Universal Health Coverage and COVID-19 Preparedness & Response

MALAYSIA

OVERVIEW

Malaysia is an upper-middle income country with a population of 32 million people. Our country has been acknowledged globally for its high performing health system based on its well-trained workforce, excellent infrastructure, and quality health services. Malaysia’s health care system is a dichotomous system of public tax-funded, government-run universal services parallel to a thriving private sector. The public health care system is accessible to all Malaysians for a minimal registration fee, with gatekeeping approach at level of primary care clinics.

We have been recognised by the World Health Organization (WHO) as one of the nations that has achieved Universal Health Coverage (UHC) with the availability and wide access to health services. We were also recognised by WHO’s Joint External Evaluation (JEE) for having a well-established health security system with multi-sectoral health emergency preparedness and response, with the capacity to detect threats early and respond effectively. The 2019 Global Health Security Index placed us in 18th place among 195 nations (third in Asia), in terms of overall readiness to face a disease outbreak. Our current challenge is to build onto our previous success and reinforce our services to cope with the challenge of shifting demographics, the rise of non-communicable diseases, and the threat of new emerging infectious diseases.

Historically, Malaysia has faced several infectious disease outbreaks, such as leptospirosis, enterovirus, encephalitis, chikungunya polyarthritis, Nipah encephalitis, SARS, and MERS-CoV. From these outbreaks, we have learnt that efforts of case detection, patient isolation, and contact tracing were proven to reduce the number of people exposed and can eventually break the chain of transmission. These experiences have collectively contributed to our resilience, in which the surveillance system were continuously tested, consequently improved, and strengthened.

Malaysia managed to achieve a well-orchestrated multi-sectoral effort in disease control and prevention during this COVID-19 pandemic. This coalition not only involves different divisions within the Ministry of Health (MOH), but also immense contributions from other governmental agencies, the private sector and importantly, the community. In short, Malaysia adopted the “Whole of Government, Whole of Society Approach” in facing this crisis.
ORGANISATIONAL RESPONSE

Since COVID-19 was deemed a national security threat, the National Security Council (NSC) was activated via the National Security Council Act 2016 (Act 776) to command and mobilise all government and non-governmental machineries to control the pandemic on a national scale. MOH provides technical advice and recommendations to facilitate the NSC's decision-making. Other legislation and policy documents that are also significant in the response to COVID-19, are the Prevention and Control of Infectious Diseases Act (Act 342), International Health Regulations 2005, the MOH Disaster Management Plan, and the Malaysia Strategy for Emerging Diseases and Public Health Emergencies (MySED) II Workplan (2017-2021).

Movement Control Order (MCO)

Evidence of asymptomatic disease transmission resulted in a nationwide enforcement to limit the movement of individuals and to reduce chances of contact within the community. The MCO implementation was reviewed on a regular basis and adjustments were made in phases, in accordance to pandemic progress, as outlined in Figure 1 below.

Prevention and Control of Infectious Diseases Act (Act 342)

Initially gazetted in 1988, Act 342 provide legal frameworks to prevent transmission of infectious disease in Malaysia. This Act allows for control measures such as placing individuals suspected to be infected or in contact with infected individuals in quarantine centres or be placed under surveillance, and requires all medical practitioners and also any individual aware of a person with an infectious disease to notify the health authorities. It grants MOH the power to establish local control measures in the event of an outbreak. The Act also enables seizures and destruction of any articles, animals or even structures should it be necessary to control the spread of an infectious disease. The authority provided under this Act is essential in a time of an epidemic, to control the outbreak and spread of the disease, for the greater good of the general population.

Understanding the nature of an outbreak, the law also confers power to the Health Minister to make regulations under provision of this Act should such a need arise. The Regulation of Measures within Infected Local Areas 2020, under the Act 342, enabled the minister to institute prohibition of activities, as well as control of movement within and between infected areas and control of gathering and processions.

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<td>Closure of State Borders</td>
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<td>Intestate with permission</td>
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<td>8 pm</td>
<td>10 pm</td>
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<tr>
<td>Business/services</td>
<td>22 identified as essential</td>
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*there were no movement restriction for frontliners (healthcare personnel, police, armed forces, civil defence force, paramilitary civil volunteer corps, fire brigade)

Note: MCO = Movement Control Order, CMCO = Conditional MCO, RMCO = Recovery MCO, EMCO = Enhanced MCO

Figure 1: Phases of Movement Control Order (MCO) implementation

Source: Summarised from contents of Malaysia Health Sector Response to COVID-19
The MCO included 6 critical measures:

a) Complete prohibition of movements & large gatherings across the country.
b) Complete restriction on all overseas travels by Malaysians; overseas returnees are required to undergo 14-day quarantine.
c) Complete restriction on all tourists and foreigners entering into the country.
d) Closures of kindergartens, nurseries, government and private schools.
e) Closure of all higher education institutions and skills training institutes.
f) Closure of all government and private premises except those providing essential services (including health).

The police, armed forces, civil defence force and the paramilitary civil volunteer corps were mobilised as frontliners to enforce the MCO, and to help with the supply logistics of medicines and protective equipment.

**Enhanced Movement Control Order (EMCO)**

EMCO were established in specific identified areas/localities which were at high risk or where there was a spike in the number of cases. This was done to contain the infection within the locality. During EMCO, for 14 days (at least):

a) All residents (citizens and foreigners), were forbidden from leaving their homes.
b) All residents (citizens and foreigners), were tested for COVID-19 free-of-charge.
c) No unauthorised outsiders were allowed into the area.
d) All shops and offices within the area were closed.
e) Basic food and necessities were provided to all residents (citizens and foreigners) for free-of-charge, and coordinated by the Social Welfare Department.
f) A medical base was established and operated by MOH within the area to provide medical assistance when necessary.
g) All roads into and out of the area were cordoned off.

**Screening Approach**

Malaysia decided to implement the targeted screening approach for best use of resources, focusing on the vulnerable and high-risk groups. Figure 2 outlines the method for detection of close contact, while Figure 3 shows our workflow for active case detection.
**rRT-PCR Protocol Development**

We started the development of the COVID-19 rRT-PCR protocol before the first case was detected in Malaysia. It was noted to be similar with WHO’s protocol that was released later.

**Testing Capacity**

Our multi-agency collaborative effort has significantly increased our testing capacity from approximately 1000 tests/day at the end of January to current capacity of 38236 tests/day.

**The Humanitarian Assistance and Disaster Relief (HADR) missions**

Under the National Disaster Management Agency (NADMA)’s coordination, the missions aimed to rescue Malaysian citizens that were stranded overseas due to the pandemic. All Malaysian citizens, along with their spouse and children (regardless of citizenship), undergone health screening at KLIA’s Air Disaster Unit upon arrival. They were then ferried to the monitoring centre in Bandar Enstek, Nilai, Negeri Sembilan, to complete a 14-day quarantine.

**Case Containment**

As noted in Figure 3, Malaysia decided to admit all symptomatic and asymptomatic positive COVID-19 patients to hospitals; regardless of citizenship, for free-of-charge. The aim was to reduce the probabilities of contact within the community.

Selected government hospitals were re-categorised either as Full COVID-19 hospitals or Hybrid hospitals to treat the COVID-19 patients. During peak period, 5728 dedicated beds for COVID-19 patients were made available with another additional 442 beds for COVID-19 patients requiring critical care.

Ventilator availability was also significantly increased from 50 in February to the current total of 1364 ventilators, which were obtained via emergency procurement and also donations from the private corporations and the public.

Stable asymptomatic patients were admitted to quarantine centres, which were make-shifted from training institutes, nursing dormitories, and non-specialist hospitals. During peak period, 3679 beds were available in the quarantine centres nationwide.

Hotels that volunteered for participation were also designated as quarantine centres for overseas returnees.
**RESEARCH & INNOVATIONS**

MySejahtera is a mobile application that was developed utilising the Deep Logic method to address issues on updating the public with the latest facts and to combat fake news, to perform a more efficient contact tracing method, as well as empowering the community to conduct self evaluation of health risk status. It also functions as a Digital Health Profile.

Several government and private health care facilities provided drive-through screening services for patients that have been identified to go for screenings.

Various technology assessments, rapid evidence synthesis, journal reviews and research activities were conducted to obtain evidence to revise and develop guidelines, to develop epidemiological forecast models for COVID-19, and to develop Standard Operating Procedures for the new norms.

COVID-19 research activities* were coordinated and categorised into six work streams:
1. Artificial Intelligence and Big Data Analysis
2. Epidemiology & Public Health Research
3. Clinical Research
4. Laboratory-based research
5. Social & Behavioural Research
6. Application Development

*Note: Details of research activities can be found in the Malaysia Health Sector Response to COVID-19.

Transforming the Malaysia Agro Exposition Park Serdang (MAEPS) to a Low-Risk Quarantine and Treatment Centre

As the number of positive cases rapidly increased in March, this state-owned exhibition centre was make-shifted into a fully equipped medical facility within four days. This success was a result of effective coordination by National Disaster Management Agency (NADMA) and MOH, as well as collaborative efforts with other government agencies and private corporations.

At full capacity, this facility can accommodate a total of 604 patients. It was equipped with fully functioning pharmacy, x-ray room, pathology laboratory, and resuscitation room.

Many interagency collaborations were also forged between the government, universities and industries. Example of the collaborative outputs are the Field Hybrid Intensive Care Unit (ICU), which is a combination of ICU and isolation ward that was cost effective to install and disassemble, and the ventilator splitter kits.

Implementation of existing and in-pilot services such as the Drive-thru Pharmacy, postal services for medication refill and Virtual Clinic were improved, expanded and accelerated given the immediate need for such services. Similarly, the use of Online Appointment System was also enhanced during this pandemic.
STRATEGIC COMMUNICATION

The establishment of trusted information sources is essential in managing panic among the public and to counter any circulating fake news. Two key websites in providing the information are:

- http://covid-19.moh.gov.my/ - which was a one-stop information centre for the public

Ever since the first COVID-19 case was detected in Malaysia until 28 June 2020, two daily media briefings were held to update and address the public. The non-medical media briefing was conducted at 2pm by the Senior Defense Minister, while the medical media briefing was conducted at 5pm by the Director-General of Health. From 29 June 2020 onwards, the media briefings were spaced to three times per week.

The NSC created a communication channel with the public on a social media application (Telegram). This allowed for faster access and retrieval of new information on COVID-19-related regulations and general information.

The NSC also sends mass bulk short messaging system (SMS) text messages to everyone with mobile phone numbers registered in Malaysia via an automated text messaging system, on a nearly daily basis. The information sent include policy and regulations update, as well as advices and reminders on COVID-19 precautionary measures (especially on the new norms of 3C and 3W).

COMMUNITY EMPOWERMENT & CITIZEN COOPERATION

Another key contributor to Malaysia’s current success in COVID-19 management is our citizen cooperation. From the daily media briefings, public compliance to the MCO regulations was reported to be around 93-97 percent.

We believe that the constant transparent communication helped to build public confidence in the Malaysia’s effort to combat COVID-19. Their confidence, support and appreciation then became a positive feedback loop which boosts the morale and spirit for the frontliners.

Various donations and welfare support for both the frontliners and the people, especially the vulnerable groups, were evident during this pandemic, in the spirit of Kita Jaga Kita (we take care of ourselves).

A: Public donating food to frontliners at work
B: Volunteers donating and setting up portable toilets at EMCO sites
C, D, E, F: Volunteers producing protective equipment for frontliners
G, H, I: Public providing welfare support to the vulnerable groups

Images: Solidarity efforts shown by Malaysians
ECONOMIC STIMULUS PACKAGES

The Malaysian government introduced three separate economic stimulus packages on 27 February 2020 (Economic Stimulus Package 2020), 27 March 2020 (PRIHATIN) and 6 April 2020 (Additional PRIHATIN Measures for SMEs) amounting to RM 260 billion to combat the economic effects of this COVID-19 pandemic, which is roughly 17% of the country’s Gross Domestic Product. Later on 5 June 2020, the PENJANA Short-term Economic Recovery Plan was announced.

Among the highlights were:

• Bank loan moratorium for 6 months (April-September 2020), with automatic opt-in.
• One-off cash payments to B40* households (to head of household), B40 individuals, university students, single mothers, and person with disabilities. If an individual is eligible for multiple categories, double counting applies.
• Additional funding to Non-government Organisations for the social vulnerable groups such as the elderly, orphans, person with disabilities, the indigenous, and homeless people.
• Progressive electricity tariff discounts until end-2020.
• Free daily 1GB internet access to non-gaming and non-social media sites until end-2020.
• Incentives for e-commerce platforms.
• One-off e-cash payments to B40 and M40 e-commerce users.
• Additional income tax exemptions.

Further details and reports of the economic stimulus packages and recovery plan at the moment can be accessed from https://www.treasury.gov.my/index_en.html and https://penjana.treasury.gov.my/

LESSONS LEARNT

Our overall public health response to COVID-19 is best summed up in Figure 4 (next page). Further details of the response can be found in the Malaysia Health Sector Response to COVID-19.

Evidence has showed that one the most effective measures to prevent COVID-19 transmission was through the practice of physical distancing. This preventive measure accelerated the buy-in and demand for technology uptake among the community.

On the medical side, the push for telemedicine accelerated much faster as compared to the pre-pandemic era. Online face-to-face consultations, teleconferencing, self-assessment and automated health risk calculations, online appointment management system, and online personnel management system were some of the long-mooted initiatives that were difficult to gain traction. Due to this pandemic, the health care sector is now starting to talk about robotic support and artificial intelligence.

On the non-medical side, e-commerce and cashless transaction are more preferred as compared to the traditional payment and shopping methods. This was mostly because the people were concerned with indirect physical contacts via cash transfer.

Since technology is and will be an essential enabler tool in moving forward, we noted opportunities for improvements on our IT infrastructure readiness. The pandemic also revealed some gaps in the existing information gathering processes that can be refined and enhanced.

We realised the importance of having a national registry of medical and non-medical experts in management of disease outbreaks, in order to produce comprehensive policy responses in managing potential outbreak of emerging infectious diseases.

*Note: Malaysians are categorised into three different income groups: Top 20% (T20), Middle 40% (M40), and Bottom 40% (B40).
WHAT’S NEXT

“Where do we go from here?” “What’s next?”
These are the most common questions asked; we believe these are also asked by rest of the world. Right now, all hopes are placed on vaccine development, where many are in Phase Three clinical trials. Despite the promising outlook, we should not lose sight and be complacent on things in our control; the 3C and 3W should always be practiced.

However, we should also be ready if vaccines are not available. Dengue for example; Dengue has been long known to have four strains, but an effective vaccine for all four strains that is without side effects has yet to be successfully developed. As new COVID-19 mutation strains are continually being discovered, the probability of not having a safe and effective vaccine in the near future might still be possible.

Without vaccines, it doesn’t mean the pandemic cannot be ended. Behaviour modification through physical distancing can still end COVID-19 transmission, which requires cooperation from everyone. To do this, the government recently launched the Cegah dan didik, Amal, Patuh dan Pantau* (CAPP) in August 2020. This community empowerment approach aimed to educate the public so that the people become frontliners themselves in preventing COVID-19 transmission in the community.

*BIBLIOGRAPHY (in alphabetical order)
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