rate of congenital syphilis (per 100 000 live birth)
  - SDG UHC Indicator 11 : Incidence of low birth weight among new born (%)

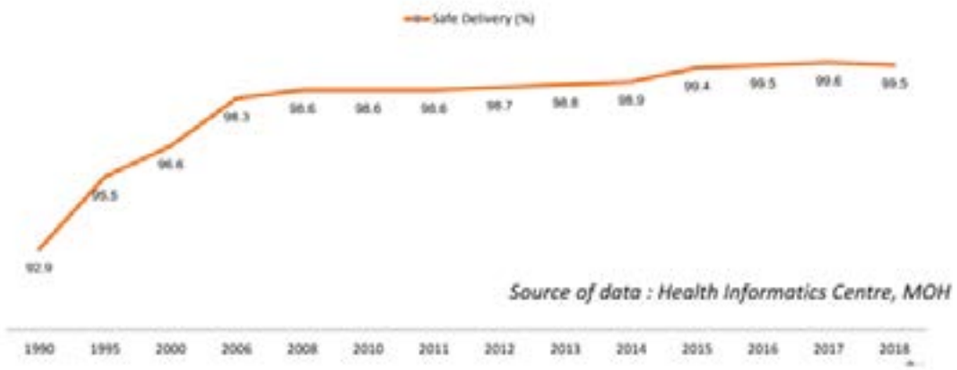
SDG 3.1.1 Maternal Mortality Ratio



Source : Department of Statistics Malaysia

11/8/2020

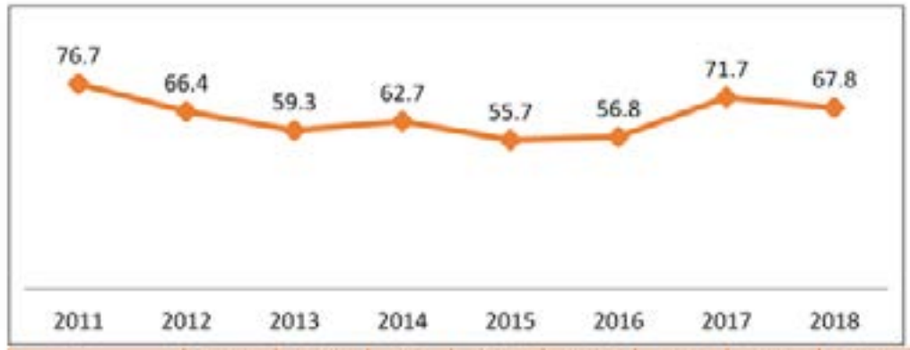
UHC Indicator : 33
Safe Delivery: Malaysia - 1990-2018



Source of data : Health Informatics Centre, MOH

NHMS 2016 reported
- 0.5% of respondents had unsafe delivery and the prevalence was highest among mothers aged 15 to 19
- 99.1% delivered in health facilities. Majority in government hospitals (80.5%), followed by private (18.6%).

Percentage of preventable deaths of maternal deaths : 2011-2018



	2011	2012	2013	2014	2015	2016	2017	2018
Preventable	101	81	64	74	69	84	91	81
Non Preventable	29	41	44	44	55	64	36	37
Total	130	122	108	118	124	148	127	118

Source of data : 2001 -2011 : Reports on the Confidential Enquiries into Maternal Deaths in Malaysia
2012 – 2018 : Family Health Development Division MOH

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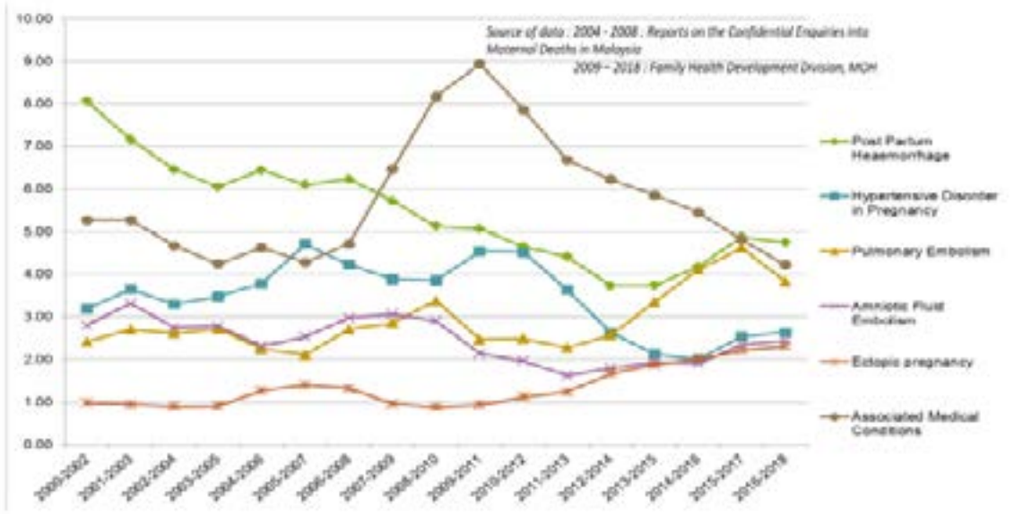
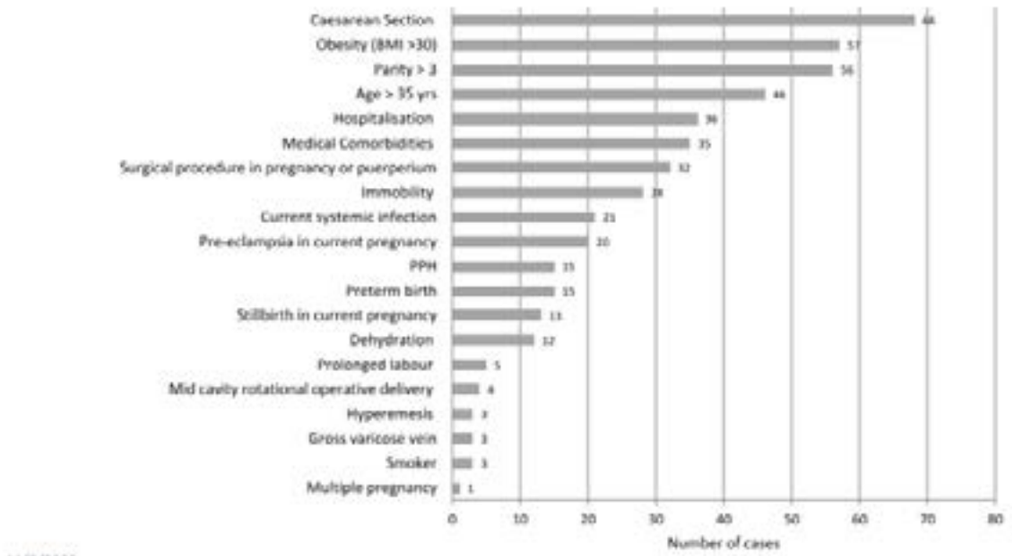
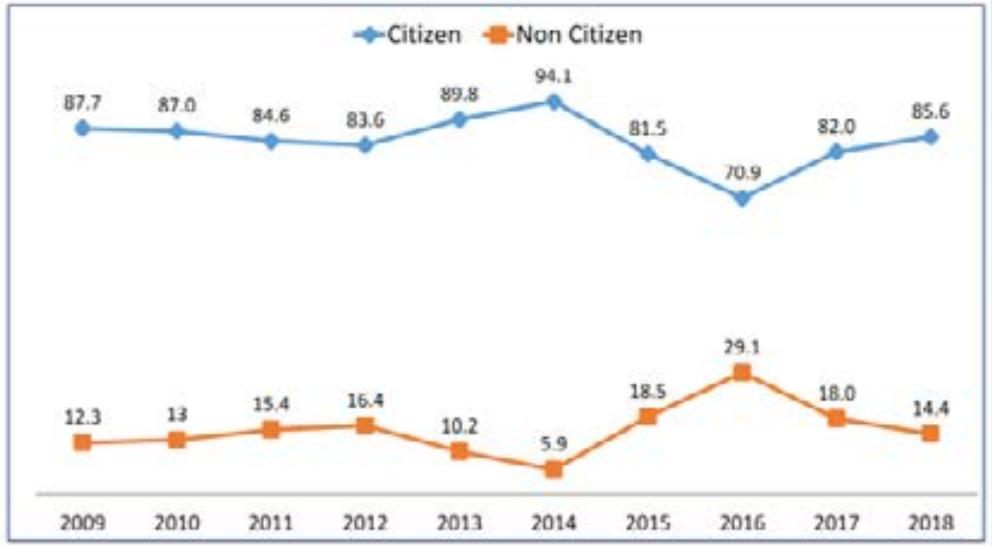
ROLLING 3-YEAR AVERAGE CAUSE SPECIFIC MMR PER 100,000 LB FOR COMMON CAUSES OF DEATH : MALAYSIA, 2000 – 2018



Risk Factors identified among maternal deaths due to Pulmonary Embolism : Malaysia 2010-2017 (n=135)



MATERNAL MORTALITY BY CITIZEN 2009 – 2018



Source of data : 2001 -2011 : Reports on the Confidential Enquiries into Maternal Deaths in Malaysia
2012 – 2018 : Family Health Development Division MOH

SDG 3.1.1 : Maternal mortality ratio (per 100,000 live birth)

Achievement (%)					Target 2030*
2015	2016	2017	2018	2019	SDG Target Reduce global MMR to less than 70 per 100 000 live births.
23.8	29.1	25	23.5	NA	

Issues and Challenges

1. Percentage of preventable deaths – 60-70% - quality of care
2. Deaths among high risk mothers e.g. medical conditions (heart disease, SLE, renal failure , cancer) - Failure to initiate pre-pregnancy care
3. Deaths related to NCD - Pulmonary Embolism is the 3rd common COD of Maternal Death, whereby obesity is the main risk factor
4. Maternal death among non-citizens - Proportion of death among non-citizens 2015 - 18.5%

Moving Forward

1. Intensify supervision /clinical audit
2. Strengthen clinical competency
3. Strengthen pre-pregnancy care, especially patients with medical conditions
4. Family planning for high risk women
5. Introduction of VTE risk assessment & thromboprophylaxis during ANC & Postnatal

ANNEX B

SDG 3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern method

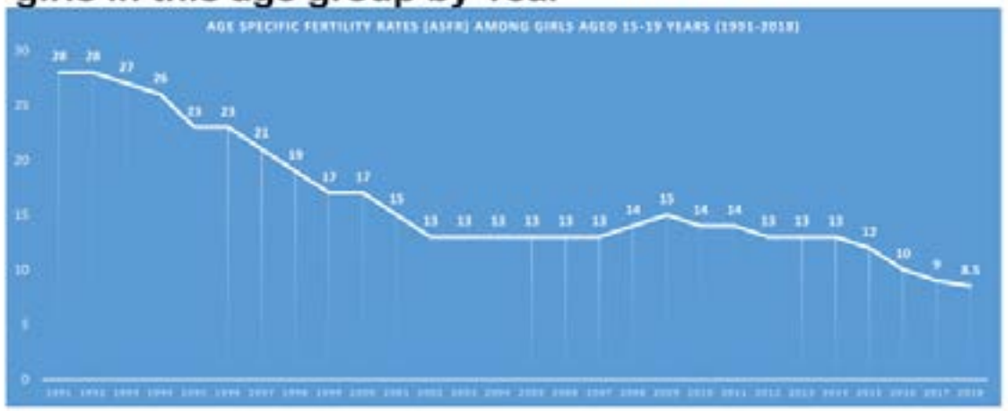
PROXY INDICATOR: Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied (both for modern and traditional method) has increased from **75.4% in 2004** to **80.4% in year 2014**

Source of data : Malaysia Population Family Survey, LPPKN

Moving Forward : Need to increase to 90%

- Proposed to include questions on family planning in NHMS 2021
- Suggested to LPPKN to do qualitative study to identify barriers to unmet needs

SDG 3.7.2
Adolescent Birth Rate (aged 15-19 years) per 1000 girls in this age group by Year



Source: Department of Statistics, Malaysia, 1991- 2018

SDG UHC Indicator 8 : Stillbirth rate (per 1000 total births)

Achievement (%)					Target 2030*
2015	2016	2017	2018	2019	The every newborn action plan to end preventable deaths has a set stillbirth target of 12 per 1000 births or less
4.5	5.2	5.4	5.5	NA	

Issues and Challenges

1. NHMS 2016 - 97.4% received minimum of 4 ANC visits (adequate as suggested by WHO). Studies show that stillbirths common among women with chronic disease during pregnancy.
2. NHMS 2016 showed high proportion of pregnant women with chronic disease.
   a. Prevalence of cardiac diseases at 0.5%,
   b. Anaemia at 29.3%,
   c. Diabetes Mellitus at 13.5%
   d. Hypertensive disorders was 5.8 %.
   e. Maternal obesity was seen in 14.6%

Moving Forward

1. Strengthen pre-pregnancy care, especially patients with medical conditions
2. Increase competency to identify risk cases
3. Intensify supervision /clinical audit
4. Family planning for high risk women
5. Increasing public awareness on the importance of pre-pregnancy care and antenatal care for child survival

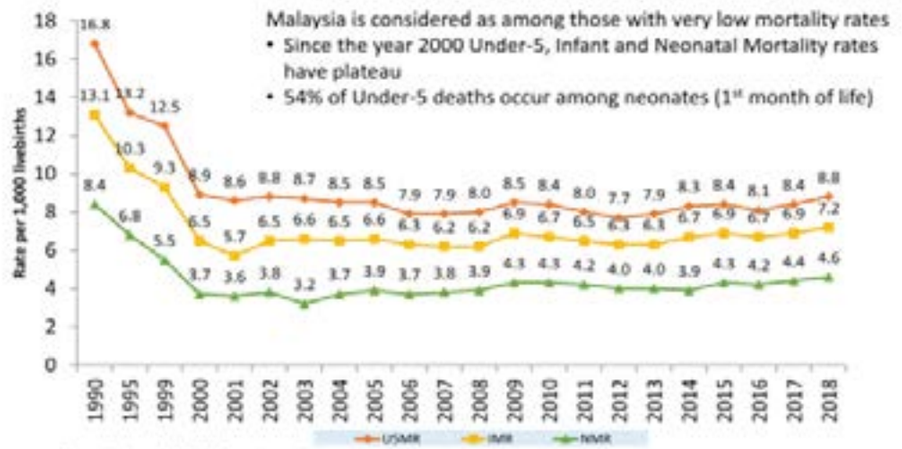
Neonatal and Child Health -related Indicators

- i. Child Health and Service Indicators (7 indicators)

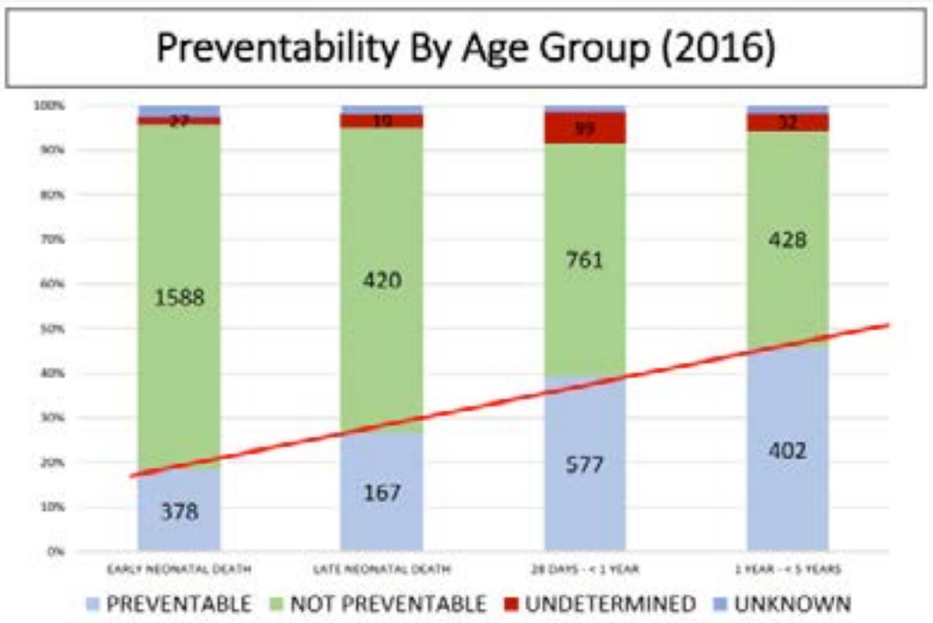
  - ❑ SDG 3.2.1: Under-five mortality rate (per 1000 live birth)
  - ❑ SDG 3.2.2 : Neonatal mortality rate (per 1000 live birth)
  - ❑ SDG 3.b.1: Proportion of the population covered by all vaccines included in the NIP
  - ❑ SDG UHC Indicator 6 : Immunization coverage rate for DPT3 (%)
  - ❑ SDG UHC Indicator 7 : Immunization coverage rate for measles (%)
  - ❑ SDG UHC Indicator 18 : Percentage of children under 5 years with suspected taken pneumonia to a health facility
  - ❑ SDG UHC Indicator 25 : Proportion of newborns receiving essential newborn care

ANNEX B

SDG 3.2.1 and 3.2.2
Under-5 Mortality Rate, IMR and NMR, 1990-2018



Source of data : 1990-2017 (Department of Statistics, Malaysia)



Majority of preventable deaths occur after the age of 1 month and in toddler age group

CAUSES 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: Under 5 Mortality Reporting System, Family Health Development Division, Ministry of Health Malaysia

TOP CAUSES OF DEATHS AMONG CHILDREN UNDER 5 YEARS

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

Conditions from perinatal period are conditions related to:
1. Prematurity (61.6%)
2. Encephalopathy (8.6%)
3. Infections specific to the perinatal period (7.3%)

Congenital malformations (CM) breakdown:
1. CM of circulatory system (33.6%)
2. Chromosomal abnormalities (20.9%)
3. CM non specified (11.4%)

Respiratory causes
1.Pneumonia (82%)
2.Aspiration Pneumonia (10%)

Breakdown of injuries
1. MVA (26.5%)
2. Drowning (23.3%)
3. Asphyxia/ suffocation/ choking (13.3%)

Requires advocacy, health promotion and health education to other agencies and parents and community

ANNEX B

SDG 3.2.1 : Under-five mortality rate (per 1000 live birth)

Achievement (%)					Target 2030*
2015	2016	2017	2018	2019	To **end preventable deaths** of newborns & under-5 children. NNM to as low as 12/1000LB and U5MR to at least as low as 25 per 1,000
8.4	8.1	8.4	8.8	NA	

Issues and Challenges	Moving Forward
1. Main cause of preventable death in toddler is injury – MVA, drowning, home injuries	1. Increasing public awareness 2. Work with other agencies and NGOs to prevent injuries and infections • Advocate for policies • Structured Parenting programmes • Strengthen abuse prevention activities 3. Capacity building for health and hospital personnel 4. Implement strategies to reduce premature births • Improve NICU services
2. Main cause of death in infants is respiratory and infections • Delay seeking treatment by family • Poor ability to appreciate severity of disease by health personnel	
3. Under 5 mortality among non-citizens between 10-13%	
4. Neonatal deaths 54% of Under 5 deaths. 18% preventable mainly related to Prematurity	

SDG UHC Indicator 6 : Immunization coverage rate for DPT3 (%)
SDG UHC Indicator 7 : Immunization coverage rate for measles (%)

	Achievement (%)					Target 2030*
	2015	2016	2017	2018	2019	
DPT3	99.04	97.97	98.89	100	97.09	To maintain >95% coverage for both DPT3 and MMR
MCV	93.07	94.37	93.51	96.08	95.36	

Issues and Challenges	Moving Forward
1. Outbreak in pockets of low coverage areas • Poor understanding • Vaccine hesitancy (<0.5%) • Refusal of Non Citizen due to Fee Act	1. Increasing public awareness 2. Work with other agencies and NGOs 3. Capacity building for health and hospital personnel

SDG UHC Indicator 18 :
Percentage of children under 5 years with suspected pneumonia taken to a health facility : **NHMS 2016 : 94.3%**

SDG UHC Indicator 25 :
Proportion of newborns receiving essential newborn care 4 elements

- immediate and thorough drying,
- immediate skin-to-skin contact,
- delayed cord clamping, and
- initiation of breastfeeding in the first hour

2015	2016	2017	2018
86.89	87.44	88.83	89.78

Nutrition-related Indicators

- i. Nutrition among Women of Reproductive Age and Birth Outcome
  - ❑ SDG-UHC - Indicator 12: **Prevalence of anaemia among women of reproduction age (WRA) aged 15-49 years**
  - ❑ SDG-UHC - Indicator 11: **Incidence of low birth weight (LBW) among newborns**
- ii. Malnutrition Among Under-Five Children
  - ❑ SDG-UHC – Indicator 10: **Exclusively breastfed rate in infants 0-5 months of age**
  - ❑ SDG – Indicator 2.2.1: **Prevalence of Stunting (Height for age <-2 SD) among children under 5**
  - ❑ SDG – Indicator 2.2.2 **(i): Prevalence of malnutrition; Wasting (Weight for height <-2SD) among children under 5 (WHO 2006)**
    (ii): Prevalence of malnutrition; Overweight (Weight for height >+2SD) among children under 5 (WHO 2006)

ANNEX B

Indicator 12:
Prevalence of anaemia among women of reproduction age (WRA) aged 15-49 years

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
34.7	NA	NA	NA	29.9	Reduction of 50% in 2025; 17.4%

Issues and Challenges	Moving Forward
1. Awareness on the importance of having optimum micronutrient intake as reflected by eating a balanced meal with adequate fruits and vegetable was still low among adolescents and young women which subsequently affect pregnancy outcomes 2. To carry out a proper and uniform prevention and control programme for anaemia for all the states as each state having its unique multiple root causes of anaemia	1. Implementing tailored strategies that focus on localised anaemia issues 2. National fortification of wheat flour with iron and folic acid. 3. Advocacy and self-awareness to prevent anaemia among WRA via various mechanism.

Indicator 11:
Incidence of low birth weight (LBW) among newborns

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
11.5	11.4	11.7	11.8	NA	30% reduction from baseline (11.5% in 2015) to 8.1% in 2025

Issues and Challenges	Moving Forward
1. LBW is a complex syndrome that has multiple causes.	1. Close monitoring of gestational weight gain (GWG) among antenatal mothers in health clinics 2. Scaling up nutrition intervention among adolescents and young women on the importance of micronutrient intake through healthy eating 3. Increase public awareness on the links between maternal nutrition and child survival and the importance of the first 1000 days of life

Indicator 10:
Exclusively breastfed rate in infants 0-5 months of age

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
NA	47.1	NA	NA	NA	≥50%

Issues and Challenges	Moving Forward
1. Non-conducive environment for working mothers to practice breastfeeding 2. Lack of supports for the BFHI implementation in the private hospitals	1. Engage employers to adopt a conducive environment in order for mothers to practice breastfeeding 2. Strengthening supports from all the relevant sectors eg. government, private health care, NGO's, breastfeeding support group 3. Policy – increase duration of maternity leave to all working mothers from 60 to 98 days as recommended by ILO 4. Incorporate BFHI as one of the mandatory requirements under the Private Healthcare Facilities and Services Act 19 for licence renewal

SDG 2.2.1 : Prevalence of Stunting (Height for age <-2 SD) among children under 5 (WHO 2006)

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
17.7	20.7	NA	NA	21.8	Reduction of 40% from baseline (17.7% in 2015) to 10.6%

SDG 2.2.2 :
i) Prevalence of malnutrition; Wasting (Weight for height <-2 SD) among children under 5 (WHO 2006)

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
8.0	11.5	NA	NA	9.7	< 5%

ii) Prevalence of malnutrition; Overweight (Weight for height >+2 SD) among children under 5 (WHO 2006)

Achievement (%)					Target 2025*
2015	2016	2017	2018	2019	
8.0	6.0	NA	NA	5.2	No increase

ANNEX B

Prevalence of malnutrition; Stunting, Wasting and Overweight Among Children Under 5

Issues and Challenges	Moving Forward
1. Increasing trend of double burden malnutrition among young children in Malaysia with both under nutrition and overweight	1. Scaling up of multiple- pronged approaches of nutrition-sensitive and nutrition-specific intervention programmes focusing on maternal and children 2. Ensuring food and nutrition security and sustaining the food system to support and promote healthy eating practices 3. Community-based approach with the use of various new media platforms targeted at child care settings will also be strengthened to increase the knowledge and skills of the caregivers on infant feeding, exclusive breastfeeding, and complementary feeding

* TARGET IS BASED ON WHO GLOBAL NUTRITION TARGET (GNT) 2025

Summary

- We are on tract for most of the SDG UHC Indicators based on targets
- We now have to beat our own targets

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
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ANNEX C

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
Progress Report for Malaysia 2016 – 2019 & Seminar Proceedings

Sustainable Development Goals and Universal Health Coverage : Achievements, Drivers of Progress, and What Lies Ahead

Dr Chai Phing Tze
11th of August 2020
Health For Our Future Generation
National Institute of Health, Shah Alam

Outline

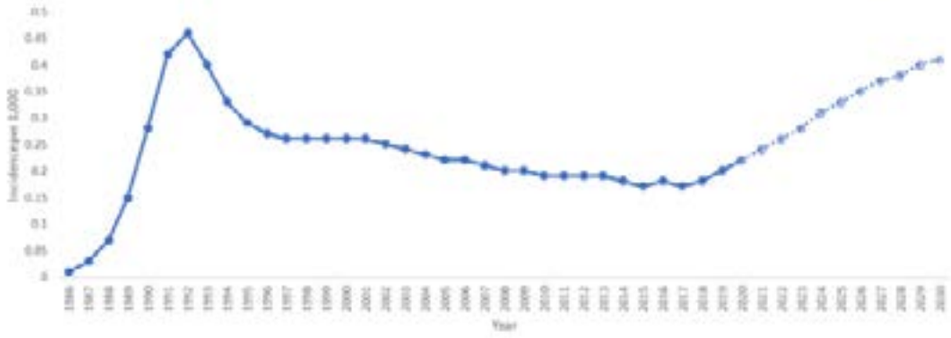
- Achievements in Communicable Disease Control
- The Main Drivers of Progress
- Moving Towards the 2030 Targets

ANNEX C

Achievement 1: Reducing Incident Rates

SDG 3.3.1 : Number of new HIV infections per 1000 uninfected population, by sex, age and key population

Achievement				Target 2020
2015	2016	2017	2018	
0.17	0.17	0.17	0.18	< 0.2

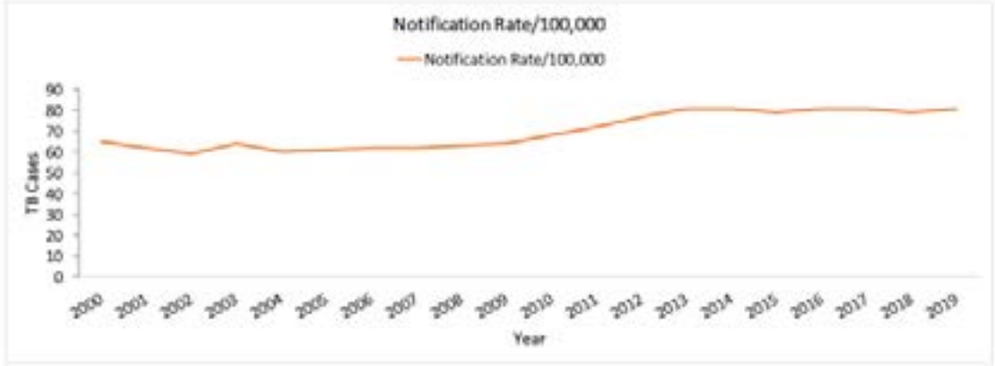


SDG 3.3.1 : Number of new HIV infections per 1000 uninfected population, by sex, age and key population

Issues and Challenges	Moving Forward
By modelling, HIV incidence is expected to increase from 2018 to 2030 because mode of transmission has shifted from needle sharing to sexual transmission and prevention coverage has not changed (business as usual).	Expanding treatment coverage to achieve 95% by 2030.

SDG 3.3.2 : Tuberculosis incidence per 100,000 population

Achievement					Target 2020
2015	2016	2017	2018	2019	
79	81	81	79	81	< 92



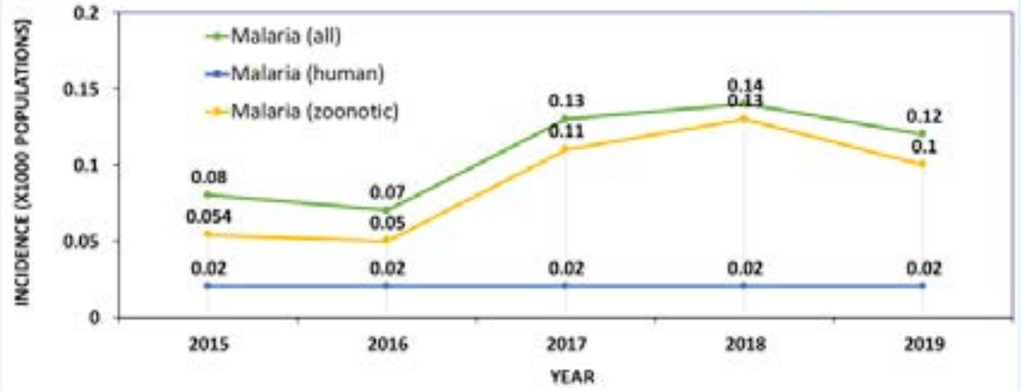
SDG 3.3.2 : Tuberculosis incidence per 100,000 population

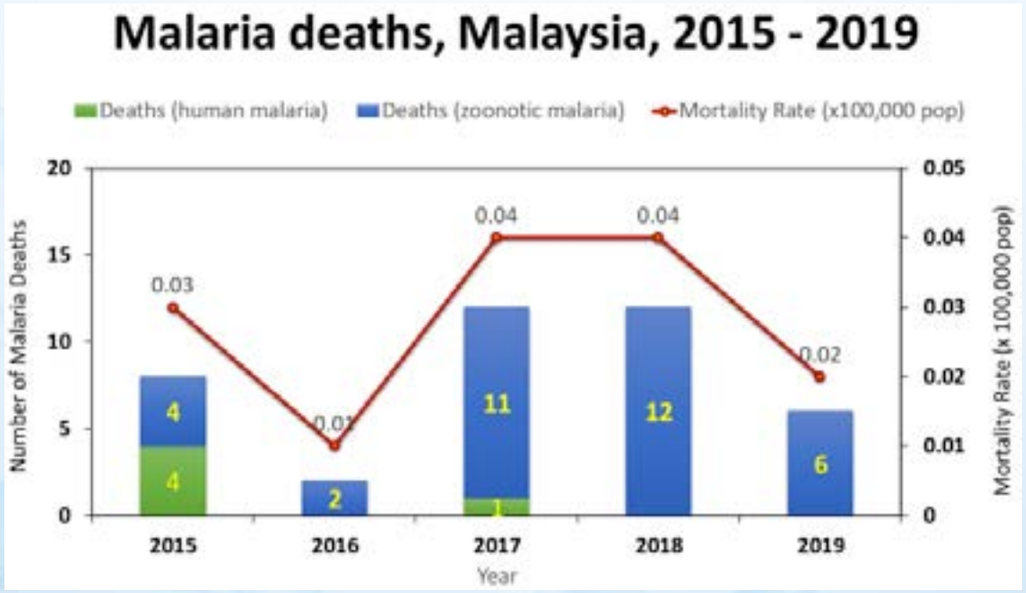
Issues and Challenges	Moving Forward
1. Low detection of TB contribute to further spread of diseases in the community. Estimated incidence by WHO is 92 per 100,000 (79-106) population 2. Late/ delay in seeking TB treatment to healthcare facilities among symptomatic TB patients. 3. Inadequate knowledge and awareness regarding TB among the public	1. Increase case detection of TB by enhancing access to quality TB screening and diagnosis among contact and selected high risk group including paediatric population 2. Strengthens TB-HIV and TB co-morbid collaborative activities

ANNEX C

SDG 3.3.3 Malaria incidence per 1,000 population

Achievement					Target 2020
2015	2016	2017	2018	2019	
0.08	0.07	0.13	0.14	0.12	< 0.1





SDG 3.3.3 Malaria incidence per 1,000 population

Issues and Challenges	Moving Forward
1. Importation of malaria 2. Border Malaria 3. Hard to reach population, e.g. Aborigines population 4. Submicroscopic and/or asymptomatic vivax infection 5. Declining disease burden 6. 85% zoonotic malaria 7. 2019 (IR: 0.118 per 1000 pop.)	1. Implementation of NSP for Prevention of Malaria Re-introduction/Re-establishment (mandatory requirement for certification) 2. Establish Public Health Intelligence at district level for Imported Malaria 3. Sub-national verification of malaria elimination at state level (Malaria elimination dossier) 4. National guidelines for control of simian malaria 5. National Malaria Elimination Dossier preparation (to be submitted to WHO in 2020)

3.3.4 Hepatitis B incidence per 100,000 population (Proxy: Hepatitis B Notification Rate)

Achievement				Target 2020
2015	2016	2017	2018	
12.65	12.60	15.41	14.52	< 12

Issues and Challenges	Moving Forward
1. True incidence of Hepatitis B is not known, as no Hepatitis B registry is available nationwide. 2. The main burden of Hepatitis B are among adults, especially those born before 1989, prior to the introduction of Hepatitis B vaccine in the NIP. 3. 2019 : 17.06 4. No metadata publicly available from UN	• EMTCT Hepatitis B – antenatal screening & treatment, premarital testing • NSPHBC as guidance policy towards triple elimination : HIV, Syphilis and Hepatitis B; Budgetary requirements • Patient registry • Strengthening case management • Sero-prevalence HBsAg among children to be included in Malaysian National Health Morbidity Survey 2020 • Upscale advocacy, GO-NGO and HCW training

ANNEX C

UHC 9 : Case rate of congenital syphilis (per 100 000 live births)

Achievement				Target 2020
2015	2016	2017	2018	
4.22	2.95	2.00	2.67	< 50

Issues and Challenges	Moving Forward
Challenge of maintaining elimination of vertical transmission of Syphilis: 1. Testing and treating mothers at remote areas. 2. Ensuring private practitioners test and treat mothers early. 3. Retesting all mothers at 28 weeks gestation to detect newly acquired Syphilis	HIV-Syphilis combination test kit to improve accessibility and treatment coverage.

Achievement 2: Reducing Mortality Rates

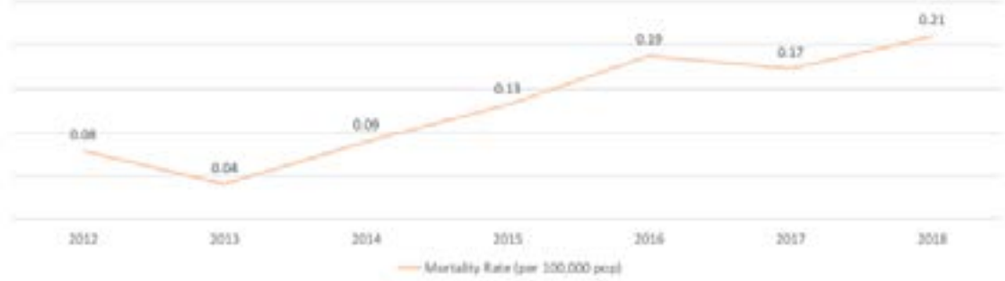
UHC 31 : Dengue mortality rate

Indicator	Achievement				Target 2020
	2015	2016	2017	2018	
Proxy: Number of reported death due to dengue fever and dengue haemorrhagic fever	1.1	0.77	0.55	0.45	<1/100,000

Issues and Challenges	Moving Forward
A rise in number of dengue cases has plagued the ASEAN region	All dengue deaths in Malaysia will be reviewed individually by Dengue Mortality Committee Chaired by State Director of Health and 4 monthly at National Dengue Mortality Committee Meeting Chaired by Deputy Director General (Medical) to discuss the shortfalls and for improvement.

UHC 32 : Mortality rate attributable HBV infection

Achievement				Target 2020
2015	2016	2017	2018	
0.13	0.19	0.17	0.21	0.12



UHC 32 : Mortality rate attributable HCV infection

Achievement				Target 2020
2015	2016	2017	2018	
NA	NA	1.86	1.85	< 1.88

Issues and Challenges	Moving Forward
1. Mortality refers to cirrhosis + hepatocellular carcinoma death due to HCV. 2. Challenge: Difficulty to obtain specific data on cirrhosis and hepatocellular carcinoma deaths due to hepatitis C. The current cancer registry does not provide data fraction attributable to HCV while the mortality statistics only provide cirrhosis and hepatocellular carcinoma death in general and from certain facilities only.	1. Obtain mortality envelope for cirrhosis and hepatocellular carcinoma from mortality data in Malaysia. 2. Set up sequelae surveillance to obtain local data on the fraction of cirrhosis and hepatocellular carcinoma attributable to HCV infection

ANNEX C

Achievement 3: Scaling up Effective Interventions

UHC 19 : Antiretroviral therapy coverage

Achievement				Target 2020
2015	2016	2017	2018	
31%	42%	54%	55%	>90%

Issues and Challenges	Moving Forward
1. Patient issue : Stigma and hesitation in seeking treatment 2. Provider issue : delay in ART initiation – provider waits until patient is ready for ART and can adhere, despite WHO and CPG 2017 suggesting initiation upon diagnosis	1. Accelerate and rapid initiation of ART to all people with HIV 2. Ensure adherence through quality peer support and case management

UHC 20 : Second-line treatment coverage among MDR-TB cases (%)

Achievement				Target 2020
2015	2016	2017	2018	
42%	51%	60%	NA	90%

Issues and Challenges	Moving Forward
1. Delay in diagnosis of MDR-TB 2. Treatment adherence (MDR-TB treatment longer duration, intolerant with side effect of second line medication) 3. MDR-TB cases were associated with high mortality rate 4. Treatment success rate for MDR-TB is analysed using a cohort of 2 years before the current year	1. Enhance the use of Rapid Molecular Test for early diagnosis of presume MDR-TB cases 2. Strengthen counselling for MDR-TB patients and their family 3. Effective management of drug sensitive TB case to prevent development of MDR-TB case

UHC 40 : HIV testing coverage among people living with HIV

Achievement				Target 2020
2015	2016	2017	2018	
98%	95%	83%	86%	>90%

Issues and Challenges	Moving Forward
Testing hard-to-reach key population	Scale-up testing in collaboration with civil society organizations via: Community-Based Testing (CBT), HIV self-testing (HIVST)

UHC 41 : Viral suppression rate among people on ART

Achievement				Target 2020
2015	2016	2017	2018	
85%	94%	95%	97%	>90%

Issues and Challenges	Moving Forward
Inadequate capacity to test all patients routinely (twice a year) as recommended.	Expanding POCT viral load service in all primary care facilities.

SDG 3.3.5 Number of people requiring interventions against neglected tropical diseases (Proxy: MDA coverage among targeted population in filarial endemic states)

Achievement					Target 2020	Status
2015	2016	2017	2018	2019		
Eligible population= 19,326 given drugs= 17684 (MDA coverage 83.1%)	Eligible population= 25,181 given drugs= 25,181 (MDA coverage 96.3%)	Eligible population= 49,333 given drugs= 47,760 (MDA coverage 96.8%)	Eligible population= 16,258 Given drugs= 16,258 (MDA coverage 100%)	Eligible population= 15,036 Given drugs= 14,423 (MDA coverage 95.9%)	Another round of Mass Drug Administration using IDA in IU Debak, Sarawak and 82 hotspot localities in Perak, Pahang, Terengganu and Sabah	On track

Issues and Challenges	Moving Forward
To maintain coverage	Use of triple drug therapy (Ivermectin + Diethylcarbamazine + Albendazole) for MDA in endemic areas

ANNEX C

The Main Drivers of Progress

- An improving global development picture
- Consensus around clear goals
- Viable strategies
- Country-level leadership and the involvement of civil society

An improving development picture

- Economic growth, rising living standards as important driver of population health status

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Consensus around clear goals

- HIV NSP programmatic planning is crafted to achieve the UNAIDS goal of Ending AIDS by 2030, with subgoals of achieving 90-90-90 by 2020.
- National Strategic Plan on Hepatitis B and C aims to achieve by 2030:
  - To diagnose 90% of the population living with viral hepatitis.
  - To reduce the number of new cases of viral hepatitis by 90%.
  - To reduce mortality due to viral hepatitis by 65%.
  - To treat 90% of the population in need of treatment.

Viable strategies

- HIV NSPEA 2016 – 2030 hinges on 4 main strategies:
  - Test and treat
  - Improve quality & coverage of prevention programmes
  - Reduction of Stigma & Discrimination
  - Ensuring quality strategic information

Viable Strategies (Cont'd)

- National Strategic Plan on Hepatitis B and C (2019 – 2023), developed in line with achieving MCG and SDG, to act as a policy document and guide for strengthening the prevention and control of both diseases
- Malaysia launched a 10-year NSP for Elimination of Malaria (2011-2020) with 7 main strategies including to strengthen malaria surveillance system.
- 11TH Strategy in NSP for TB Control (2016-2020)

ANNEX C

Country-level leadership and the involvement of civil society

- KKM-MAC smart partnership
  - The goals, objectives and strategies are aligned with goals of NSPEA 2016 – 2030 regardless of programme funding source.
- Collaboration with NGOs in advocacy on screening among high risk groups for case detection, awareness on Hep B transmission and risk factors

Towards 2030

- **3.3** By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

2030 Targets

Incidence reduction	**TB** 80% reduction in TB incidence rate by 2030 (compared with 2015) **HIV** Reduce new HIV infections to less than 500,000 by 2020 (compared with 2.1 million new HIV infections in 2010), and by 2030 reduce the annual number of new infections by 90% **Malaria** At least 90% reduction in malaria case incidence by 2030 (compared with 2015) and malaria eliminated from at least 35 countries **Hepatitis** Reduce 6–10 million HBV and HCV infections (in 2015) to 900,000 infections in 2030 **NTDs** (note that reaching the individual NTD targets should result in at least a 90% reduction in the number of people requiring interventions against NTDs; this is the combined NTD indicator to be monitored under the SDGs) 25% reduction in the number of cases of dengue (2020, compared with 2010)
Mortality reduction	**TB** A 90% reduction in TB deaths by 2030 (compared with 2015) **HIV** Reduce global AIDS deaths annually to below 500,000 by 2020, and by 80% by 2030 (compared to 2010) **Malaria** At least 90% reduction in malaria mortality rate by 2030 (compared with 2015) **Hepatitis** Reduce 1.4 million HBV and HCV deaths (in 2015) to under 500,000 deaths by 2030 **NTDs** 50% reduction in number of deaths due to dengue by 2020 (compared with 2010)

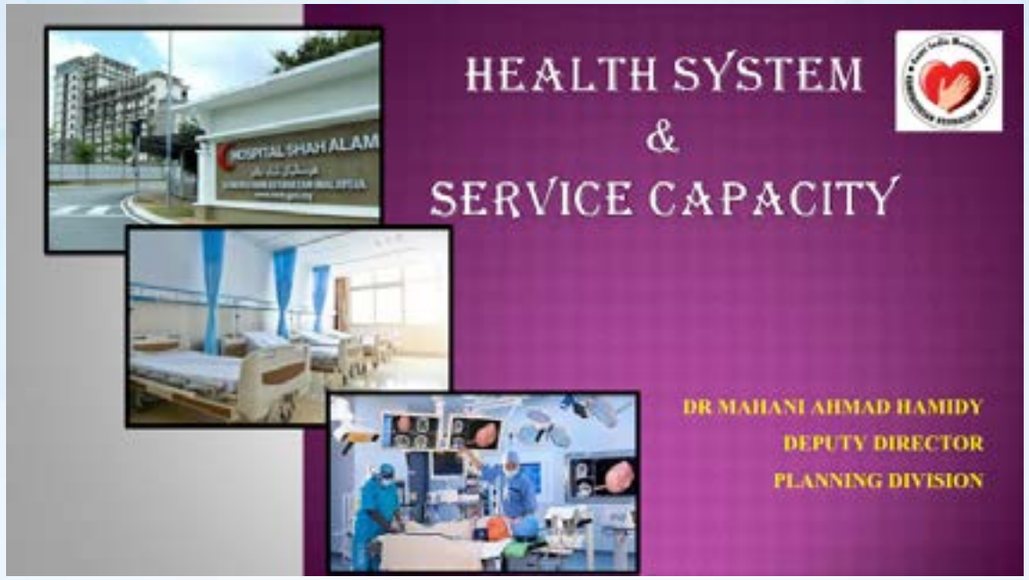
The Joint Approach

- Actions within the health sector
  - The relationship between individual health programmes and the overall health system operations is at the heart of a joint approach to this range of diseases: strengthened and performing health systems are crucial in creating a solid platform for sustainable action.
- Interactions beyond the health sector
  - progress in those dealing with poverty alleviation, nutrition, education, gender equality, clean water and sanitation, affordable and clean energy, reduction of inequalities, sustainable cities and communities, climate action is crucial for a positive impact on health

Examples of interconnection of the relevant disease strategies with broader development strategies

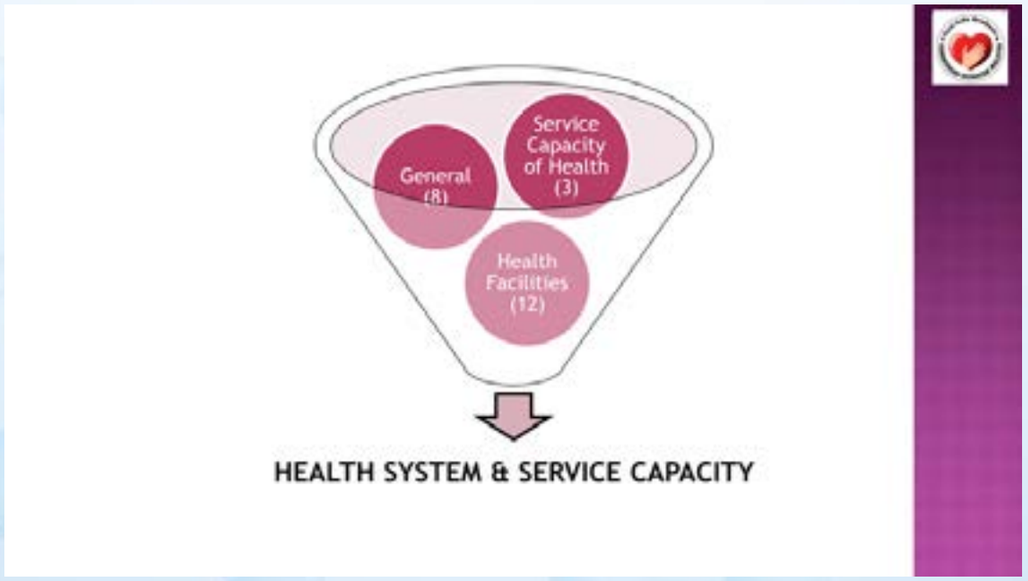
Disease	Relevant interconnected sustainable development strategy
TB	Nutrition (SDG2), gender equality (SDG5), energy (SDG7), reduced inequalities (SDG10), sustainable cities and communities (SDG11)
HIV	Nutrition (SDG2), education (SDG4), gender equality (SDG5), reduced inequalities (SDG10), sustainable cities and communities (SDG11)
Malaria	Education (SDG4), water and sanitation (SDG6), sustainable cities and communities (SDG11), climate change (SDG13)
NTDs	Nutrition (SDG2), education (SDG4), water and sanitation (SDG6), climate change (SDG13)
Hepatitis	Education (SDG4), sustainable cities and communities (SDG11), reduced inequalities (SDG10)

ANNEX D


HEALTH SYSTEM
&
SERVICE CAPACITY
DR MAHANI AHMAD HAMIDY
DEPUTY DIRECTOR
PLANNING DIVISION


OVERVIEW
The report would focus on the health aspect:
Other aspect beyond health i.e. education, social, environment would be reported by other Ministries, DOSM or Agencies
MINISTRY OF EDUCATION MALAYSIA
HEALTHY LIFESTYLE

ANNEX D



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HEALTH SYSTEM SERVICE CAPACITY
(OVERALL ACHIEVEMENT)

- General (8 indicators) - 62.5%
  - 4 of which met target
  - 1 shows improving trend;
  - 2 not improving and
  - 1 indicator not relevant to Malaysia
- Service Capacity for Health (3 indicators) - 100%
  - 2 met target and
  - 1 shows improving trend
- Health facilities (12 indicators) - cannot conclude - > 33%
  - Mostly MOH data
  - Outpatient visits are for both public and private sector)
  - 2 data are survey data (disability)
  - 4 with targets - all achieved
  - Others without target

Note : Data up to 2018 or 2019

GENERAL
HEALTH RELATED SUSTAINABLE DEVELOPMENT GOAL

GOALS 1: NO POVERTY					
INDICATOR	ACHIEVEMENT				TARGET 2020
	2015	2016	2017	2018	
SDG 1.a.2 Proportion Of Total Government Spending On Essential Services (Education, Health And Social Protection) In health context: General Government Health Expenditure As % Of General Government Expenditure	9.86	10.01	10.8	10.51	Abuja Declaration 2001 (15%) ASEAN 2017 : 3.9-15% UMIC 2017 : 5-27% HIC 2017 : 11-23.64%

GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS					
INDICATOR	ACHIEVEMENT				TARGET 2020
	2015	2016	2017	2018	
SDG 16.9.1 Proportion of children under 5 years of are whose birth have been registered* with a civil authority by age.	100%				100%

Note : UMIC - Upper Middle Income Countries
HIC - High Income Countries

ANNEX D

GENERAL

GOAL 17: PARTNERSHIP FOR THE GOALS (to counter check does census include death?)					
INDICATOR	ACHIEVEMENT 2015	2016	2017	2018	TARGET 2030
SDG 17.19.2 (b) Proportion of countries that have achieved 100% birth registration and 80% death registration	Malaysia has conducted at least one population and housing census in the last 10 years and has achieved 80 per cent death registration				Death registration - 80%

INDICATOR	ACHIEVEMENT 2015	2016	2017	2018	TARGET 2020
2 Total current expenditure on health as a percentage of gross domestic product	3.82	3.69	3.71	3.76	ASEAN 2017 ; 2.37-5.92 % UMIC 2017 : 3.5 – 10.36% HIC 2017 : 7.6-17.6%
2.3 Current expenditure on health by general government and compulsory schemes as a percentage of total current expenditure on health	53.43	51.36	51.98	51.31	ASEAN2017:17.21 – 94.82% UMIC 2017 : 14.18-77.71% HIC 2017 : 39-84.53%

Note : UMIC - Upper Middle Income Countries
HIC - High Income Countries

GENERAL

Target 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

INDICATOR	ACHIEVEMENT 2015	2016	2017	2018	TARGET 2020
3.b.2 Total net official development assistance to medical research and basic health sectors	This refers to assistance provided by OECD countries to developing countries and Malaysia is not part of this				

GENERAL

Target 3.8 :Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

INDICATOR	ACHIEVEMENT 2015	2016	2017	2018	TARGET 2020
	2013		2016		
3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income(10%/ 25%)	1.44% / 0.16%		1.96 5 / 0.19%		<5% / < 1%

GENERAL

HEALTH RELATED SUSTAINABLE DEVELOPMENT GOAL

GOALS 1: NO POVERTY					
INDICATOR	ACHIEVEMENT 2015	2016	2017	2018	TARGET 2020
SDG 1.3.1 Proportion of population covered by Social Protection Floors/systems, by sex distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and vulnerable (In health aspect: Social health coverage as a per cent of total population)	100%				

ANNEX D

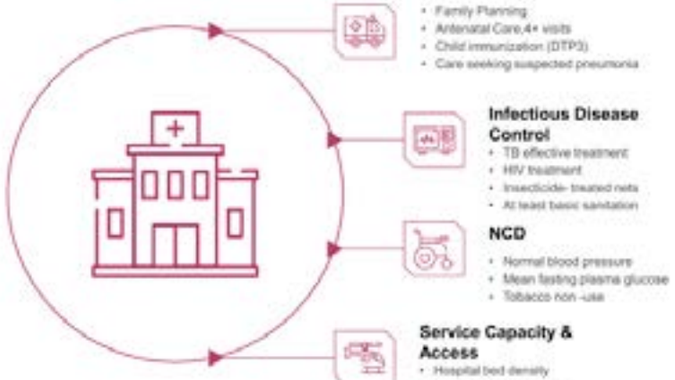
SERVICE CAPACITY OF HEALTH

SDG INDICATOR 3.8.1

Coverage of Essential Health Services:

- Defined as the average coverage of essential services based on tracer intervention that includes reproductive , maternal, newborn and child health , infectious diseases, con- communicable diseases and service capacity and access, among the general and the most disadvantage population.

SDG 3.8.1 TRACER INDICATORS

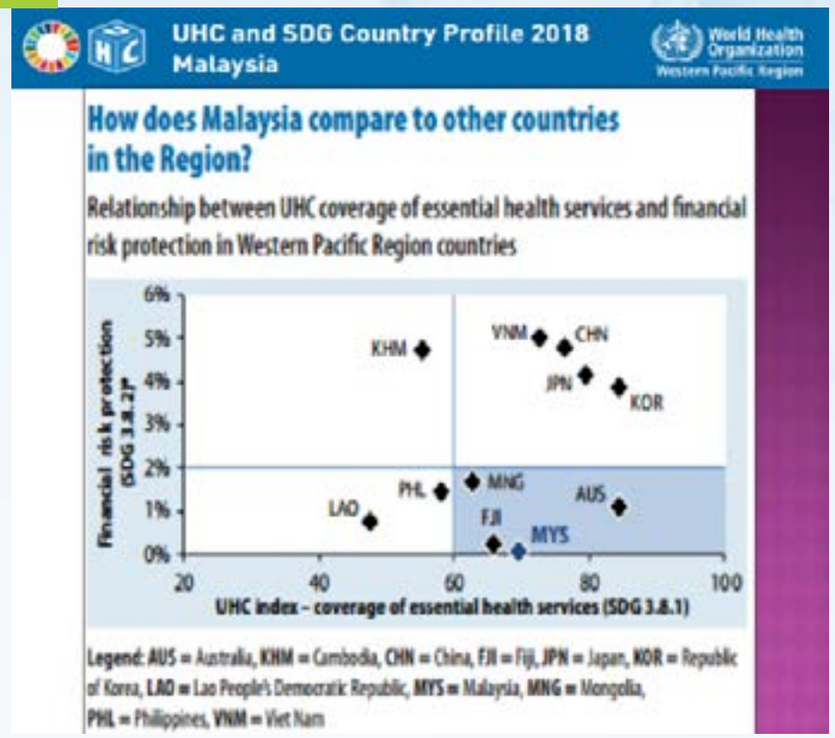


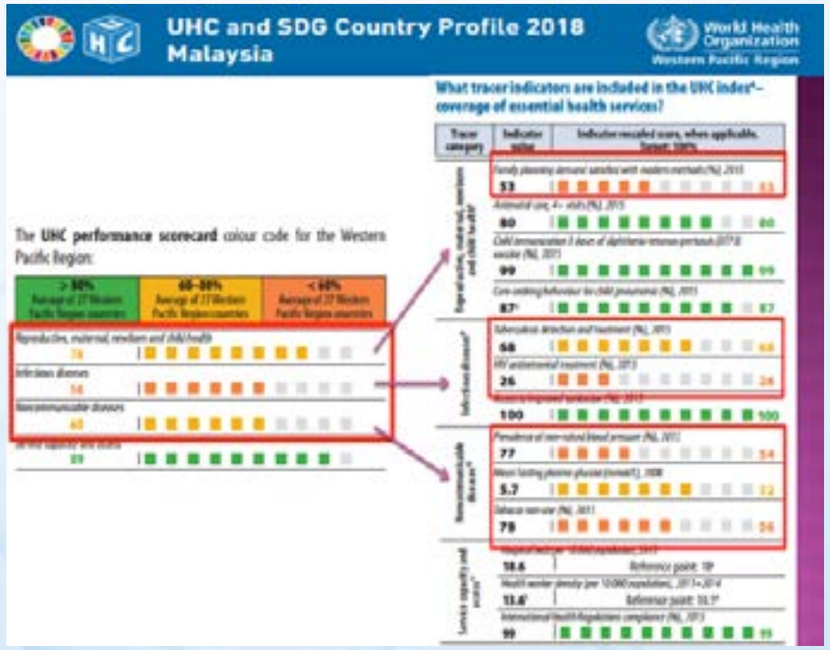
MALAYSIA'S ACHIEVEMENTS IN EACH TRACER INDICATOR

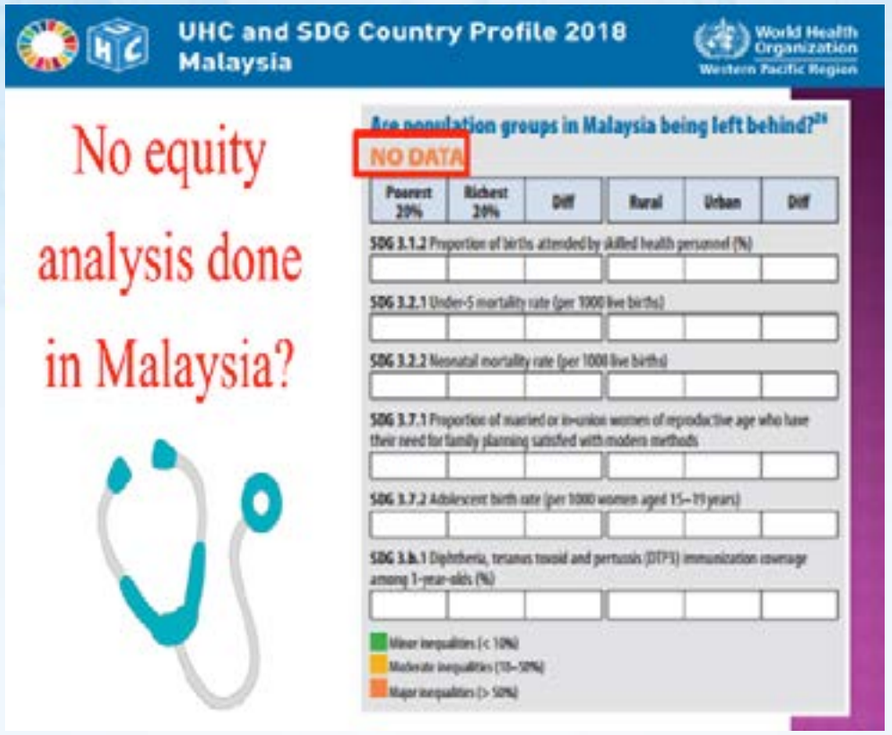
MALAYSIA'S UHC SERVICE COVERAGE INDEX

INDICATOR	ACHIEVEMENT				
	2015	2016	2017	2018	Target 2020
3.8.1 Coverage Of Essential Health Services	70.9	87.6	86.7	87.5 (WHO 70	> 80

ANNEX D







SERVICE CAPACITY OF HEALTH

Target 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

INDICATOR	ACHIEVEMENT				TARGET 2020
	2015	2016	2017	2018	
3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	100%	100%	100%	92%	92%

ANNEX D

SERVICE CAPACITY OF HEALTH

Target 3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States (per 1000 population)					
INDICATOR	ACHIEVEMENT				TARGET 2020
	2015	2016	2017	2018	
3.c.1: Health worker density and distribution					
Doctors	1.525	1.582	1.805	1.888	2.22 (1:450)
Registered Nurses	3.278	3.239	3.316	3.285	3.78
Midwifery Personnels (subset of registered nurse)	1.661	1.682	1.667	1.661	
Dentists	0.209	0.227	0.268	0.299	0.352
Pharmacists	0.345	0.332	0.361	0.414	0.622

HEALTH FACILITIES

INDICATOR	ACHIEVEMENT					TARGET
	2015	2016	2017	2018	2019	2020
5 Bed occupancy rate	71.06	70.13	60.47	68.36		NA
24 Rate of use of assistive devices among people with disabilities(%)	NA	NA	NA	NA	56.5	
27 Patient experience(%)	96.19	96.3	96.77	97.00	96.65	
28 Proportion of health care facilities with basic water supply	100%	100%	100%	100%		100%
29 Proportion of health care facilities with basic sanitation	100%	100%	100%	100%		100%
30 Hospital average length of stay (in days)	4.1	4.07	3.87	3.95		NA
35 Outpatient service utilization rate	3.23	2.4	2.46	2.7		

HEALTH FACILITIES

INDICATOR	ACHIEVEMENT					TARGET
	2015	2016	2017	2018	2019	2020
36 Cataract surgical rate and coverage(%)	109.93	93.23	106.23			>75 (2030)
37 Post-operative sepsis rate(%) (Proxy: ortho clean site surgical infection)	0.53	0.6	0.4	0.35	0.61	<3 (2030)
38 Hospital readmission rate proxy: Percentage of paediatric patients with unplanned readmissions to the paediatric ward within 48 hours of discharge	0.08	0.08	0.08	0.26	0.07	Improving
39 Proportion of the population utilizing the rehabilitation services they require (%)	NA	NA	NA	NA	53.8	

HEALTH FACILITIES

Target 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all					
INDICATOR	ACHIEVEMENT				TARGET 2020
	2015	2016	2017	2018	
3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis.	NA	NA	NA	NA	

ANNEX E

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE:
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SDG 6

Indicator 6.1.1 – Proportion of population using safely managed drinking water services

Indicatior 6.2.1 – Proportion of population using safely managed sanitation services including hands washing facilities with soap and water

Achievement Based on Data Availability

ANNEX E

SDG 6.1.1 – Proportion of population using safely managed drinking water services

- Data for 2015 – 2017 are based on Malaysia Water Industry Guide, (MWIG) 2016 - 2018 – published by MWA in collaboration with KATS and SPAN.
- Data for 2018 is based on Water and Sewerage Statistics 2019 – published by SPAN.
  - Does not cover Sabah & Sarawak.
- Data for W.P. KL & Putrajaya are reported under Selangor.
- All data (urban and rural) are based on connections to reticulated public water supply systems.
- Rural alternative water supply data is not included.

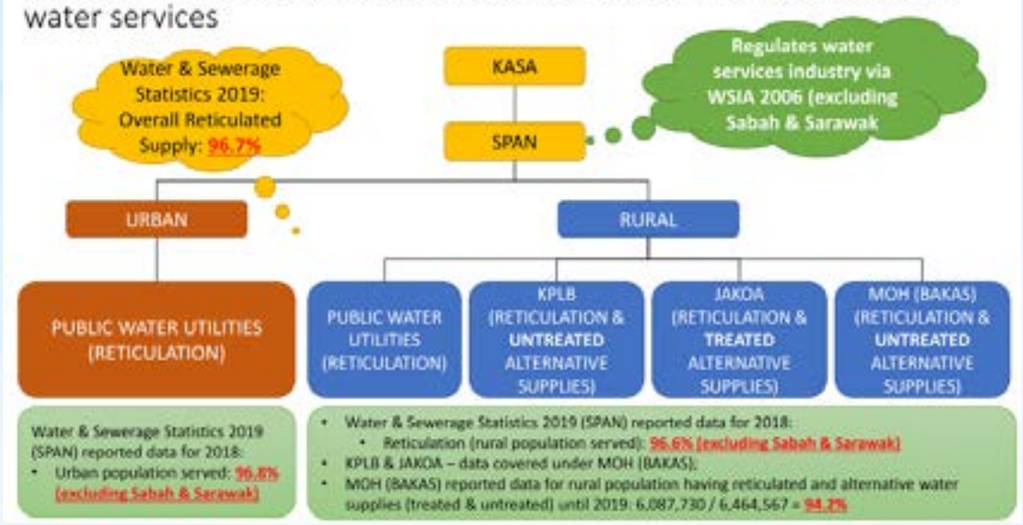
Disaggregated data by:		2015	2016	2017	2018	Target 2020
Malaysia	Total	95.5	95.3	95.5	96.7	99% (11th MP)
	Rural	93.0	93.4	93.9	96.6	
	Urban	97.2	97.2	97.2	96.8	
Perlis		99.5	99.5	99.5	99.5	
Kedah		98.3	98.3	98.3	98.3	
Pulau Pinang		99.9	99.9	99.9	99.9	
Perak		99.6	99.6	99.6	99.6	
Selangor		99.8	99.8	99.8	99.8	
W.P. Kuala Lumpur*		NA	NA	NA	NA	
W.P. Putrajaya*		NA	NA	NA	NA	
W.P. Labuan		100.0	100.0	100.0	100.0	
Negeri Sembilan		99.9	99.9	99.9	99.9	
Melaka		100.0	100.0	100.0	100.0	
Johor		99.8	99.8	99.8	99.8	
Pahang		98.0	98.0	98.0	98.0	
Terengganu		96.0	96.0	96.0	96.0	
Kelantan		64.0	64.7	68.0	69.3	
Sabah		87.9	89.4	89.0	NA	
Sarawak		94.2	89.2	89.6	NA	

SDG 6.2.1 – Proportion of population using safely managed sanitation services including hands washing facilities with soap and water

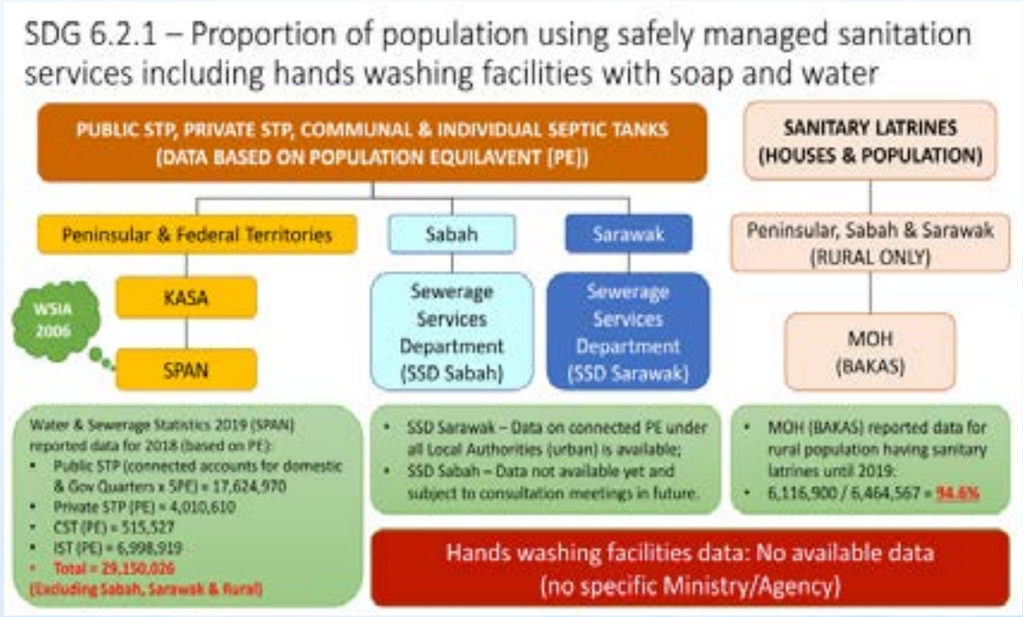
- No data available from KeTTHA/KATS/KASA, SPAN, Sabah SSD, Sarawak SSD.
- Rural Sanitary Latrine Data from KKM is used as proxy.

Disaggregated data by:		2015	2016	2017	2018	2019	Target 2020
Malaysia	Total	NA	NA	NA	NA	NA	NA
	Rural	94.7	95.8	96.0	95.3	94.6	
	Urban	NA	NA	NA	NA	NA	
Perlis	Rural	97.91	97.51	97.23	97.00	98.60	
	Urban	NA	NA	NA	NA	NA	
Kedah	Rural	92.47	97.70	97.14	96.33	97.66	
	Urban	NA	NA	NA	NA	NA	
Pulau Pinang	Rural	99.59	95.74	95.98	96.27	90.90	
	Urban	NA	NA	NA	NA	NA	
Perak	Rural	94.79	97.47	97.52	97.56	97.74	
	Urban	NA	NA	NA	NA	NA	
Selangor	Rural	98.38	96.30	95.17	94.71	94.73	
	Urban	NA	NA	NA	NA	NA	
W.P. Kuala Lumpur		NA	NA	NA	NA	NA	
W.P. Putrajaya		NA	NA	NA	NA	NA	
W.P. Labuan		NA	NA	NA	NA	NA	
Negeri Sembilan	Rural	99.73	98.27	98.74	98.90	98.01	
	Urban	NA	NA	NA	NA	NA	
Melaka	Rural	99.97	99.97	99.98	100.00	100.00	
	Urban	NA	NA	NA	NA	NA	
Johor	Rural	98.29	98.17	97.34	96.99	96.19	
	Urban	NA	NA	NA	NA	NA	
Pahang	Rural	86.14	93.13	96.41	94.56	96.39	
	Urban	NA	NA	NA	NA	NA	
Terengganu	Rural	98.27	99.95	99.97	99.98	99.88	
	Urban	NA	NA	NA	NA	NA	
Kelantan	Rural	99.43	98.78	97.75	97.62	97.91	
	Urban	NA	NA	NA	NA	NA	
Sabah	Rural	83.23	84.08	82.35	82.82	82.64	
	Urban	NA	NA	NA	NA	NA	
Sarawak	Rural	94.06	94.20	98.62	93.59	89.21	
	Urban	NA	NA	NA	NA	NA	

SDG 6.1.1 – Proportion of population using safely managed drinking water services



SDG 6.2.1 – Proportion of population using safely managed sanitation services including hands washing facilities with soap and water



ANNEX E

Current Situation

SDG 6.1.1 – Proportion of population using safely managed drinking water services

- Safely managed drinking water services for rural areas is still lacking compared to urban areas.
- In the 11th MP, the Government aims to have 99% of the population served by clean and treated water by 2020 (Strategy Paper 16 – Ensuring Quality and Efficient Water and Sewerage Services.
- A comprehensive plan to provide safe drinking water to rural communities by relevant ministries is needed.

SDG 6.2.1 – Proportion of population using safely managed sanitation services including hands washing facilities with soap and water

- Safely managed sewerage services for rural areas is still lacking far behind compared to urban areas.
- A comprehensive rural development policy was launched in 2019 whereby sewerage services and solid waste management are included in the development scope of KPLB.
- Sewerage Services Department (Peninsular) is responsible for the development of sewerage infrastructures in urban areas.
- IWK's services are concentrated in urban areas (regulated by SPAN).
- Majaari (Kelantan) provides services to urban areas (not regulated by SPAN).
- The Sewerage Services Department of Sabah and the Sarawak Sewerage Services Department are responsible for providing sewerage services to urban areas in their respective states (not regulated by SPAN).

Moving Forward

- EPU had formed a drafting committee in 2019 to develop a Strategy Paper for Water Sector Transformation for the 12th Malaysia Plan.
- It is a comprehensive paper that would address all aspects of water and sanitation in the country.
- The strategies would go beyond the 12th MP towards Vision 2040 for Water Sector Transformation.
- The draft has been completed in early 2020 and a Roadmap is in the process of development.

ANNEX F

NSP-NCD

Non-Communicable Diseases (& Mental Health)

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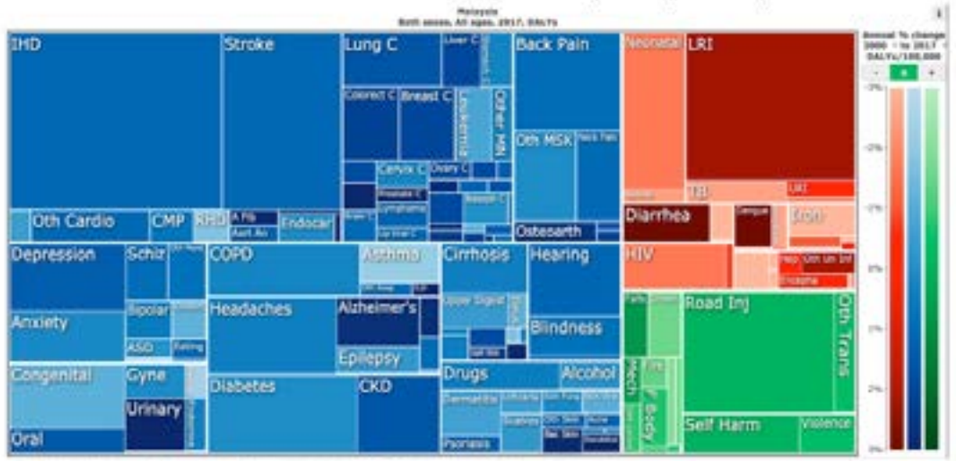
Disease Control Division
Ministry of Health Malaysia

Health in SDG and UHC Seminar
MH Setia Alam, 11 August 2020

Burden of Disease, Malaysia (2017)



Institute for Health Metrics and Evaluation (IHME). Health-related SDGs. Seattle, WA: IHME, University of Washington.
Available from https://vizhub.healthdata.org/gbd-compare/ (Accessed 8 August 2020)

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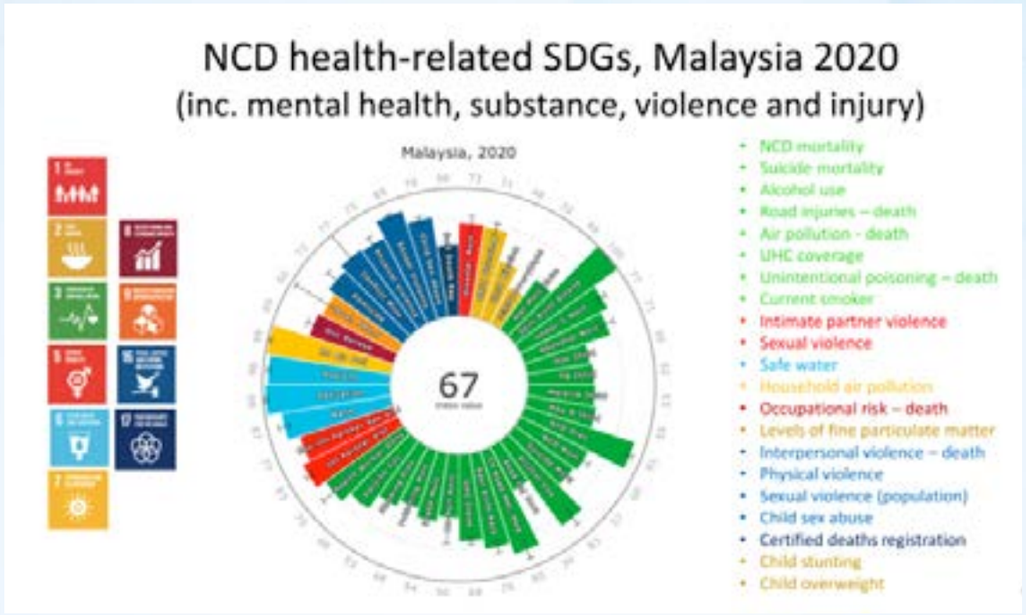
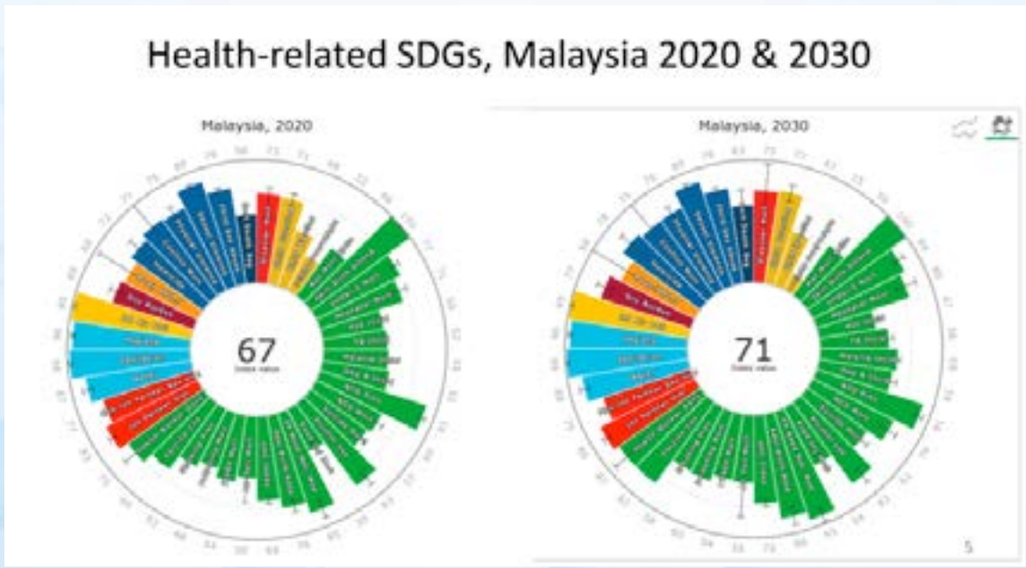
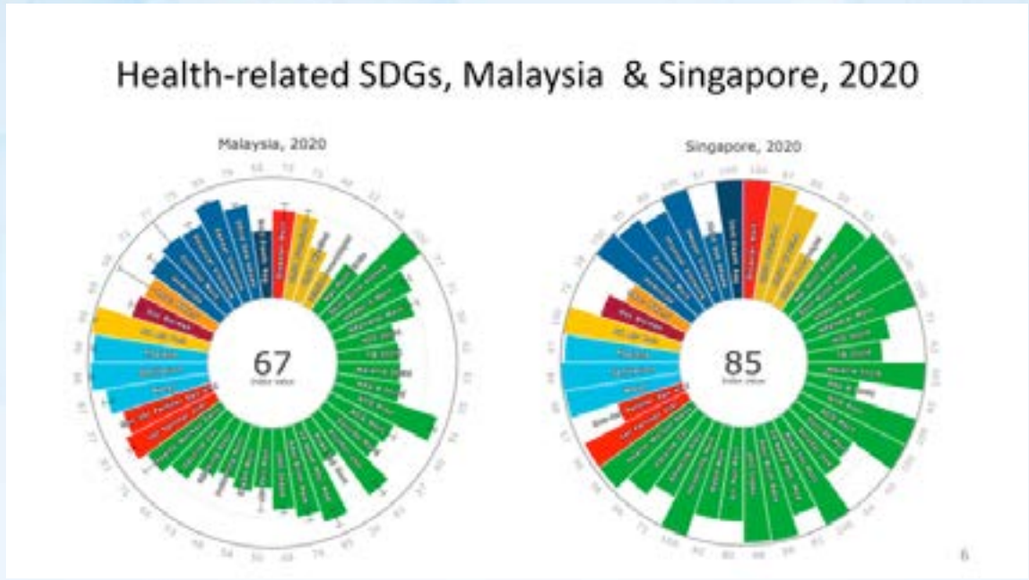
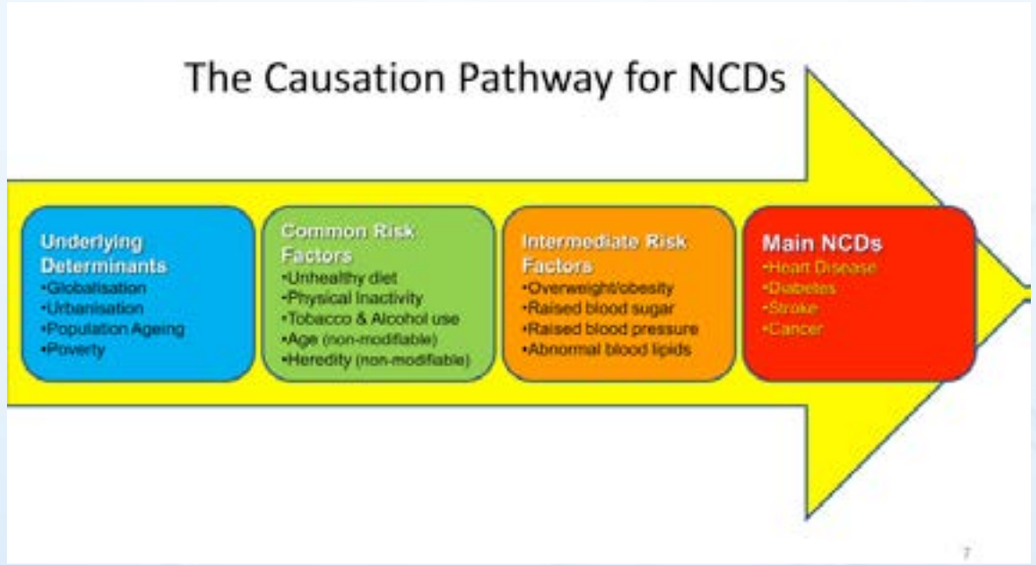

NCD health-related SDGs, Malaysia 2020
(inc. mental health, substance, violence and injury)
Malaysia, 2020
67
NCD mortality
Suicide mortality
Alcohol use
Road injuries – death
Air pollution - death
UHC coverage
Unintentional poisoning – death
Current smoker
Intimate partner violence
Sexual violence
Safe water
Household air pollution
Occupational risk – death
Levels of fine particulate matter
Interpersonal violence – death
Physical violence
Sexual violence (population)
Child sex abuse
Certified deaths registration
Child stunting
Child overweight


Health-related SDGs, Malaysia 2020 & 2030
Malaysia, 2020
67
Malaysia, 2030
71
5


Health-related SDGs, Malaysia & Singapore, 2020
Malaysia, 2020
67
Singapore, 2020
85
6


The Causation Pathway for NCDs
Underlying Determinants
•Globalisation
•Urbanisation
•Population Ageing
•Poverty
Common Risk Factors
•Unhealthy diet
•Physical inactivity
•Tobacco & Alcohol use
•Age (non-modifiable)
•Heredity (non-modifiable)
Intermediate Risk Factors
•Overweight/obesity
•Raised blood sugar
•Raised blood pressure
•Abnormal blood lipids
Main NCDs
•Heart Disease
•Diabetes
•Stroke
•Cancer
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Mental health

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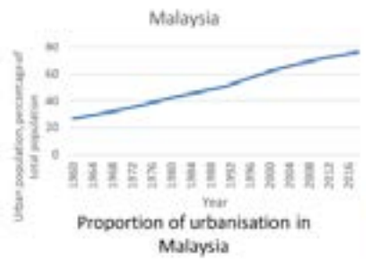
Population age structure for Malaysia, 2010 & 2040



Proportion of urbanisation in Malaysia

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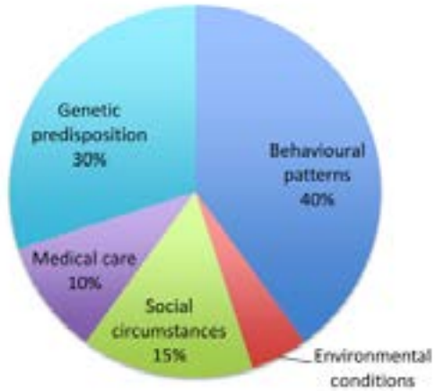
Determinants of Health: Proportional contribution to premature death



Our health is determined by much more than the health services we receive

Determinants of Health and their contribution to premature death (adapted from McGinnis, et al., 2002)

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Health-related behaviours of Malaysians (1)

Health Screening (NHMS 2019)

- 1 in 2 undiagnosed high blood sugar and high blood pressure
- 3 in 4 women aged 40 and above have never had a mammogram
- 1 in 2 women aged 18 and above did not practice Breast Self Examination
- 60% of women aged 20 and above did not undergo pap smear test in the past 3 years

Outpatient healthcare utilisation (NHMS 2019)

- 1 in 12 used outpatient healthcare services (past 2 weeks)
- 40% older adults (60 years and over)
- Public healthcare facilities: 64.6%
- Reasons:
  - 74.1% current health issues
  - 37.1% follow up
  - 26.3% medical check-up

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Health-related behaviours of Malaysians (2)

1 in 3 adults have low health literacy (NHMS 2019)

1 in 5 Malaysians rated their health as "not good" (NHMS 2019)
Among those who were sick:
- 57.5% sought care / advice from healthcare provider
- 22.8% self-medicate
- 16.4% sought advice from family or friends
- 11.3% sought advice from media

Preferred source of information (T2D patients, MOH health clinics)
- Face-to-face: healthcare providers ~60%
- Traditional media: TV ~50%, radio 13%, newspaper 13%
- New media: WhatsApp ~50%, search engines ~33%, social media ~30%
- Apps: ~2%

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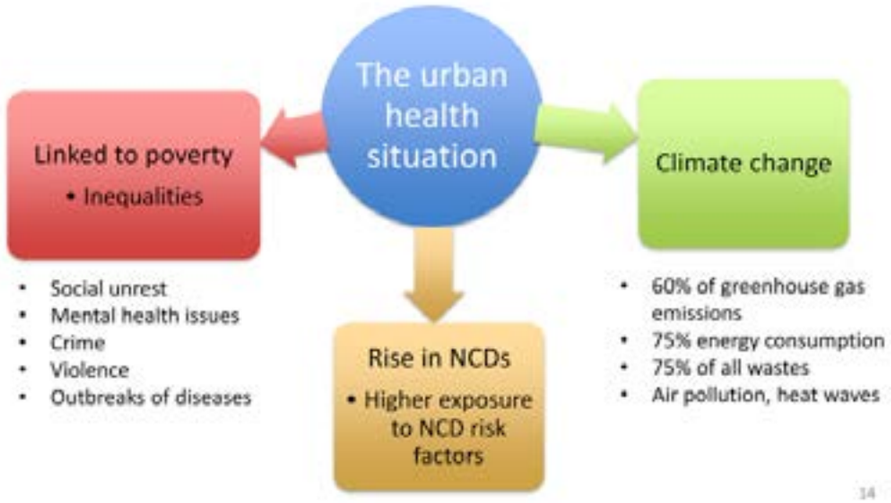

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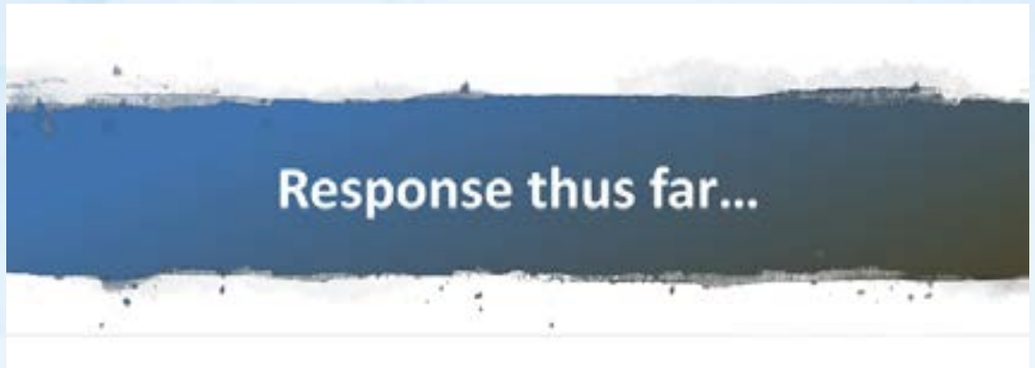

WHO: How to address NCDs

ANNEX F

Policy Documents relating to NCD

- The National Strategic Plan for NCD (NSP-NCD) 2010-2014 was the first national action plan that provided an integrated framework as a response to NCDs in Malaysia, followed by NSP-NCD 2016-2025.
- Implementation of NCD prevention and control policies and regulatory interventions was supported by a Cabinet-level Committee chaired by the Deputy Prime Minister.
- The commitment to tackle NCDs is now reflected in the Eleventh Malaysia Plan (2016-2020) and MOH Strategic Plan.
- Within the NSP-NCD 2016-2025, there were seven specific NCD policies that broadly address the WHO voluntary global targets on NCDs and its risk factors.

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Policy Documents relating to NCD

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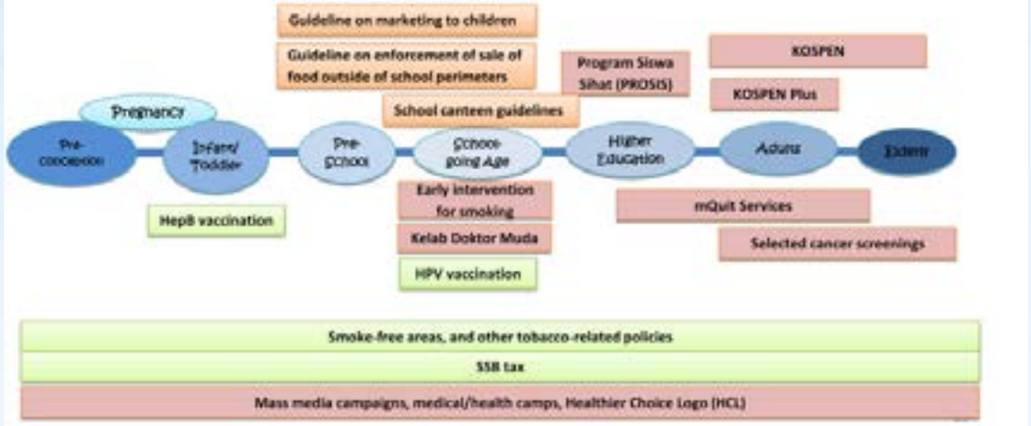
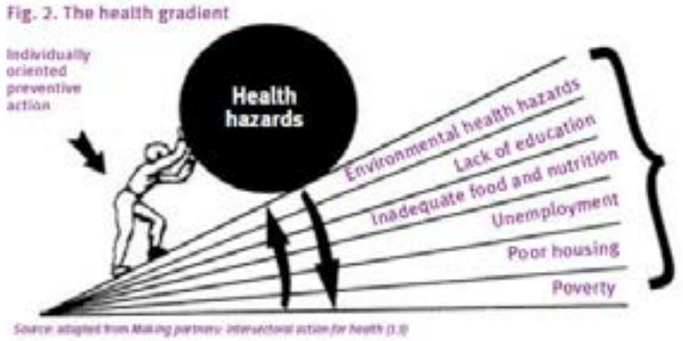
A selection of interventions for NCD prevention in Malaysia (life-course approach)



If we want people to make healthy choices we have to make healthy choices available, accessible and affordable…

Social Determinants of Health



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SWOT Analysis of NCD Prevention and Control in Malaysia (MOH perspective)

Strength • Policy documents available which shows some level of commitment by MOH • Availability of baseline parameters to evaluate intervention available • Presence of a high level inter-ministerial committee	**Weakness** • Gaps in implementation and enforcement • Policy documents not accompanied by budget and resource allocation • Inadequate spending on healthcare • Current healthcare system barely coping with the increasing burden of NCDs
Opportunity • Country is evolving into an upper middle income country which provide opportunities to improve general health • Feasibility to introduce new interventions as MOH is a federal agency	**Threat** • Lack of political commitment for hard policies • Strong industry lobbying – tobacco, food & beverages • Public objections/resistance • Lack of strong civil society

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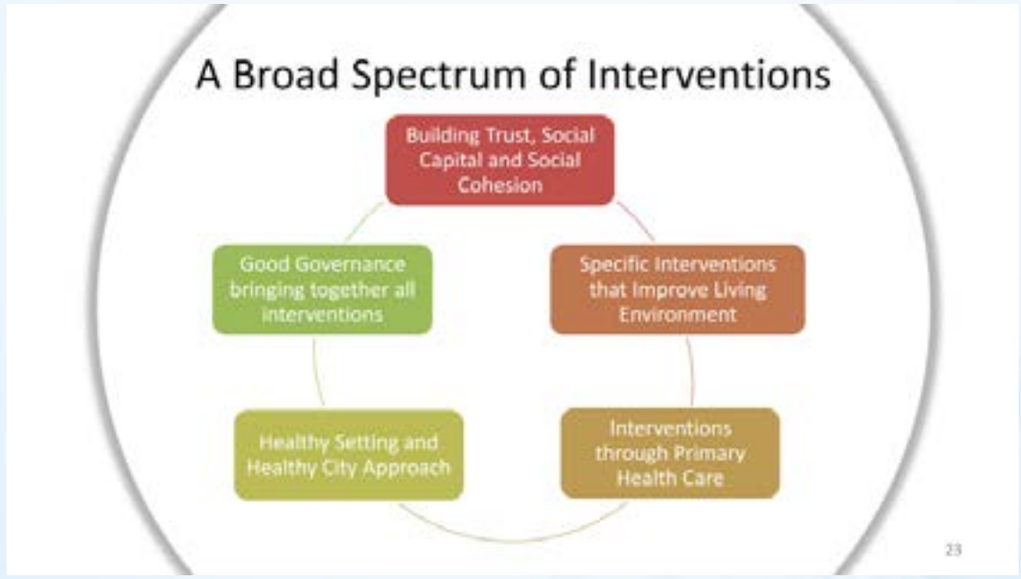

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Specific Interventions that Improve Living Environment

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Action in cities can drive progress towards multiple SDGs

- Reduce air pollution (SDGs 3.9 and 11.6)
- Combat NCDs and related risks like obesity (SDG 3.4)
- Access to public transport, with special attention to women, children, persons with disabilities and older persons (SDG 11.2)
- Sanitation and waste management (SDGs 3.9 and 11.6)
- Access to safe public and green spaces, particularly for women, children, older persons and persons with disabilities (SDG 11.7)
- Climate action – climate resilience (SDG 13)

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How do we apply these solutions in Malaysia?

note

HEALTH IN THE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL HEALTH COVERAGE

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