

28 JUNE 2021

CONSENSUS STATEMENT

# COVID-19 VACCINATION

FOR CHILDREN AND ADOLESCENTS FROM  
12 YEARS OLD AND ABOVE

COLLEGE OF PAEDIATRICS AND CHILD HEALTH  
SINGAPORE



ACADEMY OF MEDICINE  
SINGAPORE



COLLEGE OF PAEDIATRICS AND  
CHILD HEALTH, SINGAPORE

## BACKGROUND

Recent outbreaks in 2021 in Singapore have seen more children becoming infected from COVID-19 with at least 59 schools (since 1 April 2021) and 6 tuition centres being affected. While children in Singapore have had a mild upper respiratory infection or were asymptomatic, children in other countries have experienced complicated disease or multi-system inflammatory syndrome of children (MIS-C) which can be life-threatening. Among MIS-C patients, a high percentage needed intensive care admissions and interventions due to the cardiovascular complications. Among Asian countries, MIS-C has been reported in South Korea, India and Pakistan. As of early May 2021, there were more than a hundred reported deaths in persons up to 17 years old in Malaysia due to COVID-19<sup>1</sup>. We have not detected any MIS-C in Singapore children, but this is likely due to the low COVID-19 infection rates.

COVID-19 vaccination started in Singapore on 30 Dec 2020 following the Ministry of Health (MOH) Expert Committee on COVID-19 Vaccination (EC19V) and Health Sciences Authority's (HSA) approval of the Pfizer-BioNTech COVID-19 mRNA vaccine via the Pandemic Special Access Route (PSAR) for persons 16 years old and above. As of 31 May 2021, 4 million doses have been administered in Singapore.

In Singapore, on 31 May 2021, Pfizer-BioNTech COVID-19 vaccine was approved for the age extension for 12 years and above based on clinical trials involving this age group and immune-bridging studies. The clinical trial of 2260 children and adolescents showed 100% vaccine efficacy against symptomatic disease<sup>2</sup>. After a median follow-up of 2 months, the safety profile was similar to that of young adults aged 16 to 25 years old. The higher reactogenicity is attributed to the robust immune response in the younger population, which is similar to the original adult trial in which the 16-to-25-year age group had higher reactogenicity compared with the older population.

In the adolescent trial of 12 to 15 years old, serious adverse events occurred in 0.4% and 0.2% in the vaccine and placebo arms respectively and these events were similar in frequency to that seen in the general population<sup>3-6</sup>. No specific safety concerns were identified. There was a slight imbalance in depression-related serious adverse events (SAE) which is not statistically significant ( $p=0.4$ ). All psychiatric SAE were found in patients with underlying prior psychiatric illness and may have been related to the recent initiation of selective serotonin reuptake inhibitor (SSRI) anti-depressants which is a known trigger for exacerbation of depression. There is therefore, no definite cause and effect relationship between the vaccine and exacerbation of depression.

As of 31 May 2021, more than 6 million adolescents in the USA have received the Pfizer-BioNTech COVID-19 vaccine and no safety signals have been detected. Rare cases of myocarditis have been reported to the US CDC, especially seen in young males after the 2<sup>nd</sup> dose but these were mild and recovered fully. US CDC continues to recommend COVID-19 vaccination for everyone 12 years of age and older, given the greater risk of COVID-19 illness and possibly severe complications.

COVID-19 infections in children have led to school and tuition centre closures. This disrupts their learning, ability to socialize and impacts their mental health with direct impact on their families and parents who need to take leave to supervise the children at home.

The benefits of COVID-19 vaccine in the adolescents outweigh the risks of the vaccine. We will continue to monitor the safety of the vaccine in children and adolescents above 12 years old.

## RECOMMENDATIONS

Children 12 years and older should proceed with COVID-19 vaccination as the benefits clearly outweigh the risks.

- Currently only Pfizer-BioNTech mRNA vaccine has been approved for the age of 12 years and above, so children of this age group should only receive this vaccine.
- When other vaccine brands are approved for this age group, children will be able to receive these approved vaccines.

In future, the age groups eligible for COVID-19 vaccination may be extended to below 12 years of age, depending on the results of ongoing clinical trials.

Children with any acute illness including mental/psychiatric illness should defer COVID-19 vaccination until they have recovered.

For children with underlying medical conditions, reference should be made to the updated MOH guidance on indication and contraindications (<https://www.moh.gov.sg/covid-19/vaccination>). Parents who have any concerns or questions should speak to their child's paediatrician.

Children may experience side effects after vaccination, which is similar to the 16–25-year age group e.g., tiredness, muscle aches, headache, fever, axilla lymphadenopathy, injection site pain. It is important to note that while some individuals experience side effects following any vaccination, not every individual's experience will be the same and some people may not experience side effects.

## REFERENCES

1. Tan PT. Covid-19 Deaths in Children. <https://mpaeds.my/covid-19-deaths-in-children/> (Accessed 5 June 2021)
2. Wallace M, et al. The Advisory Committee on Immunization Practice’s interim recommendation for use of Pfizer-BioNTech COVID-19 vaccine in adolescents aged 12-15 years- United States, May 2021. MMWR Morb Mortal Wkly Rep 2021 May 21; 70 (20): 749-752.
3. CDC Advisory Committee on Immunization Practices (ACIP). <https://www.cdc.gov/vaccines/acip/recs/grade/covid-19-pfizer-biontech-vaccine-12-15-years.html> (Accessed 5 June 2021)
4. ACIP Evidence to Recommendations for Use of Pfizer-BioNTech COVID-19 Vaccine under an Emergency Use Authorization. <https://www.cdc.gov/vaccines/acip/recs/grade/covid-19-pfizer-biontech-etr-12-15-years.html#> (Accessed 5 June 2021)
5. Perez JL. COVID-19 Vaccine BNT162b2 Safety, Immunogenicity, and Efficacy in Subjects 12 –15 years old. Presentation to ACIP 12 May 2021. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2021-05-12/02-COVID-Perez-508.pdf> (Accessed 5 June 2021)
6. Frenck, Jr. RW, Klein NP, Kitchin N, et al. Safety, Immunogenicity, and Efficacy of the BNT162b2 Covid-19 Vaccine in Adolescents. NEJM, 6 June 2021. DOI: 10.1056/NEJMoa2107456.

## ACKNOWLEDGEMENT

| Co-Authors                 |  |
|----------------------------|--|
| (1) A/Prof Chong Chia Yin  | Senior Consultant<br>Infectious Disease Service<br>KK Women’s and Children’s Hospital  |
| (2) Dr Chan Si Min         | Head & Senior Consultant<br>Division of Paediatric Infectious Diseases<br>Department of Paediatrics, Khoo Teck Puat - National University Children’s Medical Institute<br>National University Hospital |
| (3) A/Prof Thoon Koh Cheng | Head & Senior Consultant<br>Infectious Disease Service<br>KK Women’s and Children’s Hospital   |

**PUBLISHED: 28 JUNE 2021**

College of Paediatrics and Child Health  
Singapore  
Academy of Medicine, Singapore  
81 Kim Keat Road  
#11-00 NKF Centre  
Singapore 328836