

Pediatric COVID-19 Vaccination

SARS-CoV-2 Vaccine Testing and
Trials in the Pediatric Population:

Biologic, Ethical, Research, and
Implementation Challenges

*Developed by the UCI-CTSA Pediatric Vaccine Task Force
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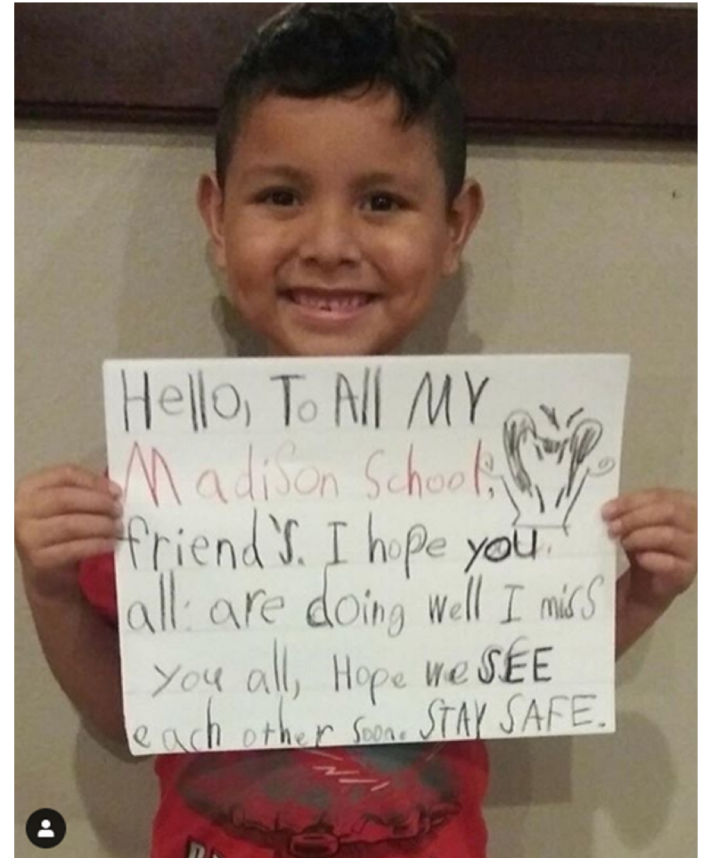
Key Messages

1. Children under 12 years-old have yet to be enrolled in any COVID-19 vaccine trials.
2. Immunity and vaccine responsiveness are different in children compared with adults.
3. COVID-19 disease is far milder in the majority of children than in adults, but children can spread the infection
4. The risk-benefit of a pediatric SARS-CoV-2 vaccine must be carefully weighed.

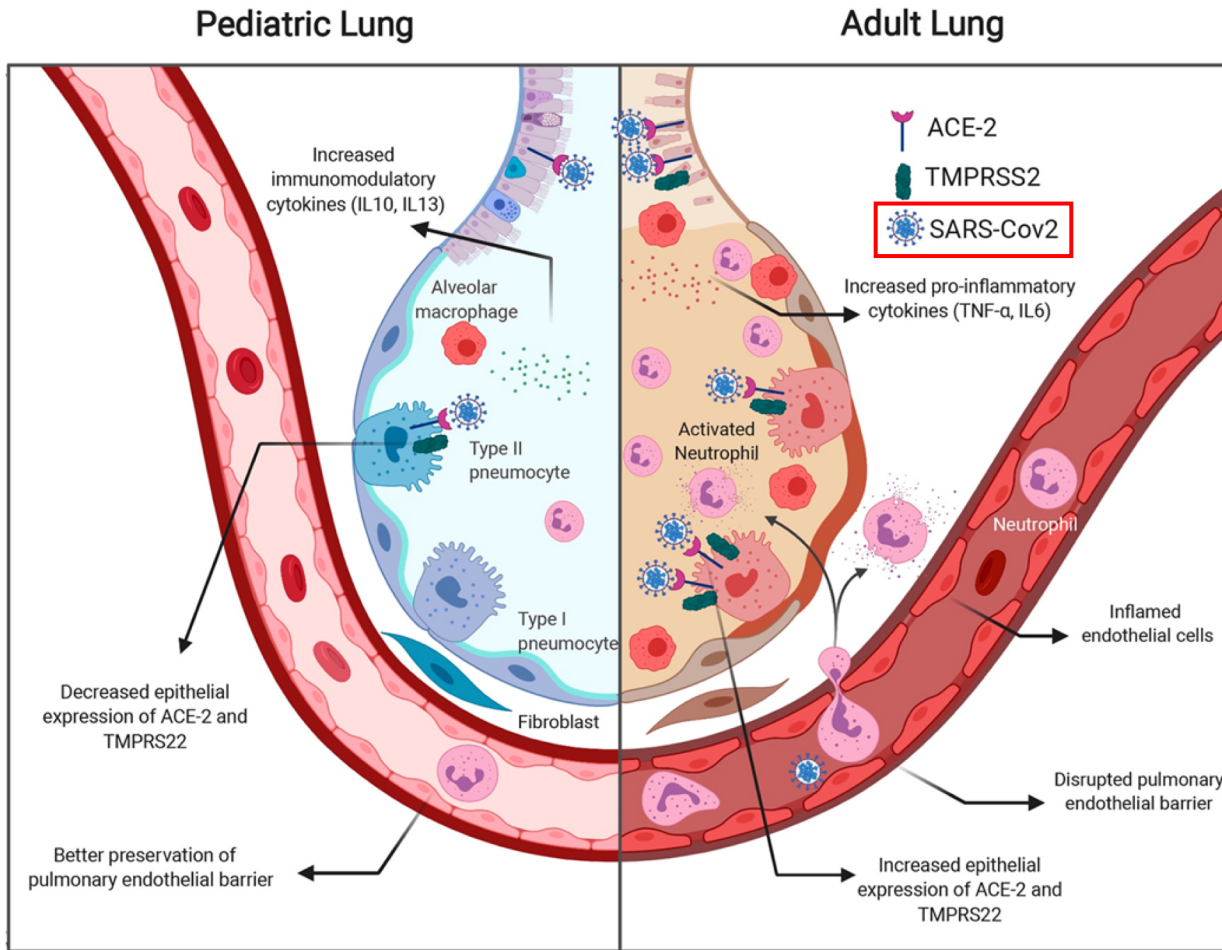


Key Messages

5. The needs of children with developmental disabilities and with chronic disease must be addressed.
6. Minority and low-income children and their families have been disproportionately adversely affected by the COVID-19 pandemic.
7. Research and strategies are necessary to address COVID-19 vaccine hesitancy in children.



Children are not miniature adults



- COVID-19 symptoms are milder in children.
- Vaccine risk-benefit evaluation is, therefore, different than in adults.

Lungs of children and adults respond differently to SARS-CoV-2

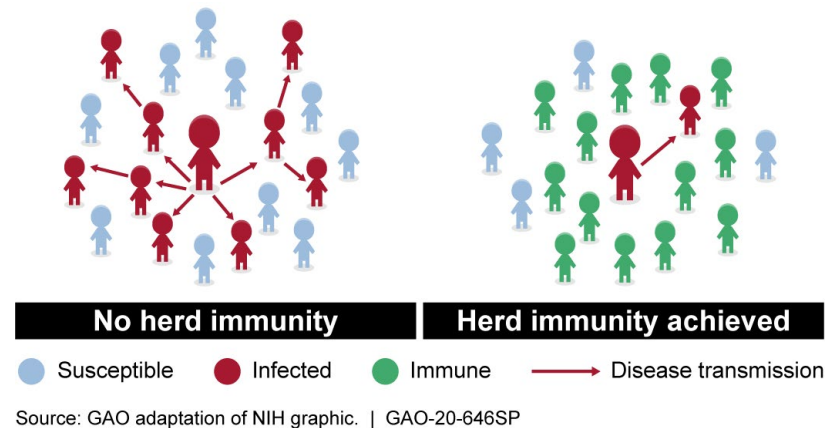
Why pediatric COVID-19 vaccines are necessary

- Although hospitalization and mortality in children due to COVID-19 are lower than in adults, the incidence of infection in children remains significant.
- About one in three children who are hospitalized because of COVID-19 infection required intensive care unit admission.



Why pediatric COVID-19 vaccines are necessary

- The hospitalization rate in children infected with COVID-19 is similar to that for influenza, and influenza vaccination reduces the risk of influenza-associated death by 50-66%.
- Childhood vaccination not only protects young children and adolescents from disease but also protects adults.



Why pediatric COVID-19 vaccines are necessary

- Face covering, physical distancing, hand hygiene, cohorting children in schools are not natural behaviors, particularly in children and adolescents, who tend to be physically close in their social interactions.
- Immunization offers an additional layer of protection and will accelerate reopening of schools.



Why pediatric COVID-19 vaccines are necessary

- Children are vulnerable members of our society and have suffered disproportionately from the disruption and school shutdowns of the pandemic.
- These adverse effects have impacted minority and low-income children disproportionately.



Children with special needs

- Children with chronic diseases and conditions, particularly those that impact the immune system, are substantially under-immunized.
- Additional efforts must be made to include them in efforts to develop, test, and implement pediatric COVID-19 vaccines.



Vaccine hesitancy

- Vaccine hesitancy has remained a long-term concern of pediatricians and public health workers.
- One in 5 children in the US has a parent who is vaccine hesitant, which is associated with reduced childhood influenza vaccinations.



Action Items

1. Operationalize an OC Pediatric COVID-19 Vaccine Task Force as part of the existing OCHCA Vaccine Task Force

2. Support Orange County's unique pediatric focused academic health centers (CHOC and UCI) to become part of pediatric vaccine trials



Action Items

3. Engage

- ✓ Parents
- ✓ Children
- ✓ Community pediatric providers
- ✓ Advocates from Orange County's underrepresented minorities



to inform, listen, and ensure the most equitable distribution of pediatric vaccines as they become available.

Action Items

4. Encourage collaborative and team research to better understand:

- Behavioral
- Immunological
- Nutritional and physical activity factors

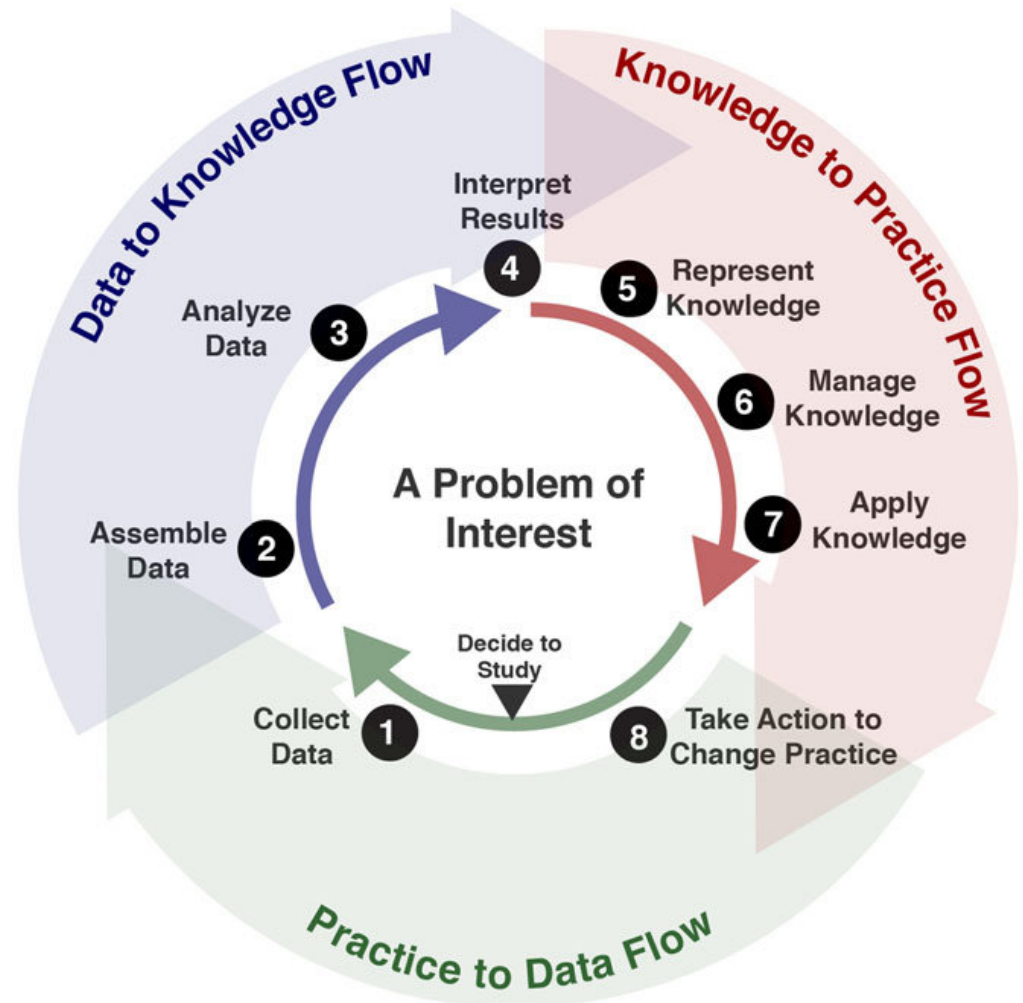
that can enhance vaccine acceptance and longterm effectiveness



RESEARCH

Action Items

5. Establish an OC “learning health system” for pediatric vaccine implementation in which we set targets, metrics, and milestones and use the continuously gathered data to adjust appropriate elements of the strategic plan





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Sia la luce

que haya luz

Let there be light

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THE UNIVERSITY OF
CALIFORNIA