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COVID-19 Pandemic: An Unseen's Evolution War

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This is a new beginning. It started just like a fiction movie.

In December 2019, a new cluster of pneumonia caused by the 2019 novel coronavirus (2019-nCoV) was first identified in Wuhan, China.[1] Without any mercy, it became a pandemic and left no time for grief. It was not only life-threatening but also challenged our healthcare system, economy, culture, lifestyle and belief. It forced us to make changes. We need to evolve, and we must evolve.

Malaysia, a multi-ethnicity and multi-religious country which is located in Southeast Asia, has a population of 32 million with a median age of 28.9 years in 2019.[2] According to the Observatory of Economic Complexity, Malaysia has experienced rapid globalization and is the 19th leading exporter in the world.[3] It is an upper-middle-income country with a gross domestic product (GDP) of 370 billion USD in 2019,[4] of which 4.5% is funded to the healthcare system.[5]

Malaysia has an efficient and widespread two-tier healthcare system which consists of a government-based universal healthcare system and a co-existing private healthcare system. In 2018, the infant mortality rate was 6.7 deaths per 1000 live births,[6] while the maternal mortality ratio was 23.5 deaths per 100,000 live births.[7] The life expectancy was 76.22 years in 2019[8] which is favorable when compared to the United States and Western Europe. The universal healthcare system provides specialist services at a very low cost, with an average of USD 10 per visit. Due to the long waiting list, the private specialist healthcare compliments the system to reduce the workload. With an indomitable spirit for 60 years, Malaysia is ranked first as the world's best healthcare category, scoring 95 out of 100 in the International Living Annual Global Retirement Index.[9] Although being ranked 49th in the World Health Organization's ranking in 2019,[10] Malaysia has showcased remarkable recovery rates as compared to the western part of the world. This shows that the standard of healthcare, infrastructures and the availability of test kits do not necessarily mean winning the war in fighting against corona virus disease (COVID-19).

The COVID-19 outbreak started in Malaysia since 25 January, 2020.[11] While going through the political transitional period, the confirmed case in Malaysia had once peaked in the Southeast Asia region, with triple-digit cases recorded per day and was benchmarked with Italy. Movement Control Order (MCO) was implemented on 18 March 2020 to break the chain of the transmission of the virus. During the MCO period, normal business, schools, entertainment and recreation activities were on hold with law applied to keep people home while the essential services remain. Malaysians started to practise social distancing, hand hygiene and wearing face masks. A prediction from an international financial service holding company, JP Morgan, was that there will be a surge of COVID-19 cases which might reach an approximate of 6300 total cases in mid-April.[12]

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Gratifyingly, with the implementation of MCO, Malaysia has successfully flattened the curve and reduced to a total case of 5571 with 22 new cases and 59 recovery cases on 17 May, 2020. Malaysia has been ranked fourth in a global public opinion survey on the government response to COVID-19, coming after China, Vietnam and UAE on par with India.[13] Malaysia is also ranked fourth on the strictest response in Southeast Asia after Vietnam, Laos and Philippines with Singapore being eighth in line.[14]

However, a new outbreak will occur if there is any tiny shortfall. From mid-May, Malaysia has moved into the Conditional MCO which allows more businesses and services to resume while being monitored closely. Quarantine and screening will be implemented if there is any new cluster identified while continuously providing education to the public on the importance of social distancing, hand washing, and the wearing of face mask. The testing capacity has reached 26,000 samples a day across 48 testing facilities in Malaysia. The public also plays an important role in combating the COVID-19 pandemic through funding, production of PPE suits for front-liners, food preparation for the poor and homeless while adhering to the rules and regulations of MCO.

Designated government and university hospitals have been selected as COVID-19 centers while transferring the non-COVID-19 cases to other hospitals, stopping most if not all elective admissions and operations. Furthermore, the government has converted the Malaysia Agro Exposition Park into a gigantic temporary makeshift hospital for the COVID-19 patients in three days. It consists of 604 beds, pharmacy, X-ray services, a pathology laboratory, occupational health, safe services, and a dietician.[15]

As part of Malaysia's private healthcare system, Columbia Asia Hospitals also play an active role as front-liners. The discussion will be focusing on the Obstetrics and Gynecology (O&G) service provided in Columbia Asia Hospital Iskandar Puteri in Johor Bahru. It is one of the busiest O&G department among the Columbia Asia Hospitals in Malaysia with an average of 1300 deliveries annually. As a non-COVID-19 healthcare center, proper and massive screenings are done to identify and transfer any suspected or high-risk COVID-19 cases to COVID-19 designated centers for further management. A questionnaire needs to be completed with the temperature checked before anyone can enter the hospital's premises. The patient's family is not allowed to enter the hospital premises unless the patient is 36 weeks and beyond or their presence is needed for any discussion. This has successfully reduced the crowd in the hospital and good social distancing is being practised.

Universal COVID-19 PCR testing is carried out for all patients admitted to the hospital, including the O&G patients. This secondary screening mechanism aims to protect all patients in the hospital by identifying any new or suspected COVID-19 cases, be it symptomatic or asymptomatic. This can be achieved with insurance coverage or patients paying out-of-pocket. This helps to break the chain and is parallel to the government's universal screening effort. With the referral of suspected or confirmed case to a COVID-19 center for further management, unnecessary PPE or N95/NK95 wastage can be avoided to overcome the shortage of PPE worldwide. In addition, the hospital and all clinical staff are able to function at maximum capacity due to reduced risk of exposure, quarantine and section being lockdown for disinfection. However, extra precautions, management with full PPE and standardized disinfecting techniques are being applied for those with unknown or pending status.

The hospital is divided into two divisions as the COVID-19 negative or green zone section and the high-risk section. All single bedded rooms have been utilized as isolation rooms. COVID-19 PCR test becomes the passport for patients to be transferred to the green zone section. All hospital clinical staff including consultants are divided into two teams to ensure that there is a continuity of the service in case any staff needs to be isolated due to any possible exposure to suspected COVID-19 cases. Staff are provided with scrubs for clinical use and are encouraged to change their attire before leaving the hospital premises.

Fortunately, since the execution of MCO from 18 March, 2020 till date, there is no case reported in this hospital. This has resulted in more patients willing to come forward to receive healthcare services and admission in our hospital.

Nevertheless, the system can be ameliorated before the availability of COVID-19 vaccines. A faster and cheaper universal COVID-19 screening

kit should be in place to prevent any future outbreak, especially in identifying any carrier, aside from primary screening sources such as history taking and contact tracing. A standardized, well-practised standard operating procedure which includes reporting of all suspected and confirmed cases must be strictly adhered to by all clinical staff. All surgical procedures including deliveries should be screened to protect all clinical staff, facilities and also to reduce the risk of intubation and minimally invasive surgery. Aerosol or virus contamination became a new risk factor that needs to be considered when designing future medical devices or hospital facilities. More cost-effective analysis and studies need to be carried out to weigh the pros and cons of any further development. This is a new beginning and we shall evolve for betterment.

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