



## POST COVID-19 PANDEMIC: HOW CHILDREN IN MALAYSIA WILL BE AFFECTED?

Intan Juliana Abd Hamid<sup>1</sup>, Fahisham Taib<sup>2</sup>

Received: 11 June 2020; Accepted revised manuscript: 18 June 2020

Published online: 25 June 2020

COVID-19, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was first reported in Wuhan district, China in December 2019 and later on spread globally to cause a global pandemic [1]. To date, there are no approved vaccines or antiviral medications available for SARS-CoV-2 making it a visible health threat and imposing several crucial life adjustments necessary for everybody.

Malaysia reported its first COVID-19 case on the 25<sup>th</sup> January 2020 [2]. On the 18<sup>th</sup> March 2020, a nationwide Movement Control Order was imposed as part of the measures to curb and mitigate COVID-19 virus spread in the community. Daily updates on the numbers of positive cases, person under investigations and mortality were made available on Crisis Preparedness and Response Centre (CPRC) website under Ministry of Health Malaysia (MOH). A total of 8,322 positive COVID-19 cases and total death of 117 cases as was reported on 7<sup>th</sup> June 2020 in Malaysia [3]. Four paediatric cases have been reported from Malaysia. The age group of these paediatric cases ranged from 20 months to 11 years old and these patients showed mild to asymptomatic manifestations of COVID-19 infection [4]. However, there were no formal reports on the prevalence of COVID-19 in paediatric age group in Malaysia.

As the situation improved and the number of cases started to decline, Malaysian government has announced the transition of 'Conditional Movement Control Order' to 'Recovery Movement Control Order' which will be effective from 10<sup>th</sup> June 2020 until 31<sup>st</sup> August 2020. During this phase, the inter-state movement and re-opening of most socio-economic activities will be allowed. However, schools will remain closed

and planned for re-introduction in stages. This brings upon a new concern on the possibility of re-emergence of a second wave of COVID-19 pandemic in Malaysia.

SARS-CoV-2 is transmitted mainly through respiratory droplets from close contact. The virus enters human by binding to the ACE2 receptor and invades the respiratory and even gastrointestinal symptoms. Children with COVID-19 show a wide clinical characteristics ranging from asymptomatic to critically severe disease. The proportion of children with more than one symptom was 35% [95% CI: 21%, 48%], and 19% [95% CI: 14%, 23%] of all children were asymptomatic [5]. Most children (90%) diagnosed with the disease experienced mild symptoms. Persistent SARS-CoV2 findings in fecal samples for an average of 21 days has also been reported [6]. These clinical features pose a challenge on how best to manage children with COVID-19. In the existing literatures, there were many documented consequences in a disaster or pandemic [7]. It is very difficult to predict the infection trajectory when the documented cases globally have been relatively small. Children need to socialize with other children. Reopening schools needs exclusive opinion from experts to ensure decisions are made in parallel to data evidences. Concerns about milder symptomatology, unknown asymptomatic carriers' status, prolong viral shedding are valid until there are more

<sup>1</sup>Primary Immunodeficiency Diseases Group, Regenerative Medicine Cluster, Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia, Bertam, 13200 Kepala Batas, Pulau Pinang, MALAYSIA

<sup>2</sup>Department of Paediatric, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan, MALAYSIA.

**Corresponding author:** Dr Intan Juliana Abd Hamid  
Primary Immunodeficiency Diseases Group, Regenerative Medicine Cluster, Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia, Bertam, 13200 Kepala Batas, Pulau Pinang, MALAYSIA

**Tel:** 604-562 2532 **Email:** intanj@usm.my

information on this matter.

The current pandemic has changed most of the children social life and learning. These children have to endure interruption in their education and the possibility of revamping of the educational system. This could affect their learning potential as they have to adapt to new learning method through online and distance learning and turn to digital technology for virtual learning path [8]. The new approach may affect the way future learning is conducted and indirectly impacting children from low social economic group families. Increase in health disparities affects the child's development, performance and vulnerability to stress in the home environment. The stress experienced by children at any age adversely impacts physical and mental health. Younger children are at great risk of high-level stress, which can affect brain development and irreparable long-term consequences. The containment measures may also result in increased gender-based violence and home-based injuries. All these approaches and access to unsupervised internet browsing has potential risks and harm.

Children must be taught in new normalcy. The new practice should be a measure of indirectly protecting the whole population, ensuring children are not harboring the infection. Simple basic measures such as proper handwashing and hygiene practices are essential but many children have lack of access to basic necessities such as water, sanitation and hygiene facilities. Migrant, undocumented and displaced children and their families may not be easily reached. These children are subjected for unequal treatment medically, socially and are exposed to harsh treatment [8]. If justice cannot be practiced to all living people in a country, then the sense of normalcy and security will not be achieved.

COVID-19 has the potential to overwhelm fragile health systems [9] and undermine child survival, health, nutrition and development. It could lead to disruption in immunization services, thus threatening outbreaks of diseases in the future. Non-coronavirus related diseases may kill children when the healthcare systems, which already under strain, are overwhelmed. With the spread of the COVID-19, there are many unanswered questions regarding the potential of children to produce adequate antibody response thus offering lifelong protection or herd immunity against the coronavirus. The effects of physical distancing measures and movement restrictions also affect children's mental health.

Children face anxiety about the negative impact of the pandemic on their lives and their communities, and uncertainty regarding the future. The disease may disappear over time, but children will continue to suffer the consequences for the rest of their lives

Nationally, Malaysian government has taken measures to ensure social protection and providing social safety, protecting jobs, supporting parents, and policies that focus on families, health care, nutrition and education. The coronavirus crisis has reshaped the world leading to pandemic's collateral damage and global recession. Fear of the infection may lead to unattendance to vaccination schedule and avoiding doctors' health visit. Many of the elective procedures are being postponed. This has led to a backlog of cases. Optimal healthcare service cannot be delivered as a result of movement order, social isolation and protection policies. How long this can be implemented remains a debate when knowingly majority of the population's income is based on daily work.

During the Spanish flu pandemic, there were second and third waves of the disease before the pandemic completely disappeared. It is thought that the Spanish flu virus mutated until it became less virulence after each devastating outbreak. The circulated virus continuously underwent gradual antigenic drift and caused annual epidemics, until the 1950s [10]. Prediction on what will happen to SARS-CoV2 mutation in the next couple of month or years remains a mystery. Unless SAR-CoV2 behaves like Spanish flu, mutating to less virulent pathogen, there will be a need for a vaccine against the deadly disease. The creation of vaccine should speed up global protection – but they are many key issues. The hallmark of successful vaccination programme depends on its effectiveness, coverage and safety to human population. However, vaccination may not be exclusively for children and we may see the introduction of adult vaccination schedule in the near future. For the time being, children have to learn what adult do – social distancing, hand hygiene and face mask – as simple measures to avoid SARS-CoV2 infection.

Competing interest: None

## References

- [1] Zhu N., Zhang D., Wang W., Li X., Yang B., Song J., et al. (2020). China Novel Coronavirus

- Investigating and Research Team A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N. Engl. J. Med.* 2020; **382**: 727-733
- [2] Mangantig E, Bonn BY, Cheng TS, Su'ait MS (2020). COVID-19 Epidemiology: Know when the outbreak is under control. Akademi Sains Malaysia.
- [3] Daily updates on COVID-19, CPRC MOH (2020). Retrieved on 7<sup>th</sup> June 2020 from <https://t.me/s/cprckkm>
- [4] See KC, Liew sM, Ng DCE, Chew EL, Khoo EM, Sam CH, Sheena D, Filzah Z, Chin SY, Lee PY, Tan LP, Farah Najwa Z, Sabrina S, Them WW, Saipriya T, Muhammad Zamakhshari ZA, Cheah WK, Peariasamy K, Goh PP, Ibrahim H. COVID-19: Four Paediatric Cases in Malaysia, *International Journal of Infectious Diseases.* 2020; **94**: 125-127. <https://doi.org/10.1016/j.ijid.2020.03.049>
- [5] Wang Z, Zhou Q, Wang C, et al. Clinical Characteristics of Children with COVID-19: A Rapid Review and Meta-Analysis. medRxiv; 2020. <https://doi.org/10.1101/2020.04.13.20064352>
- [6] She J, Liu L, Liu W. COVID-19 epidemic: Disease characteristics in children. *J Med Virol.* 2020; **1**–8. <https://doi.org/10.1002/jmv.25807>
- [7] Madhav N, Oppenheim B, Gallivan M, et al. Pandemics: Risks, Impacts, and Mitigation. In: Jamison DT, Gelband H, Horton S, et al., editors. *Disease Control Priorities: Improving Health and Reducing Poverty.* 3rd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2017 Nov 27. Chapter 17. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK525302/> doi: 10.1596/978-1-4648-0527-1\_ch17
- [8] Henrietta HH. A wake-up call: COVID-19 and its impact on children's health and wellbeing. *Lancet Glob Health* 2020. [https://doi.org/10.1016/S2214-109X\(20\)30229-1](https://doi.org/10.1016/S2214-109X(20)30229-1)
- [9] Mareiniss DP. The impending storm: COVID-19, pandemics and our overwhelmed emergency departments [published online ahead of print, 2020 Mar 23]. *Am J Emerg Med.* 2020;S0735-6757(20)30175-3. <http://doi:10.1016/j.ajem.2020.03.033>
- [10] Taubenberger JK, Morens DM. 1918 Influenza: the mother of all pandemics. *Emerg Infect Dis.* 2006;12(1):15-22. <http://doi:10.3201/eid1201.050979>