SUSTAINABLE DEVELOPMENT GOALS

Why Children Need South East Asia to Achieve SDG 3 Goals

Successes & Challenges in Implementing SDG 3 in South East Asia

Amar-Singh HSS
Consultant Paediatrician, Malaysia

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About the Author:

Dato' Dr Amar-Singh HSS, Cert Theology (Aust, Hons), MBBS (Mal), MRCP (UK), FRCP (Glasg), MSc Community Paediatrics (Ldn, distinction), is a Senior Consultant Paediatrician. He served the Malaysian civil service for >35 years and led both a regional Paediatric Department and a Clinical Research Centre. He has a long standing interest in children in the community, disability, family self-help groups, NGOs, child abuse, adolescents, disadvantaged and marginalised children (especially the indigenous). He has assisted the health ministry to revise the child health services and introduced a number of national programmes for children. He is an active child advocate and is the recipient of the "Outstanding Asian Paediatrician Award" 2012 and "SENIA Advocacy Award" 2016. He has established a number of NGOs and family support groups. He is also a Senior Fellow at the Galen Centre for Health and Social Policy. With his wife, Datin Dr Lim Swee Im, he also offers spiritual direction and counselling.

Contact Email:

amarhss@gmail.com

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Summary

The SDGs are critical milestones for any nation, including South East Asia. They chart the key direction each nation should take in poverty reduction, health gains, reducing inequalities, climate action; to name a few.

Although overall progress made has been insufficient to achieve the 2030 aims, Goal 3 (Health) appears to be on target for child and maternal mortality for some nations. However social determinants of health and inequalities remain even for nations having active targets. There are population groups and regions that are neglected and still in poverty with higher mortality rates. There are also areas with inadequate data, others where progress has been limited and a lack of focus on morbidity.

We can no longer rely on traditional and incremental approaches to improve health. We require a transformative approach that focuses on inclusive growth to achieve equality. If we are serious about child health in our region, then we require radical changes in approach and not 'more of the same'. The children of South East Asia need for us to achieve SDG 3 goals for ALL, not as an average or for a portion of the community. The SDG 3 goal is not a figure for these children but a lifeline of hope, if we are prepared to truly invest in their health.

Introduction

The UN's Sustainable Development Goals (SDGs) have set a bench mark for all nations to reach, and one that allows for a comparison between countries. The SDG Goal 3 for Health aims to 'Ensure healthy lives and promote well-being for all at all ages' (United Nations 2021). The Goal addresses major health priorities including maternal and child health, communicable and non-communicable diseases, access for all for affordable medicines and vaccines, and universal health coverage. Childhood mortality is an important indicator of socio-economic development as well as the health status of any population or nation.
This paper focuses on SDG 3 (especially Goal 3.2) in South East Asian countries and looks at successes and challenges in reducing preventable deaths of newborns and children under 5 years of age.
SDG 3.2 Target by 2030 (United Nations Department of Economic and Social Affairs 2021):

- Reduce neonatal mortality to at least 12 per 1,000 live births
- Reduce under-5 mortality to at least 25 per 1,000 live births.

Note:

1. There have been data limitations in preparing this paper. Granular data for each nation has been lacking and limits a detailed evaluation of the quality of child health services and investments by respective governments.
2. To allow for comparisons between countries I have elected to use the same standard databases for all nations (UNICEF database, Our World In Data, Institute for Health Metrics and Evaluation, World Bank, Asian Development Bank).
3. For purposes of brevity, the 'Lao People's Democratic Republic' will be referred to as 'Laos' and 'Brunei Darussalam' as 'Brunei'; no disrespect is intended.

Demographics

The 11 Countries that make up South East Asia are very diverse nations in terms of land mass, economic development and population size and structure. The countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam.

Collectively they comprise a total population of 655 million with an under-5 population of 57 million children and a total childhood population of 201.6 million (under 18 years). Close to 11.5 million children are born yearly in these countries. In 2019, 278,300 children under-5 died in the region; another 48,070 deaths were in children aged 5-14 years (Table 1).

The table also provides data on the adolescent population of each country, the number of deaths in the age group 5-14 years (one fifth the volume of under-5 deaths) and the percentage of the nation's gross domestic product (GDP) spent on health by the respective governments (does not include private sector expenditure on health).

Table 1: Key Demographics for South East Asian Countries, 2018

Country	Total Population (1000s)	Under 5yr Population (1000s)	10-19yr Population (1000s)	Under 18yr Population (1000s)	Annual Births (1000s)	Number of Neonatal Deaths (2019 data)	Number of Under 5yr Deaths (2019 data)	Number of deaths children aged 5–14yr (2019 data)	% of GDP Spent on Health
Brunei	429	34	67	119	6	38	73	16	2.3
Cambodia	16,250	1,774	3,041	5,944	365	5,257	9,647	1,630	1.3
Indonesia	267,671	24,350	46,369	85,121	4,834	59,591	114,994	24,340	1.2
Laos	7,061	788	1,447	2,726	166	3,637	7,520	1,243	0.9
Malaysia	31,528	2,606	5,262	9,191	528	2,448	4,513	1,297	2.1
Myanmar	53,708	4,518	10,059	17,238	943	21,134	41,896	4,506	1.1
Philippines	106,651	11,035	21,091	39,276	2,191	28,992	59,751	8,952	1.4
Singapore	5,758	236	548	872	50	46	128	32	2.2
Thailand	69,428	3,692	8,775	14,537	718	3,759	6,444	3,408	2.8
Timor-Leste	1,268	169	304	571	37	742	1,645	257	2.3
Viet Nam	95,546	7,831	13,324	26,017	1,598	16,587	31,689	3,632	2.4
Total	655,298	57,033	110,287	201,612	11,436	142,231	278,300	48,070	-

Source: UNICEF database, updated September 2020 and State of the World's Children Report 2019

Current Achievements

Table 2 shows the change in under five mortality rates for South East Asian countries from 1950 to 2019. All countries have made dramatic improvements in mortality rates, with enormous reductions in the past 70 years. However it should be noted that rates decline earlier in nations with higher GDPs but have stagnated in these countries the past 15-20 years (see Brunei, Malaysia, Singapore).

Countries in the South East Asian region can be divided into three groups based on performance (Figure 1):

1. Brunei, Indonesia, Malaysia, Singapore, Thailand and Viet Nam have achieved the SDG under-5 mortality target.
2. Cambodia and Philippines are on target to achieve the target.
3. Laos, Myanmar and Timor-Leste require additional support to make it happen.

If you track the data diagonally and compare with equivalent rates in other countries an idea of what stage of socio-economic development and health status can be obtained (e.g. rates in Myanmar in 2019 are similar to those for Brunei and Malaysia in the 1970s).

Neonatal mortality rates for South East Asian countries (Table 3 and Figure 1) show a similar trend and achievements for the countries as seen in under-5 mortality. Note that neonatal mortality comprises approximately half of all under-5 mortality in most countries, underlying the need to support newborns with more resources as a means to significantly reduce under-5 deaths.

Table 2: Under Five Mortality Rates for South East Asian Countries, 1950-2019

Country	1950	1960	1970	1980	1990	2000	2010	2015	2016	2017	2018	2019	Annual rate of reduction*
Brunei	211.5	122.4	54.0	20.7	13.3	10.3	9.7	10.6	10.8	11.0	11.2	11.4	-0.6
Cambodia				180.0	115.9	106.3	44.0	31.6	30.1	28.8	27.6	26.6	7.4
Indonesia		223.1	166.0	120.6	84.0	52.2	33.9	27.8	26.7	25.7	24.8	23.9	4.1
Laos				205.2	153.0	106.4	68.0	53.6	51.3	49.2	47.3	45.5	4.5
Malaysia	166.3	92.6	53.3	30.2	16.6	10.2	8.1	8.1	8.2	8.3	8.4	8.6	1.5
Myanmar			173.8	139.8	114.6	89.0	63.4	51.8	49.9	48.1	46.4	44.7	3.6
Philippines		103.4	83.8	79.5	56.6	37.7	31.7	29.8	29.3	28.7	28.0	27.3	1.6
Singapore	142.5	47.7	27.1	14.8	7.7	3.9	2.8	2.7	2.7	2.7	2.6	2.5	1.8
Thailand	207.8	146.4	98.5	60.6	36.9	22.0	13.6	10.8	10.3	9.9	9.4	9.0	4.9
Timor-Leste					174.7	108.1	61.8	50.8	49.0	47.3	45.6	44.2	4.8
Viet Nam			82.1	68.5	51.3	29.7	22.9	21.5	21.2	20.8	20.4	19.9	2.0

Source: UNICEF database, updated September 2020

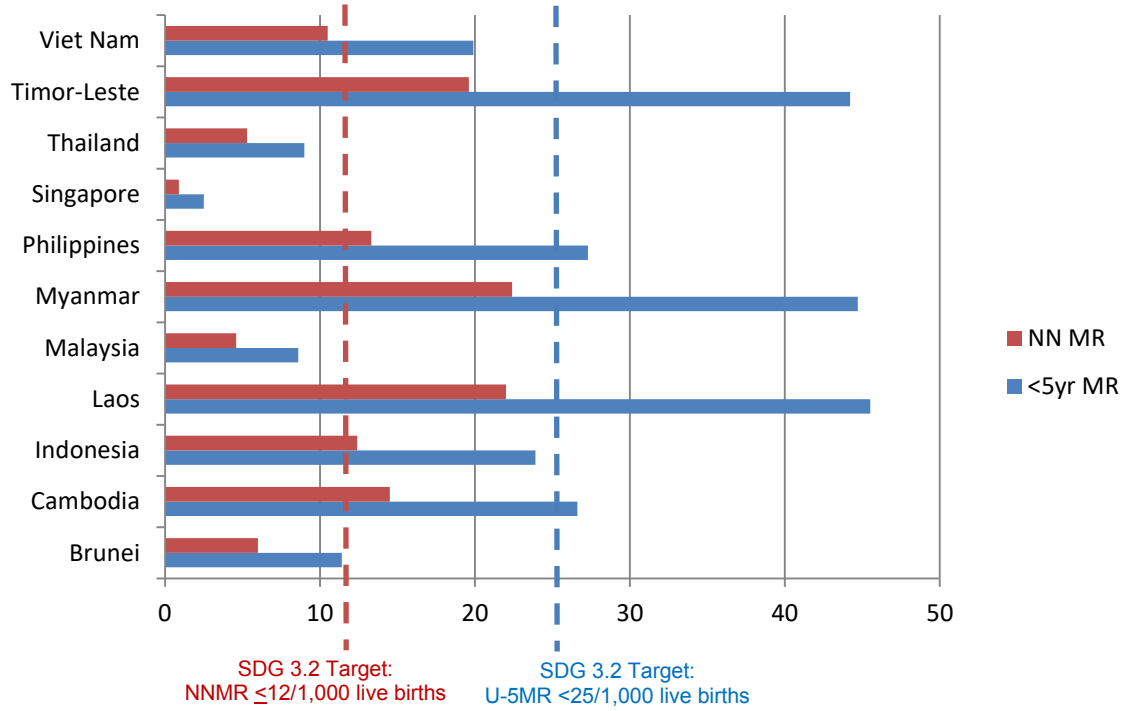
*Annual rate of reduction in under-5 mortality rate (%) from 2000–2018

Table 3: Neonatal Mortality Rates for South East Asian Countries, 1955-2019

Country	1955	1960	1970	1980	1990	2000	2010	2015	2016	2017	2018	2019
Brunei					5.6	5.0	4.8	5.2	5.4	5.6	5.8	6.0
Cambodia				52.3	40.1	35.3	21.2	16.9	16.3	15.7	15.1	14.5
Indonesia	61.9	56.6	48.1	38.3	30.6	22.8	17.4	14.5	13.9	13.4	12.9	12.4
Laos					47.2	38.0	28.6	24.4	23.7	23.1	22.5	22.0
Malaysia	25.8	21.5	16.3	12.8	7.6	4.9	4.2	4.2	4.3	4.4	4.5	4.6
Myanmar					47.4	37.3	28.2	24.8	24.1	23.6	23.0	22.4
Philippines	29.4	27.3	25.7	24.7	19.3	16.3	15.0	14.4	14.3	14.0	13.6	13.3
Singapore			15.1	8.7	4.1	1.6	1.1	1.0	1.0	1.0	0.9	0.9
Thailand	62.7	57.5	46.3	30.9	20.5	12.8	8.0	6.3	6.1	5.8	5.5	5.3
Timor-Leste					55.3	36.8	24.5	21.4	21.0	20.5	20.0	19.6
Viet Nam				25.6	23.4	15.4	12.0	11.4	11.2	11.0	10.7	10.5

Source: UNICEF database, updated September 2020

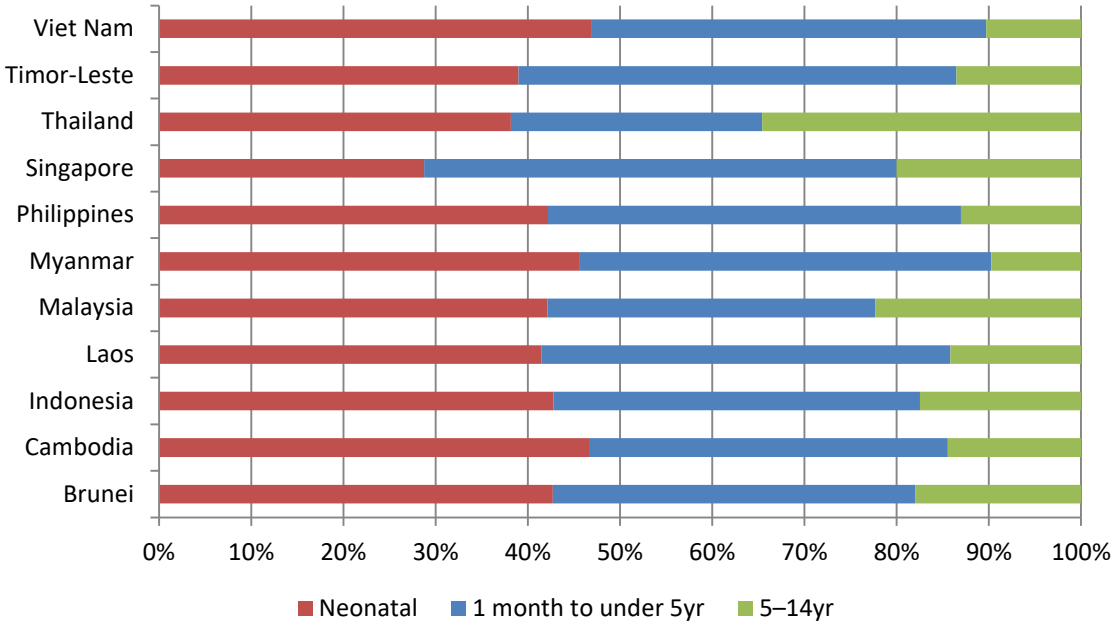
Figure 1: Under Five and Neonatal Mortality Rates for South East Asian Countries, 2019



Source: UNICEF database, updated September 2020

The figure below shows childhood deaths by age group from 0-14 years by age category. Due to SDG targets, the focus is often on the under-5 years, especially the neonatal period. However there is also a need to look at all under 18 year deaths as they are not insignificant and often related to injuries (predominantly road and drowning) which are preventable.

Figure 2: Childhood Deaths by Age Group (0-14 years) for South East Asian Countries, 2019



Source: UNICEF database, updated September 2020

Figure 3 and Table 4 show the share and rank of under-5 deaths. The top three categories of deaths for all countries are prematurity (and associated neonatal problems), congenital abnormalities and lower respiratory tract infections (pneumonia). Infective conditions (pneumonia, diarrhoea, meningitis, measles, pertussis) have a bigger impact on nations still to achieve the SDG 3.2 target. The proportion of deaths due to congenital abnormalities is larger in more economically developed nations but possibly underreported in all nations.

Drowning is ranked as the fourth cause of death for three nations and rates six or seven as a cause of death for four other countries. It is as yet a poorly recognised cause of death for children in the region (underreported) and requires more attention and better data collection. In addition it is surprising that road traffic injuries do not appear in the top ten causes of death for all nations.

There are problems with the cause of death data as classification of deaths varies between countries and it is important to standardise this work towards reporting the underlying cause of deaths. It would be expected that malnutrition as an underlying cause of death would feature for some of the countries but classification of deaths may result in end causes of deaths being notified. OECD/WHO (2018) estimates that malnutrition is the underlying cause of death in 35% of all under-5 deaths and a major impediment to SDG progress. Hence malnutrition remains an important hidden cause of death for the region.

Some countries do not have an accurate registration of deaths (not all deaths identified) and most countries have a proportion of deaths that are not medically certified (Mathers et al 2005). Using Malaysia as an example, in 2019 37.2% of the 173,746 total deaths (adult and children) were not medically certified (Department of Statistics, Malaysia 2020). Note that discussions with the Royal Malaysia Police has resulted in police officers being required to

inform the nearest hospital/clinic and get assistance to determine the cause of death for children under 5 years before issuing a burial permit.

In addition the percentage of unreported deaths in each nation is uncertain, Using Malaysia as an example, some regions (e.g. Sabah, Borneo) in the 2001-2010 decade were still grossly under reporting deaths due to vast rural communities. This has improved and hence resulted in the under-5 mortality rate remaining stagnant as reporting improves. This may also be true for some of the other South East Asian countries.

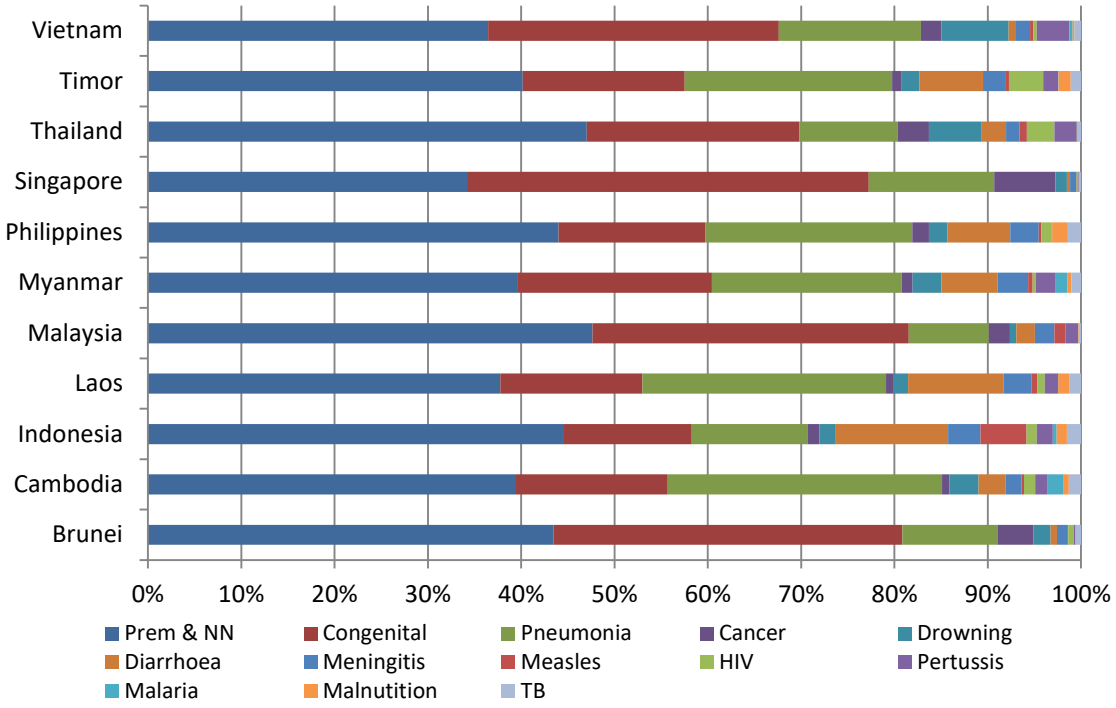
Note: I have elected to combine the neonatal conditions as 'neonatal sepsis' and 'other neonatal disorders' as the cause of death often have prematurity as the underlying reason for death.

Table 4: Rank of Top Five Causes of Under-5 Death for South East Asian Countries, 2017

	Cause Of Death Rank				
Country	**1**	**2**	**3**	**4**	**5**
Brunei	Prem & NN 21	Congenital 18	Pneumonia 5	Cancer 2	-
Cambodia	Prem & NN 4,064	Pneumonia 3,039	Congenital 1,692	Drowning 323	Diarrhoea 300
Indonesia	Prem & NN 38,960	Congenital 12,065	Pneumonia 10,895	Diarrhoea 10,568	Measles 4,332
Laos	Prem & NN 3,504	Pneumonia 2,419	Congenital 1,415	Diarrhoea 494	Meningitis 276
Malaysia	Prem & NN 1,302	Congenital 927	Pneumonia 234	Cancer 62	Meningitis 58
Myanmar	Prem & NN 13,103	Congenital 6,877	Pneumonia 6,727	Diarrhoea 2,003	Meningitis 1,071
Philippines	Prem & NN 24,592	Pneumonia 12,396	Congenital 8,779	Diarrhoea 3,763	Meningitis 1,705
Singapore	Congenital 34	Prem & NN 27	Pneumonia 11	Cancer 5	-
Thailand	Prem & NN 2,256	Congenital 1,093	Pneumonia 507	Drowning 268	Cancer 159
Timor-Leste	Prem & NN 439	Pneumonia 243	Congenital 190	Diarrhoea 75	HIV 40
Viet Nam	Prem & NN 5,802	Congenital 4,956	Pneumonia 2,432	Drowning 1,1,47	Pertussis 559

Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2017 (GBD 2017) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2018.

Figure 3: Cause of Under-5 death for South East Asian Countries, 2017



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2017 (GBD 2017) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2018.
Note: Prem & NN include preterm birth complications, birth asphyxia and trauma, neonatal sepsis & infections, other neonatal disorders

Immunisation rates in any nation are a marker of child wellbeing and the quality of any health service. SDG Goal 3.8 speaks of achieving universal health coverage, access to quality essential health-care services and access to vaccines for all. Target 3.b.1 specifically monitors the "Proportion of the target population covered by all vaccines included in their national programme".

Table 5 shows the latest available data on immunisation coverage for South East Asian countries. While coverage for most primary childhood vaccines is good, measles immunisation rates remain a major challenge, possibly fuelled by growing vaccine hesitancy. It should be noted that the Philippines is struggling with maintaining adequate immunisation coverage rates for almost all primary childhood vaccines; outlining how easily good immunisation coverage can be damaged in the region. Human papillomavirus (HPV) vaccination has also not been established for a number of countries.

In line with the SDG Goal 3.8 of achieving universal health coverage and access to quality essential health-care services, Table 6 shows selected maternal and newborn health indicators as a reflection of health coverage and access. As expected, counties that have achieved the SDG 3 mortality targets or are on target to achieve them have a much higher percentage of antenatal care visits, institutional deliveries and postnatal visits.

The continued persistence of high teenage pregnancy rates (3-5 per 100 girls) in the region is of concern and is monitored in indicator 3.7.2 of SDG 3 (Adolescent birth rate per 1,000 women in that age group). Regions which have high childhood mortality also have a high

maternal mortality ratio which is an indicator of overall socio-economic development, quality of healthcare services and possibly female empowerment.

Table 5: Immunisation Coverage (%) for South East Asian Countries, 2019

Country	BCG	HepB3	DTP3	Hib3	Polio3	Measles2	HPV
Brunei	99	99	99	99	99	98	91
Cambodia	98	92	92	92	94	82	NI
Indonesia	90	85	85	85	85	71	0.5#
Laos	79	68	68	68	67	57	NI
Malaysia	99	97	98	98	98	87	86
Myanmar	91	90	90	90	90	80	NI
Philippines	75	65	65	65	66	40	7#
Singapore	98	96	96	96	96	84	@
Thailand	99	97	97	&	97	87	76
Timor-Leste	95	83	83	83	90	80	NI
Viet Nam	96	89	89	89	89	92	+

Source: UNICEF database, updated September 2020 based on completed primary immunisation doses
Notes: *NI means not introduced; #Subnational introduction; @Introduced into the Singapore national programme in 2019 with a catch-up plan; &Introduced into the Thailand national programme in 2019 as part of a combination vaccine; +HPV introduced in schools in 2007 with coverage reaching 96% but discontinued due to lack of resources – current vaccination rates low

Table 6: Selected Maternal and Newborn Health Coverage for South East Asian Countries

Country	At least 4 Antenatal Care Visits during Pregnancy(%)*	Deliveries in a Health Facility(%)	Postnatal Newborn Visits by HCW(%)* (Within 2 days of delivery)	Women aged 20-24 who Gave Birth Before Age 18 yrs(%)*	Adolescent birth rate (Births per 1,000 adolescent girls, 2018)	Maternal Deaths (per 100,000 live births (2017)
Brunei	93 (2012)	100 (2009)	NA	NA	11	31
Cambodia	76 (2014)	83 (2014)	79 (2014)	7 (2014)	57	160
Indonesia	77 (2017)	79 (2017)	76 (2017)	7 (2019)	48	177
Laos	62 (2017)	65 (2017)	47 (2017)	18 (2017)	83	185
Malaysia	97 (2016)	99 (2014)	NA	NA	10	29
Myanmar	59 (2016)	37 (2016)	36 (2016)	5 (2016)	36	250
Philippines	87 (2017)	78 (2017)	86 (2017)	11 (2017)	47	121
Singapore	NA	100 (2015)	NA	NA	3	8
Thailand	91 (2016)	99 (2016)	NA	9 (2016)	43	37
Timor-Leste	77 (2016)	49 (2016)	31 (2016)	7 (2016)	42	142
Viet Nam	74 (2014)	94 (2014)	89 (2014)	5 (2014)	30	43

Source: UNICEF database, updated September 2020 and State of the World's Children Report 2019
Note: *Year of data source indicated in brackets; NA means data not available from this dataset; HCW means healthcare worker.

Making Sense of the Data and Understanding What Impacts SDG 3

There are some clear messages we can obtain from the data.

1. All South East Asian nations are making progress over time

We can see that continued progress is being made by all South East Asian countries in reducing childhood mortality and achieving SDG 3. As mentioned earlier, the achievement and change vary for the different countries with Brunei, Malaysia, Singapore, Thailand and Viet Nam have achieved the SDG under-5 mortality target, Cambodia, Indonesia and Philippines are on target to achieve the target and Laos, Myanmar and Timor-Leste requiring additional support to make it happen.

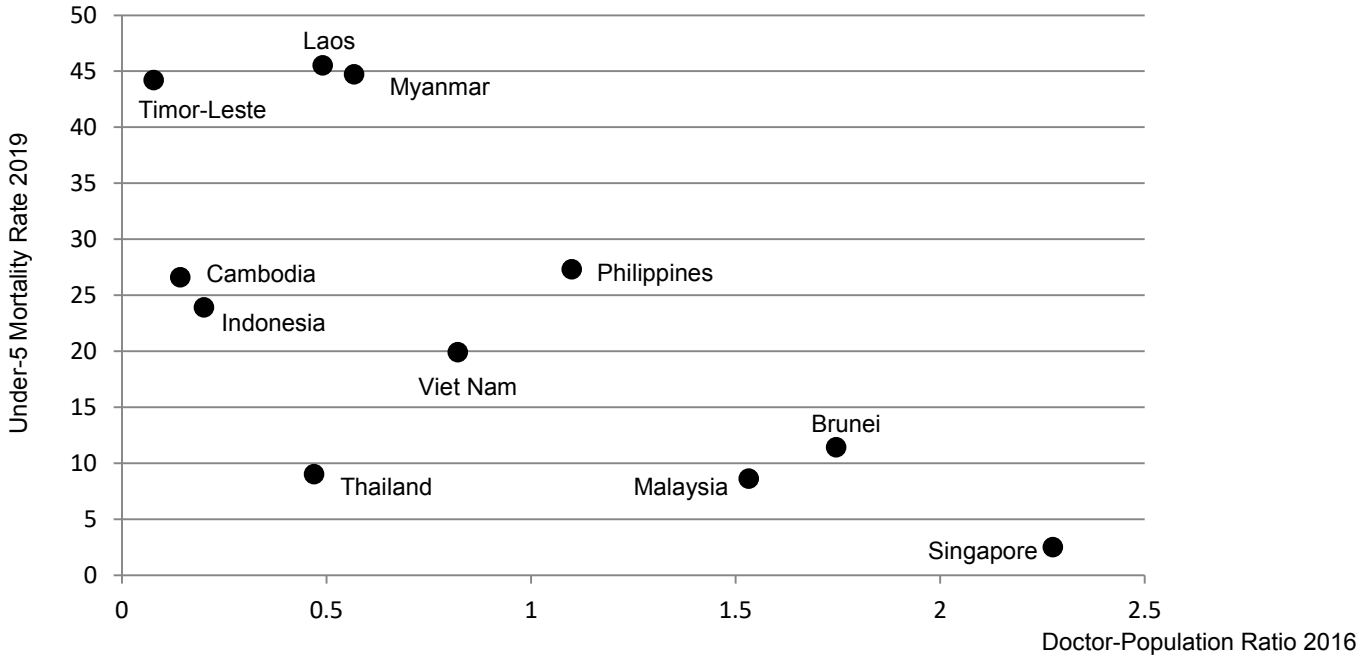
2. Why have some nations stagnated in Under-5 mortality rates?

Another trend is that nations that previously made significant reductions have stagnated in mortality rates in the past 15-20 years, especially Brunei, Malaysia and Singapore. Running the last mile is the most difficult in a marathon and nations with reasonably low under-5 mortality rates will have difficulty reducing them further without significant resource inputs. One reason Singapore has an extremely low under-5 mortality rate, apart from being a high-income economy, is that, like many industrialised nations, they have a clear policy on termination of foetus with severe congenital abnormalities. In Malaysia and Brunei these infants with non-viable congenital abnormalities are usually born and add to the under-5 mortality data.

3. What is the biggest impact on SDG 3 improvement?

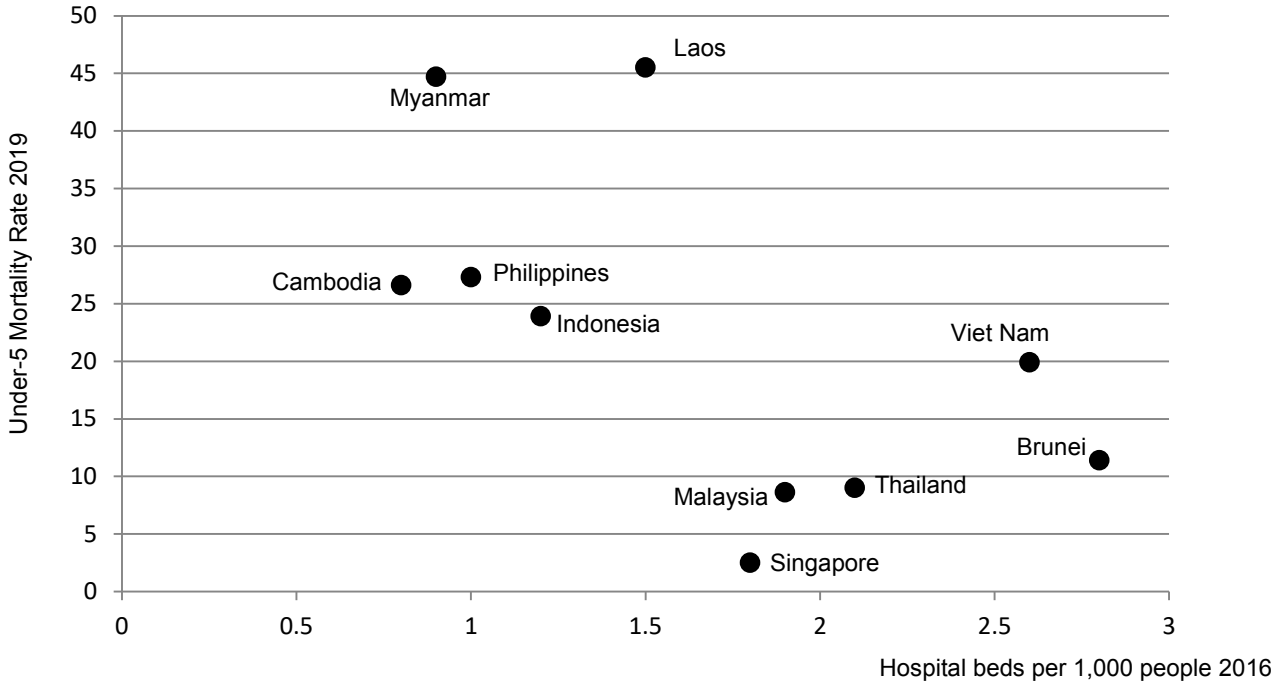
It would be tempting to infer that improvements in health services have brought about this change. Figure 4 shows the under-5 mortality rate compared to the doctor population ratio and there appear to be a good correlation. There appears to be a similar relationship between the under-5 mortality rate and hospital beds per 1,000 people (Figure 5).

Figure 4: Under-5 Mortality Rate (2019) vs Doctor-Population Ratio (2016)



Source: World Health Organization's Global Health Workforce Statistics & UNICEF database, updated September 2020

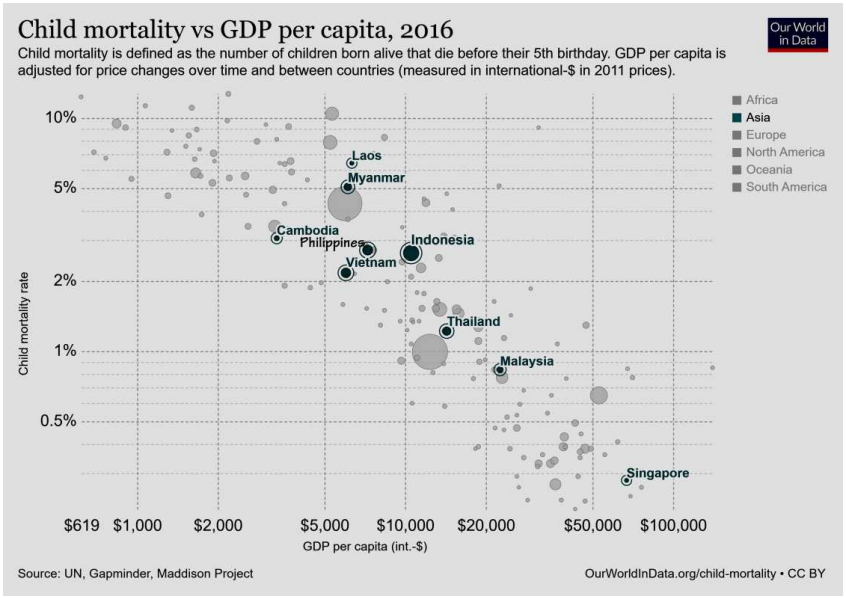
Figure 5: Under-5 Mortality Rate (2019) vs Hospital beds per 1,000 people (2016)



Source: OECD/WHO (2018) and World Bank Data 2020 (Data for Timor-Leste not current)

However we are aware that while advances in health services have some impact, particularly immunisation and access to primary health services (maternal-child clinics), **the major decrease in child mortality is related to improvements in socio-economic status, infrastructure, utilities and transport**. Figure 6 (log scale) compares under-5 mortality with gross domestic product (GDP) per capita and clearly illustrates the significant association between a nation's wealth and under-5 mortality. Every doubling of the GDP more than halves the under-five mortality rate. We can see from the under-5 mortality that some nations are 30-40 years behind others, and this also relates to their economic development.

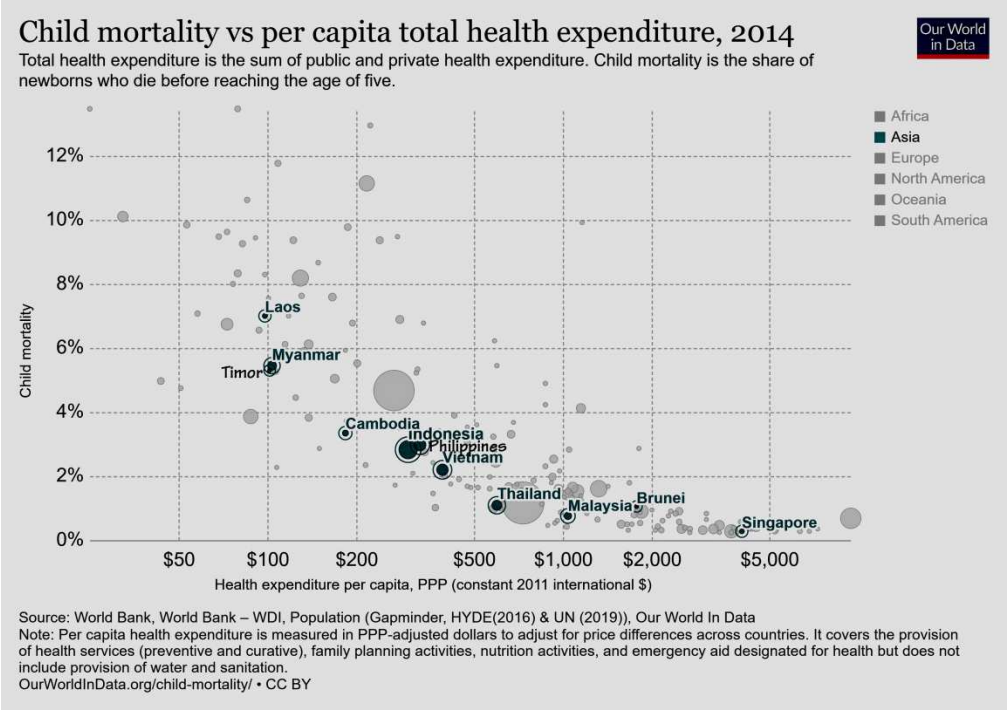
Figure 6: Child mortality vs GDP per capita for 2016



Note: Data for Brunei & Timor-Leste not available in the dataset

How much governments invest in health will also have an effect on child mortality as shown in Figure 6 (log scale). Hence a similar relationship is seen when comparing child mortality with per capita total health expenditure. The percentage of GDP that each country spends on health is shown in Table 1.

Figure 7: Child mortality vs per capita total health expenditure, 2014



What the Data Does Not Show

Gross data on childhood mortality and health indices do not reveal regional, social-class or ethnic differences within a country. We must be careful about the facade of averages.

1. The Lack of Disaggregated Data Hides the Marginalised Communities

Some South East Asia countries have achieved the SDG 3.2 target or look on track to achieve it. However we are well aware of the social determinants of health; that childhood mortality is related to family income. Governments rarely show disaggregated data, data broken down by detailed sub-categories (indigenous, marginalised groups and of level of income) and this is a glaring omission in SDG achievement. What we require for each nation is data showing the under-5 mortality rate by social class or income bracket. We would then see that many communities within the nation have a disparately high mortality rate, outside the SDG 3.2 target, even when the overall national target has been met. We can get some glimpse into this by using data on indigenous children as a proxy. For example, using under-5 deaths in Malaysia for 2016 (Hung LC & Aina Mariana 2020) the age-specific mortality rate by ethnic group for Peninsular Malaysia indigenous children (Orang Asli) was 11 times that of major ethnic groups; while the mortality rate for indigenous ethnic groups in Sabah and Sarawak was 1.7 times that of major ethnic groups (Amar-Singh HSS June 2019).

A country may look like it is becoming a high income nation but have pockets of unresolved poverty. Table 7 offers some idea of the indigenous and ethnic minority communities in South

East Asian countries. Indigenous children, inner city children in slums and poor rural communities often have 2-5 times the under-5 mortality rate for those in the middle or upper class of society or of the dominant ethnic group.

Hence SDG 3 goals must never be viewed as a national average but the goal of the bottom 20% of the society's social class. Improvements in SDG 3 are very closely linked to SDG 1 on the eradication of poverty. While 'leave no one behind' has become the rally call for our generation, we have not done enough to close the gap, and in reality the gap has widened. Ideally resources should be allocated disproportionately to meet the need. But we continue to perpetuate the 'inverse care law', where those with the greatest need are ones least likely to get adequate support.

Table 7: Indigenous and Ethnic Minority Communities in South East Asian Countries

Country	Description	Numbers (estimates)	% of country population
Brunei	Ethnic categories have shifted through successive censuses. Dusun, Murut, Kedayan and Ibans, among other groups.	71,000	16.7
Cambodia	24 different Indigenous Peoples Speak mostly Mon-Khmer or Austronesian languages	400,000	1.4 .
Indonesia	1,128 ethnic groups with some officially recognised a 'geographically-isolated Indigenous communities (komunitas adat terpencil). Recent government decrees uses term 'masyarakat adat'	50-70 million West Papua has a population of 4.378 million	20-28
Laos	Lao government recognises 160 ethnic subgroups within 50 ethnic groups. Indigenous Peoples, especially those who speak Hmong-Ew-Hmien languages, are the most vulnerable groups in Laos.	2-3 million	30-40
Malaysia	Collectively known as Orang Asal. Peninsular Malaysia known as Orang Asli with 18 people groups (198,000 or 0.7% of the population) Sarawak known as Dayak or Orang Ulu (main groups Iban, Bidayuh, Kenyah, Kayan, Kedayan, Lunbawang, Melanau and Penan) (1,932,600 or 70.5% of Sarawak's population) Sabah has 39 different indigenous ethnic groups 2,233,100 or 58.6% of Sabah's population (main groups Dusun, Murut, Paitan and Bajau)	4.3 million	13.8
Myanmar	Accurate information about indigenous lacking as government recognises all groups as indigenous. 135 different ethnic groups.	14-19 million	30-40
Philippines	Indigenous groups in mountains of Luzon collectively known as Igorot, on southern island of Mindanao collectively called Lumad. Groups on island of Mindoro collectively known as Mangyan, scattered groups in Visayas islands and Luzon.	10-20 million	10-20
Singapore	-	-	-
Thailand	Indigenous fisher communities (Chao Ley), hunter-gatherers (Mani people), groups on Korat plateau, many different highland peoples in north/north-west (officially recognised "hill tribes" include the Hmong, Karen, Lisu, Mien, Akha, Lahu, Lua, Thin, Khamu)	5 million	7.2
Timor-Leste	Population is variety of ethnic groups, with 16 languages. Most (12) indigenous peoples are of Austronesian origin, while 4 including the Bunak, Fataluku and Makasae are of predominantly Melanesian-Papuan origin		
Viet Nam	54 recognized ethnic groups, 53 of which are minority ethnic groups (government does not use the term 'indigenous peoples' but 'ethnic minorities')	13.8 million	14.6

Source: The International Work Group for Indigenous Affairs (IWGIA) (2020)

2. Identifying Preventable Deaths

Just because a nation has achieved or is on target to achieve, the SDG 3.2 target does not mean that preventable deaths still do not occur. A study looking at under-5 deaths in Malaysia for 2015 (Amar-Singh HSS, Xin JL, Siti Hafsah AH, et al 2018) showed that 48.7% were preventable, often due to family factors (lack of awareness of severity of illness and delay in seeking treatment) and quality of medical care issues (failure to escalate care to a higher level of expertise, failure to appreciate disease severity, limited human resources). This rate was higher than the self-reported preventable rate of 27.2%. Hence all countries should monitor preventability of deaths and work to reduce this rate, whatever their SDG achievement status.

3. Hidden Deaths – Children Victimised by the System

It is uncertain whether all countries report non-citizen deaths (economic and undocumented migrants). Under-5 mortality rates among these communities is much higher than the national average as they have either difficulty accessing healthcare due to financial constraints or a reluctance to accessing healthcare due to legal issues. The under-5 age-specific mortality rate by ethnic group (2016) for children from Indonesia and Myanmar residing in Malaysia was 25.5 times higher than the national average. Governments are not proactively concerned to meet the healthcare needs of migrants; some do not provide basic healthcare without payment. Another 'hidden' community is children of refugees, asylum-seekers, in detention and stateless; Table 8 attempts to provide data for the region. Thailand and Malaysia have received large Myanmar refugee populations. Stateless persons have limited access to health, education and social services for their children and this impacts SDG 3. There is limited data on refugees in detention; this can be as families in detention, parents taken into detention (children left to fend for themselves) or children in detention without guardians. Detention, perpetuate the cycle of poverty with the loss of education and adequate nutrition.

Table 8: Refugees, Asylum-seekers and Stateless in South East Asian Countries, 2019

Country	Refugees & Asylum-seekers			Stateless
	Total	Children	Details	
Brunei	-	-	-	20,863
Cambodia	-	-	-	57,444
Indonesia	10,295	-	-	582
Laos	-	-	-	-
Malaysia	178,450 (2020)	46,730 (2020)	153,800 from Myanmar (mainly Rohingyas & Chins), others from conflict-affected areas or fleeing persecution. 756 children in immigration detention centres (without guardians).	290,000 children (2016 data, Home Minister) 108,332 (another 55,000 'of concern')
Myanmar	-	-	312,018 internally displaced persons	600,000
Philippines	690	-	178,897 internally displaced persons	383 (another 129,734 'of concern')
Singapore	-	-	-	1,303
Thailand	96,803 (2020)		91,803 in temporary shelters on Thai/Myanmar border, rest urban refugees	475,000
Timor-Leste	-	-	-	-
Viet Nam		-	-	30,581

Source: United Nations High Commissioner for Refugees (2020)

Morbidity not Just Mortality

The SDG 3 health goals can only be achieved with significant improvement in other SDG areas. In addition, quality of life is not merely a reduction in death rates but living a childhood and adult life free from disability and the effects of deprivation. Improving SDG 3 must come with it an alleviation of the morbidity that food deprivation and limited education impose on children for a lifetime. Table 9 shows selected morbidity indicators among children under 5 years in South East Asian countries. Most nations have 20-30% stunting rates, 30-50% who do not complete secondary education and 5-10% significant poverty (by individual country definitions). Growth stunting can result in a lifetime of irreversible physical and cognitive impairment. Interrupted education affects long term financial abilities and perpetuates the cycle of poverty across generations. Children from the poor and marginalised communities are often significantly impacted by malnutrition.

Poverty is a life-time trap that is very difficult to come out of and has devastating impacts. As UNICEF clearly articulates *"the legacy of child poverty can last a lifetime". "Very often children experience poverty as the lack of shelter, education, nutrition, water or health services. The lack of these basic needs often results in deficits that cannot easily be overcome later in life. Even when not clearly deprived, having poorer opportunities than their peers in any of the above can limit future opportunities."*

Table 9: Selected Morbidity Indicators among Children in South East Asian Countries

Country	Percentage Moderate & Severe Stunting[#] as a Proxy Indicator of Malnutrition*	Education: Percentage Completed Upper Secondary Education[+]		Living in Poverty[@]
		Male	Female	
Brunei	20 (2009)	NA (20% drop out in upper secondary)	NA (16% drop out in upper secondary)	20,790 persons (2012) 5.0% of population
Cambodia	32 (2014)	20	20	12.9% of population (2018)
Indonesia	31 (2018)	40	37	26.42 million persons (2019) 9.8% of population
Laos	33 (2017)	33	31	18% (2019) ~80% live on < $2.50/day
Malaysia	21 (2016)	NA (41% drop out in upper secondary)	NA (32% drop out in upper secondary)	405,441 households (2019) 5.6% of all households
Myanmar	29 (2016)	13	18	28.4% of population (2017)
Philippines	30 (2018)	54	66	16.6% of population (2018)
Singapore	4 (2000)	NA (99.6% completes lower secondary in 2018)		105,000 households (2018) 7.7% of all households
Thailand	11 (2016)	50	62	6.7 million persons (2018) 9.8% of population
Timor-Leste	52 (2013)	49	55	41.8% of population (2014)
Viet Nam	24 (2017)	50	61	5.8% of population (2016)

Source: UNICEF database, updated September 2020 and State of the World's Children Report 2019
Note: # Stunting is children under 5 years of age in the surveyed population that fall below minus 2 standard deviations from the median height-for-age of the reference population; *Year of data source indicated in brackets; + Data based on latest available 2012-2018; @ Poverty lines are not comparable and as reported by individual governments or ADB/World Bank (see Reference); NA means data not available from this dataset;

More issues related to 'new' morbidities and current and emerging child health care challenges are outlined in the appendix (Amar-Singh HSS 2019).

Key Challenges to Achieving SDG 3

The UN's Sustainable Development Goals (SDGs) have been very meaningful in bringing governments back to a focus on health, environment and social justice. However the impact of the SDGs has not permeated the health services as effectively as intended and especially failed to impact clinicians. Some key challenges to achieving SDG 3 are summarised below.

1. Loss of Focus and Conflicting Interests

In healthcare, often the loudest voices dictate resource allocation and development. Specialisation and sub-specialisation has engulfed health care and clouded the issues. Medical schools enamour students to curative fields and most healthcare professionals, especially doctors who hold much of the 'power', have lost a prevention focus. The 'brightest and best' of our medical personnel tend to opt for a hospital-based profession and career.

We no longer run Ministries of Health (MOH) but Ministries of Disease (MOD); an institutionalisation of medicine. Sadly, Public Health has not made the distance to adequately advocate for a growth in preventative services. The primary care success of antenatal and child health clinics with immunisation, growth and development focus has not been sustained and not duplicated especially in urban settings. Hence hospitals 'eat' a large proportion of health resources in terms of funding, manpower and development. In recent decades there has been an "explosion" of tertiary level specialised services as means to 'meet' the health needs of the community.

This model is doctor and illness focused, expensive, fragmented and institutional based. Hence we tend to focus on disease (Paediatrics) and not health (Child Health). This 'curative' model is however inappropriate for the majority of the population, is not financially viable and a never-ending thirsty black hole.

2. A Public Addicted to Curative Services

We have nurtured our public to depend on doctors and the curative health services. The cry of the public is for more hospitals nearer their homes, more specialists at their door-step and more quick-fixes for their medical problems. Our public has been weaned on a diet of curative services offered by doctors and focused on specialists. They are now addicted to this model - specialist care and curative care. They have little concept of prevention. They desire to live as they choose and ask us to fix their health problems with drugs or procedures.

3. The Damage of Private Health Services

The Private-Public divide also worsens our health services. The private sector is totally dedicated to treating disease; they thrive on the non-communicable disease (NCD) epidemics. They are profit driven so there is no major incentive to promote preventative health. The commercialisation of healthcare, the use of healthcare as a means of obtaining financial wealth, has undermined the trust of individuals and communities in healthcare professionals and even governments.

Governments have begun investing in private healthcare, a serious conflict of interest. There may also be a subtle opposition from the private sector and big business (private hospital groups) to a preventative approach as they thrive on a curative model and on sick people.

4. Inadequate Financial Resources, Health Spending by Governments
Table 1 shows the percentage of GDP spent on health by the various South East Asian countries. While it may not be as important in nations that have achieved a high income status, the limited government spending on health in many nations limits SDG 3 improvement.

5. Failure to deal with Social Determinants of Health
This major challenge has been outlined in the earlier discussion. Families that are poor, disadvantaged, marginalised or have poor access to health care are the ones where the children have the highest mortality and morbidity. Unfortunately many of our services are urban based and focused on those that have wealth (Inverse Care Law).

Note that I have chosen not to discuss the 'elephant in the room', corruption. Institutionalised corruption and corrupt practices in some of the countries have a significant impact on the healthcare system in terms of spending and development.

Special Focus on the Impact of Covid-19 on SDG 3

Covid-19 is an enormous spanner in the works; a great distractor that has siphoned off resources, energy and focus on SDG 3. It is anticipated that the impact of Covid-19 will set us back by decades. It is likely that we will continue to see worsening malnutrition, psychological morbidity, demographic change and limited educational outcomes for many generations to come. Childhood immunisation efforts have interrupted in a number of countries (United Nations 2021). It is expected that gains in child mortality will be halted or slowed down. A summary of the key impacts on SDG 3 include (UNICEF data hub, 2020; Amar-Singh HSS November 2019):

1. Downward Poverty Spiral

It is anticipated that the loss of income and jobs will push more of the population into poverty. In Malaysia this has been estimated as an additional 5-8% of the population, which translates into an added 2-3 million children thrust into serious poverty.

2. Worsening Childhood Malnutrition

The increasing poverty, decrease in non-governmental organisation support, decrease in charity and corporate giving, and loss of schooling means that malnutrition in children will worsen with long term consequences for height growth. For example, a sizeable proportion of children in Malaysia, with poor food security, who depended on the school-based Supplementary Food Programme, have now lost this resource. In addition support services and community feeding programmes for indigenous children have been impaired or retarded in growth.

3. Interrupted Education

Schools have been closed intermittently and attempts have been made to move schools to online classes. There is a huge digital divide (unequal access to technology) and disparity between different social groups, worsening the access to education. Data is emerging that children from poorer communities are losing interest in schooling. Children with disabilities have been the hardest hit by a loss of education and therapy.

4. A Generational Scar/Gap

Due to Covid-19 many couples are delaying getting married or postponing having a child. This reduction in planned births will take its full effect in 2021 where we will see a major change in births. The reduction in yearly birth volume may last much longer after Covid-19 due to increased poverty and the need to rebuild lives. In Malaysia the annual reduction in total births of 1.5-2.5% has accelerated to 5.9% in 2020. The impact of this 'lost generation' will be seen in the education system (reduction in students/classes), long term manpower needs and health considerations (increased later age pregnancies).

The Looming Impact of Climate Change

It is estimated that 26% of childhood deaths and 25% of the total disease burden in children under five could be prevented through the reduction of environmental risks such as air pollution, unsafe water, sanitation and inadequate hygiene or chemicals (Prüss-Ustün et al 2016). No discussion on SDG 3 would be appropriate without pointing out that climate change, the impending climate emergency that threatens to engulf us, will reverse SDG 3 gains. This may prove to be the major health challenge of our time and children will be the most affected.

Transformative Approach to Achieving SDG 3

While South East Asian nations have made progress to achieve the SDG 3 goals, at the current progress this has not been achieved at a regional or community level. Even nations that have achieved or are on target to achieve the goals have left behind many of the marginalised communities in their nation. If we are serious about child health in our region, then we require radical changes in approach and not 'more of the same'. The children of South East Asia need for us to achieve SDG 3 goals for ALL, not as an average or for a portion of the community. The SDG 3 goal is not a figure for these children but a lifeline of hope, if we are prepared to truly invest in their health. We can no longer rely on traditional and incremental approaches to improve health. We require a transformative approach that focuses on inclusive growth to achieve equality.

What does a transformative health service look like? Some key aspects include:

1. A healthcare system which focuses on community care

The cornerstone for developing community care will be enabling and empowering the community to care for themselves. We need to move away from a mind-set of delivery of healthcare to the community and work towards the development of capability within the community for self-care. We need a healthcare system that is developed for children and families, and not one that is developed for managers and the healthcare professional (Amar-Singh HSS, September 2019).

2. A healthcare system which focuses on preventative services

We need to revolutionise the training of our healthcare professionals and move away from a disease approach. We need to provide incentives for our brightest minds to work in the community and in prevention activities. We need to encourage clinicians to spend at least 40% of their working time in the community. We need to dramatically increase funding and manpower resources for public health. We need to develop and enlarge mobile health services to meet urban child health needs (5 of the 11 nations have more than 50% of their population in urban environments).

3. A healthcare system which focuses on marginalised communities

For true change to occur we require disaggregated data, broken down by detailed sub-categories (indigenous, marginalised groups, level of income, gender). We then need to map communities with high child mortality rates and focus sufficient resources on those with high rates. For this to happen we need compulsory death registration and mandated medical certification of deaths by law.

4. A government committed to adequately funding the healthcare system

Recognising the problem and what needs to be done for child health is half the battle. We need to advocate with governments to allocate sufficient health resources to meet the need in the community. Funding for the national health service for many countries in South East Asia

needs to be doubled. This must be the agenda of any good government and advocating for it to become the mandate of all political parties is a way forward.

5. A government committed to ending child poverty and malnutrition (achieving SDG 1 & 2)

Working on health alone will not result in the dramatic change in SDG 3 child mortality and morbidity that we hope for. For this to happen there is a need to end child poverty and hunger. The achievement of SDG 1 and 2 will go a long way to help achieve SDG 3.

Some Closing Remarks

While we may look to governments to provide strong leadership, direction and funding to develop such a health system described above, the real transforming movement might be from the community itself – a grassroots, grounds-up advocacy and development.

The paediatric community has been 'clouded' by many issues and failed to adequately advocate for the poorest children in each of our nations. We cannot leave this task to others. These children and families have no voice; we have the data and the capability to lend them ours. What is required is a willingness in our hearts to choose to do so.

As a nation we must never compare with other nations and think that we are doing better. Every preventable child death in our country is a travesty. Every child that continues to live in (relative) poverty is our nation's shame.

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Appendix

Current Child Health Care Challenges & Suggestions: Improving Child Health Services in Malaysia

Amar-Singh HSS (Dato' Dr)
Cert Theology (Aust, Hons), MBBS (Mal), MRCP (UK), FRCP (Glasg), MSc Community Paeds (Lond, dist.)
Senior Consultant Paediatrician

This brief overview looks at the challenges faced in child health in Malaysia and some solutions to overcome them (written for the RMK 12 plan and submitted to MOH Malaysia).

Health challenges have changed over time and now relate more to health care delivery systems, lifestyle diseases, genetic disorders, environmental problems and urbanisation. In the past health systems were more concerned with mortality. With the rapid decline in perinatal and child mortality, problems that cause significant morbidity have emerged as more important. As a society we have moved from mortality to morbidity to new mortalities and morbidities. There is a need to move away from just a focus on under 5 years of age to the entire paediatric population (0-18 years).

Some of the key health challenges faced by the paediatric population are summarised in the table.

Table: Current Child Health Care Challenges & Suggestions

Problem	Size of the Problem (one example)	Key Initiatives that Work
Unreached/Poorly reached indigenous & rural populations	Indigenous people (Orang Asli, Penans) and rural poor (esp. Sabah). Mortality rates in excess of 10x national average. Worsening health and socio-economic status over many years. A "silent genocide" of our people.	• National community re-feeding programme for the indigenous with uninterrupted funding • Improved health access and community trained healthcare workers • Remove or revamp JAKOA • Development work (uplifting communities) with NGOs but based on Orang Asli opinion
Unreached/Poorly reached urban populations	75% of the population lived in urban environments in 2018. Urban poor, local migrants, immigrants face poor access to healthcare, environmental risks, air pollution, unsafe water, sanitation issues, heat-stress, injuries, unhealthy housing. WHO 2016 estimates that 26% of childhood deaths & 25% of total disease burden in children < 5 years are due to this.	• Improved housing for low-income sectors of cities & slum upgrading for urban health equity • Mobile health care delivery systems • Rights-based (UNCRC) services for immigrants • National agenda to reduce vehicular air pollution • Revise national poverty line to RM 3,000
Unintentional Injuries (especially Road & Drowning)	Road traffic injuries and Drowning are a leading cause of death and burden of disease for children and adolescents. Injuries account for more than 1,500 deaths per year and 4 times as many become permanently disabled.	• Mandatory car seat programme that is enforced • Affordable, extensive, bus-based, public transport system is critical to reduce motorbikes • Drowning awareness for families, child-care minders, children/teens • Child-proof medication dispensing of all MOH drugs to reduce poisoning (blister packs, CPC)
Lifestyle related adult illnesses with an onset in childhood & behavioural problems	Obesity, mental stress and smoking impact large segments of the population. Obesity & mental health are associated with sedentary lifestyles and screen addiction due to limited safe urban green lungs for play. Mental health problems	• Promoting safe green spaces & recreational areas in all urban areas that comprise 15% of total land area (KL currently has only 6.5% open or recreation areas) • A national campaign to move

	with increasing depression, anxiety, suicides, drug addiction and gender confusion are very common among teens (20-30% obesity or overweight, 38% internet addiction, 1: 5 of boys smoke, 3-4% of teens currently on drugs, 10% of form 1 students say they have attempted suicide, NHMS 2017).	adults away from screens, so as to support children - promote screen free days weekly for families • Routine obesity screening programme at 2 years of age • Investment in mobility: Bus rapid transit (BRT), walking & cycling Major need to address parenting
Disability and Genetic disorders	15% of the community comprise children with disability requiring assistance. Current services are limited, too late, do not reach rural communities and often not rights based. Too much focus and funding of services in the Klang valley. Also many parents refuse to register children as disabled as the OKU term is viewed as demeaning and inhibits inclusive education.	• Partner with & fund NGOs to expand services throughout the country • Dramatically revamp the CBR centres and remove them from Welfare oversight to MOH (they should become vibrant, community based NGOs) • Train trans-disciplinary therapists to meet the needs • Advocate for MOE to have a true inclusive education policy
Intentional Injuries (Child Abuse)	Epidemiological studies done locally on community prevalence of child sexual abuse show rates of 8-26% of all children (Amar 1996, Kamaruddin 2000, Choo 2011). Current services are extremely poor & Child Act not implemented fully since developed (1991).	• There are no easy solutions for this but a national pre-school & primary school training programme to teach all children protective sexual behaviours would help reduce abuse • All MOH, Welfare staff & police to implement Child Act fully to protect children

Some ideas taken from: Amar-Singh HSS. Editorial: Current Challenges in Health and Health Care. Asia-Pacific Journal of Public Health, 2004, Vol 16(2)

It is important to recognise that a major issue is the 'Social Determinants of Health'. Families who are poor, disadvantaged, marginalised or have poor access to health care are the ones where the children have the highest mortality and morbidity. Health services need to be targeted at reaching these populations. Unfortunately many of our services are urban based and focused on those that have some wealth. The Private-Public divide also worsens our child health services. Within MOH, Paediatricians and managers tend to focus on disease and not health (Paediatrics not Child Health).
We need to move away from the present 'curative' model of health services where the model is doctor and illness focused, expensive, fragmented and institutional based. We need to move to develop a 'wellness' service as opposed to 'illness' service. This includes a lifetime health plan that aims at keeping the child and family well. It focuses on prevention issues and includes visits to health professionals on a regular basis from conception right through childhood and adolescence to adulthood.

Child health is critical for the nation's health. If we do not take care of and invest in children we will have 'failed' adults. It is important that the government recognise and respond to the serious health changes posed by rapid socio-economic mal-development. Solutions for change often lie beyond the health sector, and require the engagement of many different sectors of government and society. In this era, individuals and communities have the capacity to take the initiative to advocate for change and work to improve child health and secure a future for their children.

Finally there is a need to address the impending climate emergency,
as that is the major health challenge of our time
and children will be the most affected.

Citation for Appendix: Amar-Singh HSS. Current Child Health Care Challenges & Suggestions: Improving Child Health Services in Malaysia. September 2019. Malaysia. (Note that this was written for the 12th Malaysia Plan (RMK 12) and submitted to the Ministry of Health Malaysia)