

Caution urged before vaccinating kids under 12 against COVID-19

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Any decision to vaccinate all children under 12 years of age against COVID-19 must be done with due caution, considering in detail the risk and benefits, according to a new review by international pediatric vaccine experts.

The review, led by the Murdoch Children's Research Institute (MCRI) and the University of Fribourg, doesn't argue for or against vaccinating [children](#) against COVID-19 but rather highlighted the points to consider and the complexity of policy decisions around vaccination of this age group.

MCRI and University of Melbourne Professor Nigel Curtis said the review, published in *Archives of Disease in Childhood*, stated that although mass COVID-19 vaccination of all ages may become the standard approach globally, it was important to scrutinize all the arguments around vaccination of young children.

"Whether all children less than 12 years of age should be vaccinated against COVID-19 remains an open scientific question," he said. The balance of risks and benefits of COVID-19 vaccination in children is more complex than in adults, as the relative harms from vaccination and disease are less well established in this age bracket."

University of Fribourg Dr. Petra Zimmermann said that aside from preventing the small minority of children who become severely unwell with COVID-19, the key arguments for vaccinating healthy children were to protect them from long-term consequences such as long COVID and rare instances of multisystem inflammatory syndrome, as well as reducing community transmission and helping prevent school closures and the indirect harms of lockdowns.

"Vaccinating adults and adolescents are already decreasing community transmission and consequently reducing severe cases and the risk of new virus variants emerging," she said. "Vaccinating young children might also help to further reduce the indirect harms caused by quarantine, lockdowns, repeat testing and school closures."

The review also pointed out that if COVID-19 remained a generally mild

disease in children it may not be necessary to vaccinate all those aged under 12 years, which would reduce exposure to rare vaccine side effects, help improve the global vaccine supply and prevent any impact on routine immunization schedules.

"Routine immunization programs for children and adolescents worldwide have been disrupted by the pandemic," Dr. Zimmermann said. Implementing a universal COVID-19 vaccine program for these age groups risks causing further delays by using up existing delivery resources and personnel. However, if COVID-19 vaccination is combined with the administration of other routine vaccines, this problem might be reduced."

Professor Curtis said it was important to consider vaccine decisions for infants, young children and adolescents separately and for data on the effectiveness and adverse effects to be continually reviewed.

"Further data is needed to confirm that the benefits of the vaccine in preventing COVID-19 disease in children under 12 years of age outweighs any potential risks," he said.

"Constant monitoring of COVID-19 disease severity across all age groups is crucial. If a variant of concern emerges with increased severity in children this would alter the risk–benefit equation.

"In low- and middle-income countries where COVID-19 disease is more severe in children due to underlying health conditions, there may be a lower threshold for vaccinating children. A one-dose or a reduced-dose vaccine might be an option for this age group, which might also lower the small [risk](#) of myocarditis experienced after a second dose of a mRNA vaccine."

A phase two trial in 2500 children, aged 5–12 years, recently reported

that a mRNA vaccine was safe, well tolerated and produced robust neutralizing antibodies. Results from the same trial in children under five years of age are expected by the end of 2021.

The US Food and Drug Administration recently recommended Pfizer vaccines for children aged 5-11 years. The Therapeutic Goods Administration has indicated that [young children](#) in Australia could be eligible for a COVID-19 [vaccine](#) by the end of November, but long-term, real-world safety data will likely be required by Australian authorities before approving vaccines for this age group.

More information: Petra Zimmermann et al, Should children be vaccinated against COVID-19?, *Archives of Disease in Childhood* (2021). [DOI: 10.1136/archdischild-2021-323040](https://doi.org/10.1136/archdischild-2021-323040)

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