

Pediatric Vaccine Hesitancy and COVID-19

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Vaccine hesitancy has become increasingly prevalent and was designated as one of the top 10 threats to global health by the World Health Organization in 2019.¹ Recognition of this issue increased throughout the

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COVID-19 pandemic as the availability of COVID-19 vaccinations was accompanied by a highly visible increase in vaccine hesitancy.² Determining the key drivers for vaccine hesitancy and current attitudes regarding COVID-19 vaccines are essential to combat misinformation and optimize vaccine uptake. Wang et al evaluated these attitudes in parents of children with a variety of kidney disorders at their center,³ the results of which are published in this issue of *AJKD*. They found that a staggering two-thirds of parents were unwilling or unsure as to whether they would vaccinate their children against COVID-19. Those who reported hesitancy toward general childhood vaccines or influenza vaccines were more likely to also report hesitancy toward the COVID-19 vaccine. Higher parental education was associated with an increased likelihood of COVID-19 vaccination, and themes of reasons for vaccine hesitancy included concerns about vaccine safety, variation in recommendations provided by health care professionals, and the need for more information.³

Vaccine hesitancy as it relates to childhood vaccines predates the COVID-19 vaccine and has been associated with significant outbreaks.⁴ Along with the disbursement of accurate information, social media has made possible widespread and highly volatile misinformation regarding vaccine efficacy and safety, which has likely contributed to vaccine hesitancy and opposition. Add to that the influence of the political landscape and an associated growing mistrust in medicine and science, and one can understand why the capacity to successfully achieve public health goals for vaccination in an attempt to help curb the global pandemic have been impaired.^{2,5} Interestingly, data from the US Centers for Disease Control and Prevention (CDC) found that the influenza vaccine rate decreased among children between 2020 and 2021. One potential explanation may be vaccine hesitancy toward the COVID-19 vaccine, which may have secondarily influenced parental decision making regarding other childhood vaccinations.⁶

Specific to COVID-19 vaccine hesitancy, concern about rushed vaccine development, limited data on short- and long-term vaccine side effects, the inclusion of a relatively small number of children (compared with adults) in the vaccine trials, and lower morbidity and mortality rates associated with COVID-19-related illness in children are additional contributing factors relevant to the vaccination of

children.^{7,8} In a national telephone survey administered during May 2022, 53.6% of parents reported that their child was unimmunized and 33% reported that they probably or definitely would not get their child vaccinated against COVID-19.⁹ Most recently, the CDC has reported that 29.9% and 60% of children aged 5-11 years and 12-17 years, respectively, have been fully vaccinated against COVID-19.¹⁰

COVID-19 vaccine hesitancy is prevalent despite the overwhelming evidence that the COVID-19 vaccine is safe and effective.¹¹ Most important, however, is the repeated delivery of consistent, clear, and pertinent information regarding SARS-CoV-2 and the COVID-19 vaccines from trusted health care providers that is likely required to further increase the COVID-19 vaccination rate. In the case of the child or adolescent with kidney disease, the pediatric nephrology team can assume this role. At the same time, the associated expectation is that the nephrologist or a colleague (eg, infectious diseases physician) has available to them the most current vaccine-related information to share with the patient and parent.^{7,8} Many organizations, including the American Society of Nephrology, American Society of Pediatric Nephrology, American Society of Transplantation, and National Kidney Foundation, have compiled information that has been made available online and in print that is specifically tailored for those with kidney disease. These resources can help health care providers give consistent information to patients and families to avoid confusion and variation in recommendations.

Children with glomerular chronic kidney disease or who have received a kidney transplant are at high risk for infection-related complications because of their regular use of immunosuppressive therapy. These children benefit greatly from effective infection prevention strategies, namely vaccination. COVID-19 vaccination has been shown to elicit a detectable immune response in terms of antibody production in these patients, although lower than what has been exhibited by healthy children.^{12,13} While the decision of whether to mandate COVID-19 vaccines for kidney transplant candidates (children or adults) is a different discussion altogether and has recently been thoroughly addressed in *AJKD*,^{14,15} the goal of decreasing vaccine hesitancy in this high-risk patient cohort is the same.

In addition to the creation of a uniform response from health care providers regarding COVID-19 vaccine recommendations, even more important is the need to regularly use all medical encounters as an occasion to provide vaccine-related education. Although it is easy to defer these discussions to the next visit or the next provider, doing so results in a lost opportunity to provide information and answer questions of those who see their health care provider as a valuable resource. As confirmed in the article by Wang et al,

parents who are unsure about whether they will vaccinate their child against COVID-19 are interested in hearing what their health care provider recommends and may choose to receive the COVID-19 vaccine if they are given the appropriate information. Peer-to-peer resources, either online or as in-person forums designed to discuss COVID-19 vaccine recommendations and experiences, can also be valuable.²⁻⁵

The study by Wang et al does have some limitations. The timing of data collection from parents took place from December 2020 to October 2021, while COVID-19 vaccinations for children aged 12-15 years and 5-11 years did not receive emergency-use authorization until May and November 2021, respectively. Current parental attitudes, particularly of those parents whose children have a chronic medical condition, may have changed following the widespread availability of the COVID-19 vaccine for children at least 5 years of age (and most recently for those as young as 6 months) and mounting evidence of the vaccine's safety and efficacy. Generalizability of the study results to the parents of all children with kidney disease also comes into question, a limitation acknowledged by the authors.³ Low participant numbers in groups classified by type of kidney disease or kidney replacement modality (dialysis and kidney transplant), along with the study being conducted at a single center and being survey-driven with a response rate of 39%, may not produce results that are representative of the pediatric nephrology community at large.

Regardless, the important takeaway message from the publication by Wang et al is that children with kidney disease, like all children, are affected by COVID-19 vaccine hesitancy, the etiology of which is multifactorial. The call to action for the medical community is to identify barriers to vaccination so those barriers can be addressed in a thoughtful and effective manner. Notably, it is imperative that we formulate and regularly update uniform health-literate recommendations tailored for patient groups such as children with kidney disease that are readily available and actively distributed by health care teams to help encourage vaccination. Incorporation of responses to the insightful questions and concerns relayed by patients and families, such as those queried by Wang et al, is certain to add value to the resources that are developed.

Article Information

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